APAC Product Catalog
Part 1: Lighting

CROUSE-HINDS SERIES

The safety you rely on.

Powering Business Worldwide




The safety you rely on.

Delivering world-class reliability and safety in high consequence harsh and hazardous environments

Eaton's Crouse-Hinds series products can deliver...

- Protection and safety of people and assets around the world with unsurpassed reliability and quality in every product we offer
- Industry leading innovation and product efficiency
- Product solutions designed and certified for global specifications
- Best-in-class, global sales, and customer service teams that provide local support

CROUSE-HINDS
SERIES

Crouse-Hinds remains the brand that stands for safety in the harshest of environments when power management is most critical. While it all began with the Condulet®, the Crouse-Hinds brand has grown into the premier name for a comprehensive portfolio of solutions for high-consequence harsh and hazardous environments.

And now, the next phase in the evolution of the brand you trust: Crouse-Hinds joins the leading Eaton portfolio of reliable, efficient and safe electrical power management solutions.

More protection. More technology.
Expect more.

EATON
Powering Business Worldwide

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Comprehensive global product solutions that fulfill local demand worldwide

Fast-growing industrial and commercial customers alike need international partners who can help them adapt to local requirements, and Eaton's Crouse-Hinds' global capabilities and local expertise help their expansion.

NEPSI
National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation
Chinese certification

ATEX
ATmosphères EXplosibles
European Union certification

IEC & IEC-Ex
International Electrotechnical Commission
International certification

CSA
Canadian Standards Association
Canadian certification

INMETRO
Instituto Nacional de Metrologia, Qualidade e Tecnologia
Brazilian certification

UL
Underwriters Laboratories
American certification

TIIS
Technology Institution of Industrial Safety
Japanese Certification

KC
Korea Certification
Korean certification

ABS
American Bureau of Shipping
American marine certification

DNV
Det Norske Veritas
Norwegian marine certification

LR
Lloyd's Register of Shipping
British marine certification

CE
Conformité Européenne
European certification

Hazardous area reference guide:

Hazardous areas due to explosive gases, vapours and liquids

Zone 0 covers areas in which an explosive atmosphere caused by a mixture of air and gases, vapours or liquids is present, continuously, for long periods or frequently.

Zone 1 covers areas in which the occasional occurrence of an explosive atmosphere due to the presence of gases, vapours or liquids is likely.

Zone 2 covers areas in which the occurrence of an explosive of gases, vapours and liquids is not likely, but if one should occur, then only rarely and only for a short period.

Hazardous areas due to explosive dust/ air mixtures

Zone 20 covers areas in which an explosive atmosphere due to dust/air mixtures is present continuously, for long periods or frequently.

Zone 21 covers areas in which the occurrence of an explosive atmosphere due to dust/air mixtures is to be expected occasionally.

Zone 22 covers areas in which the occurrence of an explosive atmosphere due to whirled-up dust is not likely, but, if it occurs, then in all probability only rarely and only for a short period.

Principles of explosion-protection

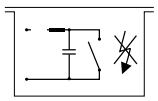
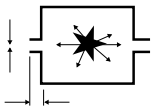
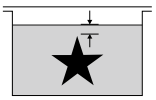
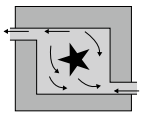
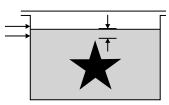
Liquids, gases & vapours

Zone 0	Continuously hazardous (Eg: Inside storage tanks containing flammable liquid.)
Zone 1	Frequently hazardous under normal conditions (eg. container filling area, pump alley in a refinery petrol pump)
Zone 2	Infrequently hazardous under abnormal conditions (eg. sealed container stored above 3m in a plant)

Dusts, fibres & flyings

Zone 20	Dust/air mixtures is present continuously, for long periods or frequently (Eg: close container, inside grain hopper etc.)
Zone 21	Dust/air mixtures is to be expected occasionally (eg. include areas in the immediate vicinity of dust extraction, such as grain handling areas)
Zone 22	Dust is not likely, but, if it occurs, then in all probability only rarely and only for a short period (eg. milling rooms, where dust leaks from the mill and builds a dust layer)

Principles of explosion-protection

Ex code	Hazardous areas	Type of protection	Standard	Principle	Application
ia	Zone 0, 20	Intrinsic safety	IEC 60079-11 EN 60079-11 AS/NZS 60079-11 GB3836.4		Measurement and control devices, data processing (low electric values)
ib	Zone 1, 21	Intrinsic safety			
ic	Zone 2, 22	Intrinsic safety			
eb	Zone 1	Increased safety	IEC 60079-7 EN 60079-7 AS/NZS 60079-7 GB3836.3		Connection and distribution boxes light fittings, measuring instruments, squirrel cage motors (no ignitable sparks in normal operation)
ec	Zone 2	Increased safety			
da	Zone 0	Flameproof	IEC 60079-1 EN 60079-1 AS/NZS 60079-1 GB3836.2		Power-operated apparatus, switchgear, motors (all types of apparatus producing ignitable arcs in normal operation)
db	Zone 1	Flameproof			
dc	Zone 2	Flameproof			
q	Zone 1	Powder filling	IEC 60079-5 EN 60079-5 AS/NZS 60079-5 GB3836.7		Capacitors, electronice components, fuses
nC	Zone 2	Sealed devices	IEC 60079-15 EN 60079-15 AS/NZS 60079-15 GB3836.8		Zone 2 only. Lamps, motors, plugs and sockets, measurement and control devices
pxb	Zone 1, 21	Pressurization	IEC 60079-2 EN 60079-2 AS/NZS 60079-2 GB3836.5		Power-operated apparatus (active safety measures required)
pyc	Zone 1, 21	Pressurization			
pzc	Zone 2, 21	Pressurization			
ma	Zone 0, 20	Encapsulation	IEC 60079-18 EN 60079-18 AS/NZS 60079-18 GB3836.9	Proved by test unable to cause ignition	Measurement and control devices, relays, electronic circuits
mb	Zone 1, 21	Encapsulation			
mc	Zone 2, 22	Encapsulation			
nR	Zone 2	Restricted breathing apparatus	IEC 60079-15 EN 60079-15 AS/NZS 60079-15 GB3836.8		Zone 2 only. Lamps, motors, plugs and sockets, measurement and control devices
ob	Zone 1	Liquid immersion	IEC 60079-6 EN 60079-6 AS/NZS 60079-6 GB3836.6		Transformers (rarely used)
oc	Zone 2	Liquid immersion			
ta	Zone 20	Dust-protected	IEC 60079-31 EN 60079-31 AS/NZS 60079-31 GB 12476.5		Equipment dust ignition protection by enclosure 't'
tb	Zone 21	Dust-protected			
tc	Zone 22	Dust-protected			

Principles of explosion-protection

Division of explosion-protected apparatus into explosion groups (Gas-ex area)

Explosion-protected electrical apparatus are divided into group I and II. It is further sub-division of the Explosion Group II into "A", "B" and "C".

Gas group \ Temperature class	T1	T2	T3	T4	T5	T6
I	Methane	Ethylalcohol	Petrol	Acetaldehyde		
IIA	Acetone, Ethane	i-amyl acetate	Diesel-fuel	Ethylether		
	Ethyl acetate	n-butane	Aviation-fuel			
	Ammonia, Benzol	n-butylalcohol	Heating-oils			
	Acetic acid		n-hexane			
	Carbon monoxide					
	Methanol, Propane					
	Toluene					
IIB		Ethylene				
IIC		Acetylene				Carbon disulphide

The ignition temperature is the lowest temperature of a surface at which an explosive atmosphere will ignite. Gases and vapours can be divided into temperature classes according to their ignition temperatures. This results in a subdivision of explosion-protected electrical apparatus into the temperature classes T1 to T6. This classification allows explosion-protected apparatus to be used economically. The maximum surface temperature of an apparatus must always be lower than the ignition temperature of the gas/air or vapour/air mixture.

T6 is the highest temperature class with the lowest permissible surface temperature.

Max surface temperature	NEC table 500-3 (d)	IEC T class
450 °C	T1	T1
300 °C	T2	T2
280 °C	T2A	
260 °C	T2B	
230 °C	T2C	
215 °C	T2D	
200 °C	T3	T3
180 °C	T3A	
165 °C	T3B	
160 °C	T3C	
135 °C	T4	T4
120 °C	T4A	
100 °C	T5	T5
85 °C	T6	T6

IEC group	Representative	NEC group
I	Methane (underground mining)	I
IIA	Propane	D
IIB	Ethylene	C
IIB(H_2)	Hydrogen	B
IIC	Acetylene	A

Principles of explosion-protection

IECEx/GB Ex marking — Gas

Ex **de** **IIC** **T6** **Gb**

Ex logo

Type of protection	
d	Flame proof
i	Intrinsic safety
m	Encapsulation
q	Sand filled
e	Increased safe
nR	Restricted Breathing

Atmosphere group	
I	Mines with firedamp
II	All other areas-gas
IIC	Hydrogen and acetylene
IIB	Ethylene
IIA	Nonmineral methane and propane

T code	
T1	450°C
T2	300°C
T3	200°C
T4	135°C
T5	100°C
T6	85°C

Equipment protection level(EPL)	
G	Gas
a	Very High
b	High
c	Low

IECEx/GB Ex marking — Dust

Ex **tb** **IIC** **T80°C** **Db**

Ex logo

Type of protection	
i	Intrinsic safety
m	Encapsulation
t	Dust ignition protection by enclosure "t" "ta" (EPL"Da") "tb" (EPL"Db") "tc" (EPL"Dc")

Atmosphere group	
III	All other areas-dust
IIIA	Combustible flying
IIIB	Non-conductive
IIIC	Conductive

Maximum surface temperature

Equipment protection level(EPL)	
D	Dust
a	Very High
b	High
c	Low

Degrees of ingress protection according to IEC 60529

First digit	Protection against solid foreign objects	Second digit	Protection against ingress of water with damaging effects
0	No special protection	0	No special protection
1	Protected against solid foreign bodies Ø 50 mm and larger	1	Protected against vertically dripping water
2	Protected against solid foreign bodies Ø 12.5mm and larger	2	Protected against dripping water when enclosure is incliened up to 15˚C
3	Protected against solid foreign bodies Ø 2.5mm and larger	3	Protected against dripping water when enclosure is incliened up to 60˚C
4	Protected against solid foreign bodies Ø 1mm and larger	4	Protected against splash water from any direction
5	Dust protected	5	Protected against jet water from any direction
6	Dust-tight	6	Protected against powerful water jets from any direction
		7	Protected against water intrusion when submerged for a limited time
		8	Protected against water intrusion when submerged, time irrelevant

Quick product selector

Ex LED lighting		Application area/ degree of protection	Type of protection	Features	Certification	Page
VLL GRP linear LED		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66	• Ex db eb mb • Ex db eb ib mb	• GRP enclosure, PC cover • Color temp: cool white 5700K/warm white 3000k • Permissible temp.: -40°C ~ +50/55°C -25°C ~ +45/50°C (emergency)	• GB • ATEX • IECEx	1.1.1
HLL aluminum linear LED		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66	• Ex d e ib mb	• Aluminum enclosure, PC cover • Color Temp.: cool white 5700K/warm white 3000K • Permissible temp.: -40°C ~ +55°C -25°C ~ +55°C (Emergency)	• GB • ATEX • IECEx	1.1.6
Exlin		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66/67 • IK10	• Ex eb, ib • Ex eb, ib, mb	• GRP enclosure, PC cover • Color Temp.: cool white 5000K/warm white 4000K • Permissible temp.: -40°C ~ +45/55°C	• ATEX • IECEx	1.1.9
eLLK series Ex LED lighting		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66 • IK10	• Ex db eb mb	• GRP enclosure, PC cover • Color Temp.: cool white 5700K/warm white 4000K • Permissible temp.: -25°C ~ +55°C	• ATEX • IECEx	1.1.17
HPL pendant LED lighting		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66	• Ex d e mb	• Up to 66% energy savings comparing to metal halide • Instant illumination and restrike • Color Temp.: cool white 5700K/warm white 3000K • Permissible temp.: -40°C~+40°C/45°C/50°C	• GB • ATEX • IECEx	1.1.22
HPLN		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66	• Ex db eb mb op is	• Up to 70% energy savings comparing to metal halide • Three types of beam angle, Narrow / Medium/ Wide beam • Color Temp.: cool white 5700K/warm white 3000K • Permissible temp.: -40°C~+55°C	• GB • ATEX • IECEx • CUTR	1.1.24
LPL high power pendant lighting		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66	• Ex d e	• Up to 63% energy savings comparing to metal halide • LED lifetime longer than 50000H • Instant illumination and restrike • Color Temp.: cool white 5700K • Permissible temp.: -40°C ~ +40°C/45°C/55°C	• GB • ATEX • IECEx	1.1.31
VMVL		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66	• Ex nA nR	• Up to 77% energy savings comparing to HID • Wattage from 40W up to 232W • Equivalent HID Luminaire from 70W up to 1000W • Wide Voltage Range: 120V-277V • Permissible temp.: -40°C ~ +40°C/+55°C	• UL • IECEx • ATEX	1.1.35
FMVA		• Zone 21 & Zone 22 • IP66	• Ex nA nR	• Up to 77% energy savings comparing to HID • Wattage from 65W up to 531W • Equivalent HID Floodlight from 100W up to 1500W • Wide Voltage Range: 120V-277V • Permissible temp.: -40°C ~ +40°C/+55°C	• UL • IECEx • ATEX	1.1.48
NHLL		• Zone 2 • Zone 21 & Zone 22 • IP66	• Ex nR	• Up to 40% energy savings comparing to fluorescent • Instant illumination and restrike • Color Temp.: cool white 5700K/warm white 3000K • Permissible temp.: -40°C~+55°C	• GB • IECEx	1.1.57
NLE pendant LED lighting		• Zone 2 • Zone 21 & Zone 22 • IP66	• Ex nR	• Up to 66% energy savings comparing to metal halide • Instant illumination and restrike • Color Temp.: cool white 5700K/warm white 3000K • Permissible temp.: -40°C~+55°C	• GB • IECEx	1.1.60

Quick product selector

Weatherproof lighting		Application area/ degree of protection	Features	Certification	Page
PLLE linear LED		• Industrial area • IP66	• Up to 40% energy savings comparing to fluorescent • Color Temp.: cool white 5700K/warm white 3000K • Permissible temp.: -40/25˚C ~ +55˚C	• CE	1.2.1
PLE pendant LED		• Industrial area • IP66	• Up to 66% energy savings comparing to metal halide • Instant illumination and restrike • Color Temp.: cool white 5700K/warm white 3000K • Permissible temp.: -40/25˚C ~ +55˚C	• CE	1.2.5
ECH-SHB LED high bay lights		• Industrial area • IP66	• Aluminum die casting housing with attractive looking, resist impact and corrosion • A separate driver compartment, easy for LEDs and driver to dissipate heat independently and effectively • Input voltage AC100-277V, 50/60Hz • Ambient temperature - 25˚C~45˚C		1.2.7
ECH-FDL03 LED flood lights		• Industrial area • IP66	• Resist impact and corrosion with high strength Aluminum extruded housing • Perfect integrative heat sink • Input voltage AC100-277V, 50/60Hz • Ambient temperature -25˚C~50˚C		1.2.8
ECH-STL LED street lights		• Industrial area • IP66	• Resist impact and corrosion with Aluminum die casting housing • Perfect integrative heat sink • Input voltage AC100-277V, 50/60Hz • Ambient temperature -25˚C~45˚C		1.2.9

Quick product selector

Marine lighting		Application area & degree of protection	Features	Certification	Page
CDLL LED down lights		• For meeting room, entertaining room or other interior spaces • IP20-44	• 10W/20W LED • Housing: Galvanized steel, optional SS316L • Diffuser: optional IP44 sealed diffuser on trim ring • Terminal block: 3 pole 6mm^2 max • Permissible temp.: -30 °C~+50 °C	• DNV	1.3.1
CMBL berth LED lights		• For berth light or desk light • IP 20	• 1x6W LED • Housing: Galvanized steel, optional SS316L • Diffuser: acrylic • Surface mounting • Terminal block: 3 pole 6mm^2 max • Permissible temp.: -25°C ~ +45°C	• DNV	1.3.2
CMML mirror LED lights		• For bathroom, mirror or berth • IP 44	• 1x6W LED • Housing: Galvanized steel, optional SS316L • Diffuser: PC • Surface mounting, under cabinet • Terminal block: 3 pole 6mm^2 max • Permissible temp.: -25°C ~ +45°C	• DNV	1.3.3
CMRL recessed LED luminaires		• For Office, wheelhouse, state room • IP 42	• 2x10W/2x20W LED • Housing: Galvanized steel, optional SS316L • Diffuser: translucent white acrylic or PC • Optional 90mins or 180mins emergency light • Terminal block: 6 pole 6mm^2 max • Permissible temp.: -30 °C~+50 °C	• DNV	1.3.4
CMRL/C recessed LED luminaires		• For Office, wheelhouse, state room • IP 44	• 2x10W/2x20W LED • Housing: Galvanized steel, optional SS316L • Diffuser: translucent white acrylic or PC • Optional 90mins or 180mins emergency light • Terminal block: 6 pole 6mm^2 max • Permissible temp.: -30 °C~+50 °C	• DNV	1.3.6
MSLL surface LED luminaires		• For engine room, galley or other various applications • IP66/67	• 2x10W/2x20W LED • Housing: Galvanized steel, optional SS316L • Diffuser: clear PC • Terminal block: 6 pole 6mm^2 max • Permissible temp.: -30 °C~+50 °C	• DNV	1.3.8
HRL Zone 1 Recessed LED		• Zone 1 & Zone 2 • Zone 21 & Zone 22 • IP66	• Recessed mounting • Housing: Galvanized steel, optional SS316L • Diffuser: clear PC • Color temp: cool white 5700K/warm white 3000k • Permissible: -40 °C~+55 °C -25 °C~+55 °C (emergency)	• GB • IECEx • ATEX	1.3.10

Safe.
Reliable.
Efficient.

Featuring the industry's broadest range of LED luminaires for harsh and hazardous environments, Eaton's Crouse-Hinds can deliver a lighting solution that performs reliably in even the worst operating conditions. All the while reducing your energy, maintenance and manpower costs.

Why LED?

Useful life
Rated life of 50,000 hours of maintenance-free and safe operation

Energy efficiency
LED average energy consumption is 50% less than HID and 85% less than incandescent

Start/restart time
Instant illumination compared to 10 minute restrike time for HID

Light quality
Higher color rendering and color temperature compared to fluorescent

Environmental benefits
Mercury-free LED eliminates disposal costs and lower energy consumption for a smaller carbon footprint

Why Crouse-Hinds?

Industry-best reliability
Built to withstand extreme temperatures, vibration, water and dust

Thermal management
Effective heat sinking ensures longer life

Quality of light
Custom optics designed to maximize light distribution and intensity

Retrofit compatibility
LED fixtures are compatible with Crouse-Hinds' HID installed base

Ex LED lighting

Contents

1

VLL LED Zone 1 GRP linear fixtures

Featuring indutrial-leading energy efficiency, VLL is designed to replace fluorescent light in Zone 1 and 2 hazardous area applications with easy installation and maintenance. This product performs its excellence in both reliability and safety while helping reduce energy and cost.

Benefits:

EFFICIENCY

- Industry leading lumen efficacy up to 130~lm/w reduces energy consumption and delivers cost savings.
- Three lumen packages available from 3100 to 7400lm providing a versatile solution for different illumination applications.

SAFETY AND RELIABILITY

- Rugged design for extremely harsh environments, IP66 even under vibration.
- Optional self-contained battery for emergency lighting applications delivers 25% of standard lumen output for 1.5-hours or 3-hours.

EASY INSTALLATION AND MAINTENANCE

- Retrofit- friendly with optional sliding rail mounting system, allowing brackets to be easily adjusted to existing mounting holes.
- Self-monitoring status battery indicator makes easy for maintenance check.
- Inhibit switch comes as standard for our emergency fitting which is suitable for offshore unmanned platform application.

LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED? The numbers say it all.

VLL-5L vs. x 36W Fluorescent

40% REDUCTION IN ENERGY COSTS

66% LOWER TOTAL COST OF OWNERSHIP

100% LAMP MAINTENANCE REDUCTION

VLL LED Zone 1 GRP linear fixtures

Features & specifications

The Zone 1 VLL product Series LED Luminaires with high-quality international brand LED chips, have extremely long lifespan. Multiple versions of the LED are available, providing ideal solutions for indoor or outdoor areas to retrofit existing fluorescent fixtures.

Model	Nominal* lumens	Wattage	Efficacy	Equivalent fluorescent
VLL-3L	3100	<25W	>130~Lm/W	2x18W
VLL-5L	6400	<50W	>130~Lm/W	2X36W
VLL-7L	7400	<60W	>130~Lm/W	2X54W

*Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.
*Tolerance+/-10%

Application

- Locations where require continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; platforms; loading docks; tunnels

Standard materials

- Enclosure-Glass Fiber Reinforced Plastic (GRP)
- Diffuser-Polycarbonate (PC)
- Gaskets-Silicone
- Fasteners-All external fasteners stainless steel

LED system:

- Cold white 5700K
- Optional 3000K, 4000K, 5000K
- All series feature field replaced LED modules
- Fog diffuser with harmful glare protection as standard
- Rated life of 5 years up to 50/55˚C provides long term, lowmaintencnce operation.

Certifications and compliances

- Marking accd.to IECEx
  Ex db eb mb IIC T5 Gb or Ex eb mb IIC T5 Gb
  / Ex db eb ib mb IIC T5 Gb (EM)*
  Ex tb IIIC T80˚C Db
- Marking accd.to ATEX
  II2 G Ex eb mb IIC T5 Gb
  II2 G Ex db eb mb IIC T5 Gb
  II2 G Ex db eb ib mb IIC T5 Gb(EM)
  II2 D Ex tb IIIC T80˚C Db

Technical data

IECEx-certification of conformity	IECEx NEP 21.0020X, SEV 22 ATEX 0584X, IECEx SEV 22.0001X
Ex Marking	Ex db eb mb IIC T5 Gb or Ex eb mb IIC T5 Gb / Ex db eb ib mb IIC T5Gb (EM)* Ex tb IIIC T80˚C Db
Ambient temp	Normal: -40˚C to 55˚C for 3L, 5L, -40˚C to 50˚C for 7L Emergency: -25˚C to 50˚C for 3L,5L, -25˚C to 45˚C for 7L
Rated input volt	100-240VAC 50/60Hz, DC 105-250V
Power factor	>0.9
Color Temperature	5700K as standard, 3000K,4000K,5000K is available.
CRI	Cool white>70 as standard, CRI>80 is optional
System watt*	VLL 3L series: <30W VLL 5L series: <55W VLL 7L series: <65W
Lumen output	VLL 3L series:3100Lm VLL 5L series:6400Lm VLL 7L series:7400Lm
Material	GRP and PC
Weight	VLL 3L series Normal and EM: 4.3Kg / 5.8Kg VLL 5L /7L series Normal and EM: 7.5Kg / 9.8Kg
Terminals	Max 6mm²
Entry Size	M20 as standard, M25 is available.
Out line dimension	VLL 3L series: 732x178x125 VLL 5L /7L series:1333x178x125
Backup duration & Lumen percentage	Standard version EM1=1.5h,25% output. EM2=3h, 25% output is available.
IP(IEC60598)	IP66

*Isolation switch is available as optional
*Tolerance+/-5%

VLL LED Zone 1 GRP linear fixtures

Ordering Information

Product Type	Colour Temp[1]	Terminals	Throughwiring[2] Single-ended	Throughwiring[2] Twin-ended	Entry Threaded	Ex e Threaded Plug[3]	Part No.[4]
VLL 3L							
VLL-3L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004126
VLL-3L-57-2/6-220-N		2x6	-	●	4xM20	2	CCL2004130
VLL 3L Emergency							
VLL-3L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004134
VLL-3L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	CCL2004138
VLL 5L							
VLL-5L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004174
VLL-5L-57-2/6-220-N		2x6	-	●	4xM20	2	CCL2004178
VLL 5L Emergency							
VLL-5L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004182
VLL-5L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	CCL2004186
VLL 7L							
VLL-7L-57-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004222
VLL-7L-57-2/6-220-N		2x6	-	●	4xM20	2	CCL2004226
VLL 7L Emergency							
VLL-7L-57-EM1-1/6-120-N	5700K	1x6	●	-	2xM20	1	CCL2004230
VLL-7L-57-EM1-2/6-220-N		2x6	-	●	4xM20	2	CCL2004234

[1] Tolerance +/- 10%
[2] Through wiring 6 x 2.5 mm^2
[3] Standard version without cable gland. if need, please order separately
[4] Contact your local sales representative for special requirements.

Metallic Cable Glands (Order Separately)

ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M201NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0

ADE-4F

Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath Min.	Cable sealing range inner sheath Max.	Cable sealing range outer sheath Min.	Cable sealing range outer sheath Max.	Armor Min.	Armor Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20		7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3

ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

VLL LED Zone 1 GRP linear fixtures

Dimensions (mm)

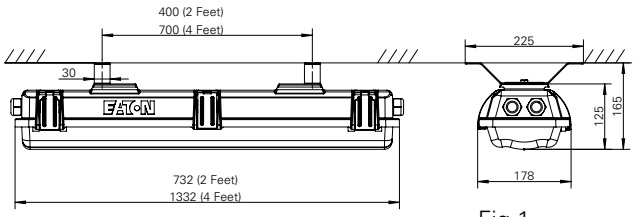
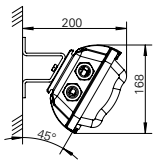


Fig.1
Ceiling Mounting



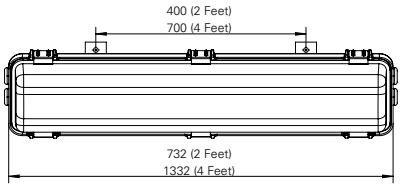


Fig.2
Wall Mounting

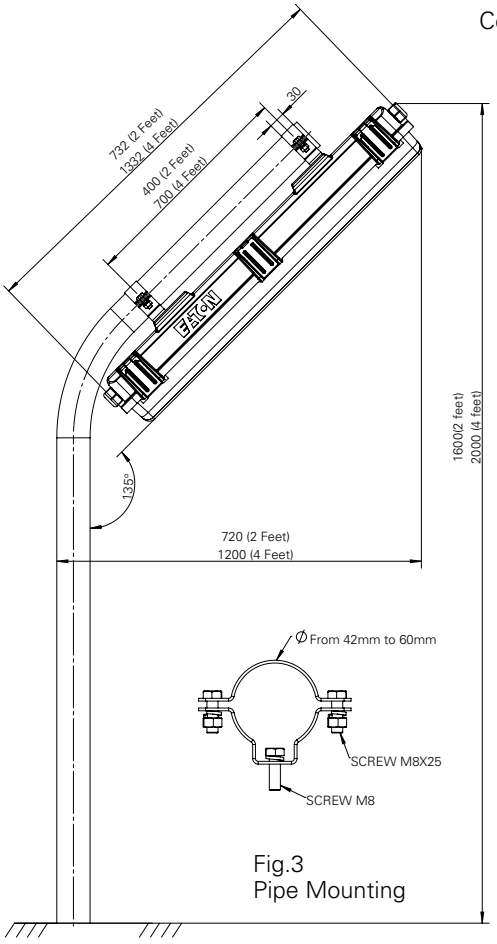


Fig.3
Pipe Mounting

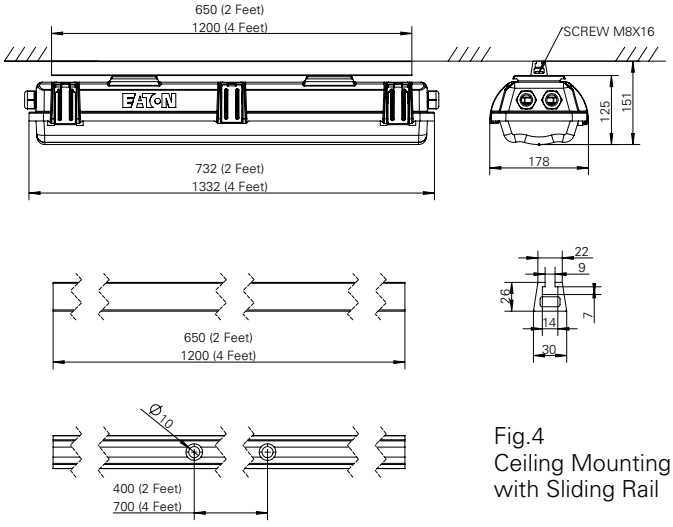
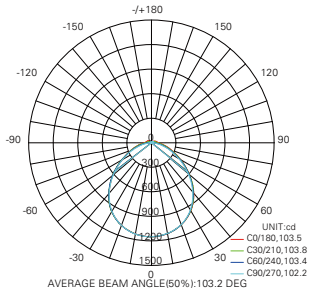
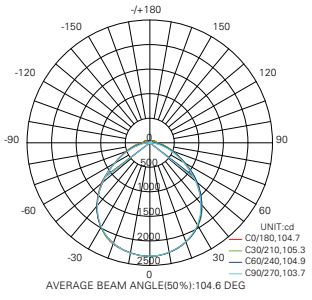


Fig.4
Ceiling Mounting
with Sliding Rail

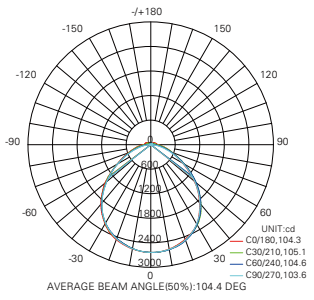
Polar curve



VLL 3L



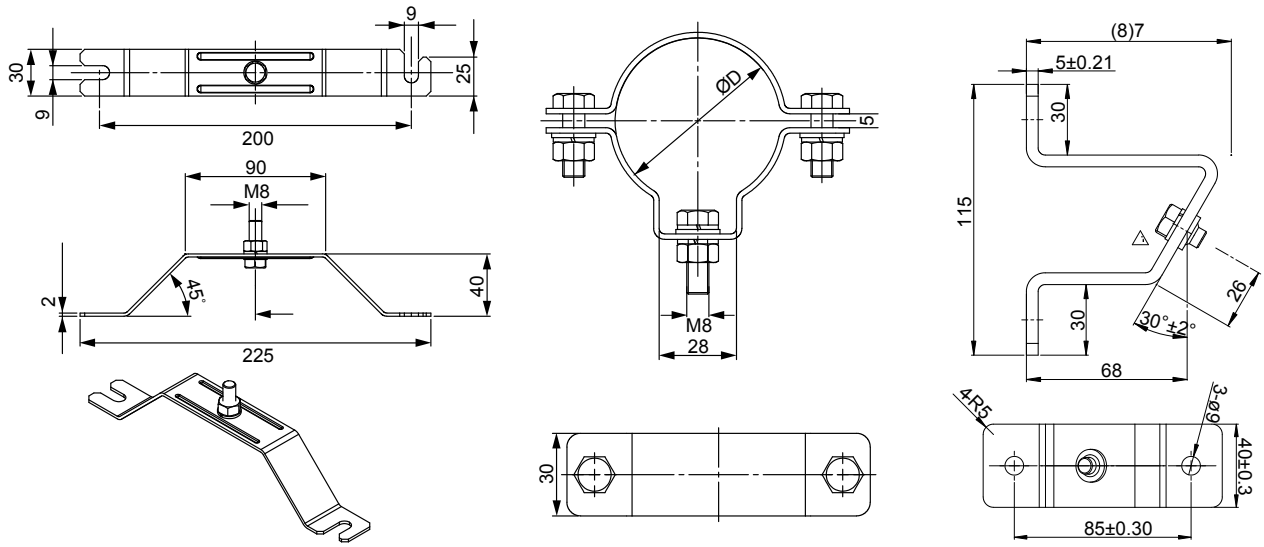
VLL 5L



VLL 7L

VLL LED Zone 1 GRP linear fixtures

Mounting accessories (To be ordered separately)



Ceiling mounting bracket | Pipe clamp | Wall mount bracket

Unit: mm

Pipe mounting

Part No	Description	Quantity per luminaire
CHR5218	Pipe clamp assy D42 316S/S	2
CHR5221	Pipe clamp assy D51 316S/S	2

Wall mounting

Part No	Description	Quantity per luminaire
CHR5248	Wall suspension 316S/S	2

Ceiling mounting

Part No	Description	Quantity per luminaire
CHR5245	Ceiling mounting BKT 316S/S	2
CHLMT2372-01	Mounting sliding rail for 2 feet	1
CHLMT2372-02	Mounting sliding rail for 4 feet	1

HLL linear LED lighting-hazardous area

Product introduction

HLL series is an extremely robust liner LED luminaire in an aluminum housing with a high impact polycarbonate diffuser for use in Zone 1, 2, 21 and 22 hazardous environments.

The use of high quality LED chips, along with Crouse-Hinds' industry knowhow in extracting heat from electrical products in hazardous, gaseous environment, ensures benchmark longevity for HLL in operation. With the added benefits of energy savings, lower maintenance, overall lower cost of ownership and importantly, contributes to a greener environment.

Product features

Model	Length	Color temp.	Nominal lumens	Wattage	Equivalent fluorescent luminaire
HLL-2-3L series	735mm	5700K	Approx.2800	<30W	2x18W
HLL-4-5L series	1335mm	5700K	Approx.5700	<60W	2x36W

* Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.
* Tolerance+/-10%

- Reliability
  - Polycarbonate, 4J impact resistant
  - Cooper free aluminum for excellent corrosion and heat transfer properties
  - IP66 protection
  - Suitable for zone 1, 2, 21 and 22 gas and dust atmospheres
  - Highest temperature class T6
- Permissible ambient temperature:
  - Standard luminaire: -40˚C~+55˚C
  - Emergency luminaire: -25˚C~+55˚C
  - Standard 5700K, also avaliable for 3000K, 4000K, 5000K, 6500K.
- Anti shock and vibration proof
- Mercury-free
- Instant ON without time delay
- Rated life of 5 years up to 55˚C provides long term, low-maintenance operation.

Technical data

IECEx-certification of conformity	IECEx NEP 19.0003X, IECEx SEV 19.0053X, SEV 20 ATEX 0379 X
Ex marking	Ex db eb ib mb IIC T6 Gb or Ex eb ib mb IIC T6 Gb* Ex tb IIIC T80˚C Db
Ambient temp	-40°C to 55°C (Normal) -25°C to 55°C (Emergency)
Rated input volt	100~240 VAC; 108~250 VDC
Power factor	>0.9
CRI	Cool white>70 as standard, CRI>80 is optional
LED module	HLL 2 series: 2x14W HLL 4 series: 2x28W
Lumen output*	HLL 2 series: 2800Lm, 5700K HLL 4 series: 5700Lm, 5700K HLL 2 series: 2700Lm, 3000K HLL 4 series: 5600Lm, 3000K
Material	Aluminum
Weight	HLL 2 series Normal: 5kg HLL 2 series Em: 6kg HLL 4 series Normal: 10kg HLL 4 series Em: 12kg
Terminals	6mm²
Out line dimension	HLL 2 series: 735x180x130(mm) HLL 4 series: 1335x180x130(mm)
Backup duration & lumen percentage	EM1=1.5h, 25% output, EM2=3h, 25% output
IP (IEC60529)	IP66

* Tolerance+/-10%

HLL linear LED lighting-hazardous area

Ordering information

Product Type	Color Temp[1]	Terminals	Through wiring[2] Single-ended	Through wiring[2] Twin-ended	Entry Threaded	Ex e Threaded Plug[3]	Part No.[4]
HLL-3L							
HLL-2-3L-D-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622395U
HLL-2-3L-D-2/6-220		2x6	-	●	4xM20	2	CCL1622411U
HLL-3L Emergency							
HLL-2-3L-D-EM1-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622427U
HLL-2-3L-D-EM1-2/6-220		2x6	-	●	4xM20	2	CCL1622443U
HLL- 5L							
HLL-4-5L-D-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622779U
HLL-4-5L-D-2/6-220		2x6	-	●	4xM20	2	CCL1622795U
HLL- 5L Emergency							
HLL-4-5L-D-EM1-1/6-220	5700K	1x6	●	-	2xM20	1	CCL1622811U
HLL-4-5L-D-EM1-2/6-220		2x6	-	●	4xM20	2	CCL1622827U

[1] Tolerance +/- 10%
[2] Through wiring 6 x 2.5 mm^2
[3] Standard version without cable gland. if need, please order separately
[4] Default=IECEx certified; Suffix A=ATEX certified; Suffix B=GB certified
Any other types, like M25, Coating, Replacement version, please contact Crouse-Hinds sales.

Metallic cable glands (order separately)

ADE-1F2

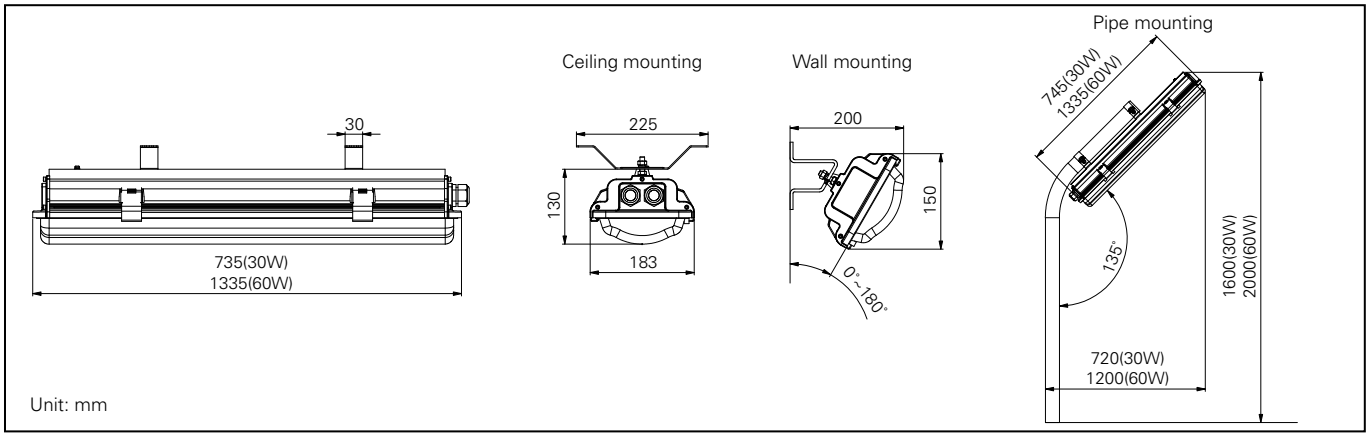
Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M201NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0

ADE-4F

Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath Min.	Cable sealing range inner sheath Max.	Cable sealing range outer sheath Min.	Cable sealing range outer sheath Max.	Armor Min.	Armor Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20		7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3

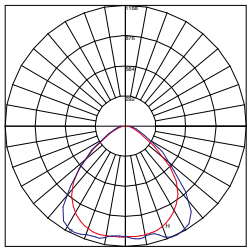
ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

Dimension

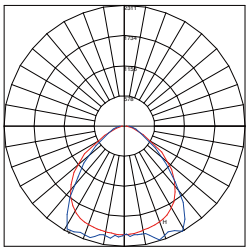


HLL linear LED lighting-hazardous area

Polar curve

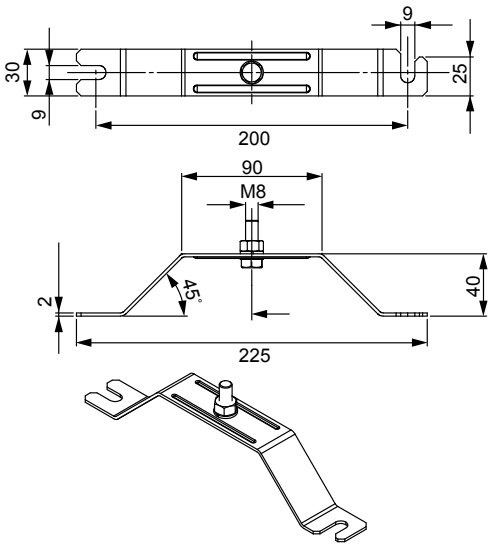


HLL-2 series

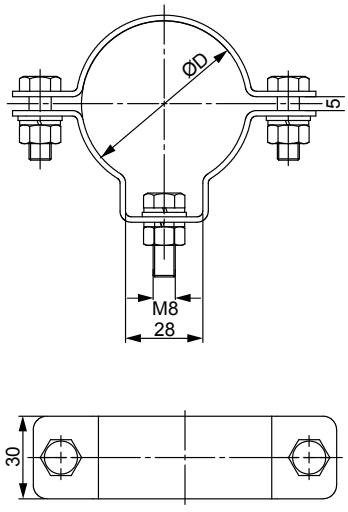


HLL-4 series

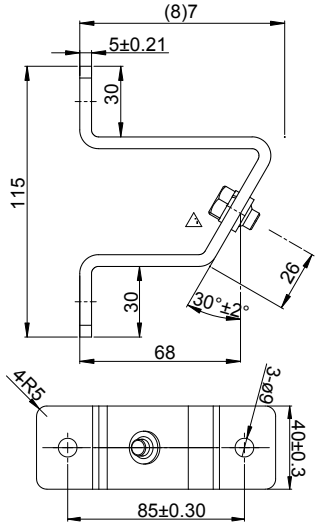
Mounting accessories (To be ordered separately)



Ceiling mounting bracket



Pipe clamp



Wall mount bracket

Unit: mm

Pipe mounting

Part No	Description	Qty
CHR11076	Pipe clamp assy D42 316S/S	2
CHR11079	Pipe clamp assy D51 316S/S	2

Wall mounting

Part No	Description	Qty
CHR11073	Wall suspension 316S/S	2

Ceiling mounting

Part No	Description	Qty
CHR11099	Ceiling mounting BKT 316S/S	2

CEAG ExLin / NE+ series

A linear LED engineered for use in Zone 1 and 21 hazardous areas.

CEAG ExLin / NE+ delivers longer life, improved efficiency and superior performance with a competitive payback vs. fluorescent fixtures.

The following CEAG ExLin models will replace 2x18 W, 2x36 W and 2x58 W fluorescent fixtures, as well as low bay fixtures above 150 W HID

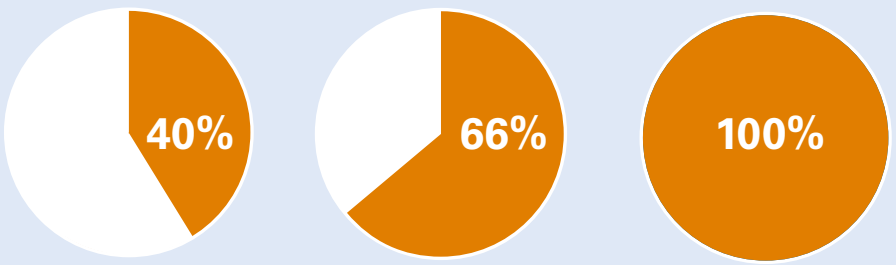
Model	Typical lumens with clear glass lens	Wattage	Lumens per watt	Equivalent fluorescent luminaire	Typical energy savings / lifetime
ExLin 3L-1	2,910	22 W	> 132	2 x 18 W	> 40%
ExLin 5L-1	5,610	44 W	> 127	2 x 36 W	> 40%
ExLin 5L-2	5,810	44 W	> 132	2 x 36 W	> 40%
ExLin 7L-2	8,600	67 W	> 127	2 x 58 W	> 40%
ExLin 10-2	11,230	89 W	> 127	> 2 x 58 W	> 40%

LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED?

The numbers say it all.

CEAG ExLin vs. x 36W Fluorescent



40% REDUCTION IN ENERGY COSTS

66% LOWER TOTAL COST OF OWNERSHIP

100% LAMP MAINTENANCE REDUCTION

Assumptions: Calculations based on overall life of the LED system. Energy cost of €.09 per kilowatt; 24 hour per day operation; labor rate of €75 each for 2 workers; average time for fixture maintenance of 2 hours.

CEAG ExLin series

Certifications and compliances

IECEx / ATEX Standards

EC-Type Examination Certificate
- BVS 18 ATEX E 037 X

IECEx-Certification of conformity
- IECEx BVS 18.0028X

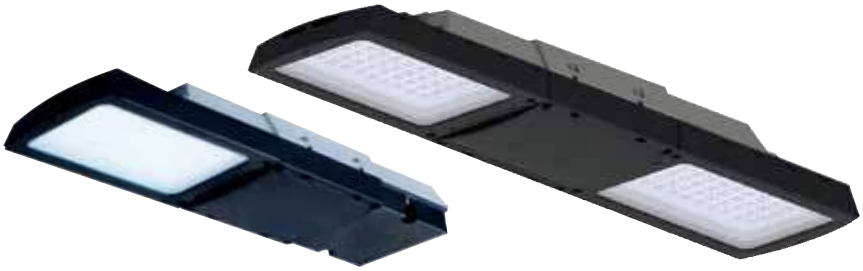
Marking accd. to 2014/34/EU
- Ex II 2G Ex eb ib op is q IIC T4/T5 Gb
- Ex II 2D Ex tb op is IIIC T80/115°C Db

Marking accd. to IECEx
- Ex eb ib op is q IIC T4 Gb
- Ex tb op is IIIC T80/115°C Db

Permissible ambient temperature, depending on configuration
- -40°C up to +55°C* for ExLin 3L, 5L, 7L
- -40°C up to +45°C* for ExLin 10L

Degree of protection accd. to EN 60529
- IP66/67

IK-class according to IEC/EN 62262
- IK10



3L-1 and 5L-1 models

5L-2, 7L-2, 10L-2 models

1

LED system

- Light colour / CRI: 5000K / 70 and 80 CRI and 4000K / 80 CRI
- Optics: Standard, narrow beam, wide beam.

Fixture life (IEC 62722)

LED
- L90 ~100,000 h at ta = +25 °C
- L85 ~75,000 h at ta = +55 °C

Control gear
- C5 ~100,000 h at ta = +25 °C
- C10 ~75,000 h at ta = +55 °C

Standard materials

- Fixture enclosure - Glassfibre reinforced polyester
- LED module cover - toughened glass or plastic-laminated glass, clear or opaque

Dimensions and weights

ExLin 3L-1 and 5L-1
- 770x201x115 mm
- 6.7 kg

ExLin 5L-2, 7L-2 and 10L-2
- 931x201x115 mm
- 8.0 kg

* Up to +50°C for 3L-1and 5L-2 with through wiring and plastic cable glands. Up to +45°C for 5L-1 and 7L-2 with through wiring and plastic cable glands.

Electrical ratings

Model	ExLin 3L-1	ExLin 5L-1 / 5L-2	ExLin 7L-2	ExLin 10L-2
Voltage**	110 up to 277 V AC/DC	110 up to 277 V AC/DC	110 up to 277 V AC/DC	220-277 V AC/DC
Power consumption	22 W	44 W	67 W	88 W
Lumens (clear glass cover) †	2910 lm	5610 / 5810 lm	8600 lm	11230 lm
Lumens (frosted glass cover) †	2490 lm	4940 / 4960 lm	7370 lm	9900 lm
Frequency	0/50 - 60 Hz	0/50 - 60 Hz	0/50 - 60 Hz	0/50 - 60 Hz
Inrush current	5 A for 1 ms	5 A for 1 ms	9 A for 1 ms	9 A for 1 ms
Power factor cos ψ @ 230 V	≥ 0.92	≥ 0.95 ≥	0.95	≥ 0.98
Circuit	EVG	EVG	EVG	EVG
Protection class	I	I	I	I
Immunity to surge voltages according to EN6100-4-5	4 kV, L-N and L-PE	4 kV, L-N and L-PE	4 kV, L-N and L-PE	4 kV, L-N and L-PE
THD @230V	8%	5%	5%	5%

** Voltage for V-CG-S models: 220-254 V AC / 195-250 V DC

† Lumen values apply to 5000 K light colour, 70 CRI fixtures. Lumen output may vary slightly for different models.

CEAG ExLin series

Ordering information

Part number example

ExLin 5L-1 G C S 7 50 T1 1/6 M25K

CEAG ExLin linear, 5300 lumens, glass lens, clear lens, standard light beam, >70 CRI, 5000K, Type 2410-4 terminals, single-ended wiring, M25 plastic cable gland

ExLin 5L-1 G C S 7 50 T1 1/6 M25K

1

Version / LED modules

3L-1	2750 lm single sided
5L-1	5300 lm single sided
5L-2	5480 lm double sided
7L-2	8120 lm double sided
10L-2	10600 lm double sided

Emergency light function

BLANK	Standard, without em. Lighting
V-CG-S	with V-CG-S functionality*
NE+	see page 1.1.11

Protective cover material

G	Glass
F	Glass laminated with splitter protection foil

Protective cover type

C	Clear
F	Opaque (Frosted)

Light distribution

S	Standard
N	Narrow beam
W	Wide beam
R	Stray ligth protection grid

CRI

7	>70
8	>80

CCT

30	3000 K
40	4000 K
50	5000 K

Terminals

T1	Type 2410-4 max 6 mm²
T3	Push-type 5-pole max 4 mm²
XX	On request

Through wiring

1/6	Single-ended
2/6	Twin-ended

Cable gland / thread

M25K	M25 plastic glands
M20M	M20 metallic threads
M25M	M25 metallic threads

* Not available for 10L-2

Additional terminal, CCT and CRI options available. Please consult factory or authorized Eaton's Crouse-Hinds Division sales representative.

Example: ExLin	5L-1 G C S 7 50 T1 1/6 M25K	Order-No.: Key	Example Order-No.: 12300 1 4 0 101	Example: ExLin description
ExLin	3L-1	xxxxx x 2 x xxx		
ExLin	5L-1	xxxxx x 4 x xxx	xxxxx x **4** x xxx	**5300lm single sided**
ExLin	5L-2	xxxxx x 5 x xxx		
ExLin	7L-2	xxxxx x 7 x xxx		
ExLin	10L-2	xxxxx x 9 x xxx		
ExLin	G	12300 x x x xxx	**12300** x x x xxx	**Standard, glass cover**
ExLin	F	12301 x x x xxx		
ExLin	V-CG-S G	12310 x x x xxx		
ExLin	V-CG-S F	12311 x x x xxx		
ExLin	C S	xxxxx x x 0 xxx	xxxxx x x **0** xxx	**Clear cover, standard light beam**
ExLin	C N	xxxxx x x 1 xxx		
ExLin	C W	xxxxx x x 2 xxx		
ExLin	C R	xxxxx x x 4 xxx		
ExLin	F S	xxxxx x x 5 xxx		
ExLin	F N	xxxxx x x 6 xxx		
ExLin	F W	xxxxx x x 7 xxx		
ExLin	750	xxxxx 1 x x xxx	xxxxx **1** x x xxx	**CRI >70, CCT 5000 K**
ExLin	740	xxxxx 2 x x xxx		
ExLin	850	xxxxx 3 x x xxx		
ExLin	840	xxxxx 4 x x xxx		
ExLin	1/6 M25K	xxxxx x x x 101	xxxxx x x x **101**	**Single ended wiring with M25 plastic glands**
ExLin	2/6 M25K	xxxxx x x x 103		
ExLin	1/6 M20M	xxxxx x x x 109		
ExLin	2/6 M20M	xxxxx x x x 111		
ExLin	1/6 M25M	xxxxx x x x 609		
ExLin	2/6 M25M	xxxxx x x x 611		

CEAG ExLin NE+

Certifications and compliances:

IECEx / ATEX Standards:

EC-Type Examination Certificate
- BVS 18 ATEX E 037 X

IECEx-Certification of conformity
- IECEx BVS 18.0028X

Marking accd. to 2014/34/EU
- Ex II 2G Ex eb ib mb op is q IIC T4/T5 Gb
- Ex II 2D Ex tb op is IIIC T80/115°C Db

Marking accd. to IECEx
- Ex eb ib mb op is q IIC T4 Gb
- Ex tb op is IIIC T80/115°C Db

Permissible ambient temperature, depending on configuration
- -40 °C up to +45 °C* for ExLin NE+ 3L, 5L, specified data 0 °C up to +45 °C

Degree of protection accd. to EN 60529
- IP66/67

IK-class according to IEC/EN 62262
- IK10

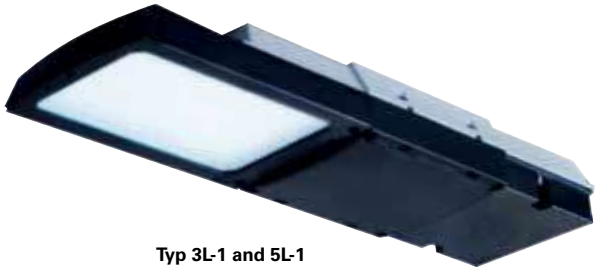
LED system:

- Light colour / CRI: 5000K / 70 and 80 CRI and 4000K / 80 CRI
- Optics: Standard, narrow beam, wide beam.

Battery set

- LiFePO4 with LED display and monitoring by micro processor

* Up to +40 °C with through wiring.



Typ 3L-1 and 5L-1

Fixture life (IEC 62722):

LED
- L90 ~100,000 h at ta = +25 °C
- L85 ~75,000 h at ta = +55 °C

Control gear
- C5 ~100,000 h at ta = +25 °C
- C10 ~75,000 h at ta = +55 °C

Standard materials:

- Fixture enclosure - Glassfibre reinforced polyester
- LED module cover - toughened glass or plastic-laminated glass, clear or opaque

Dimensions and weights:

ExLin 3L-1 and 5L-1
- 770x201x115 mm
- 8.3 kg

Electrical ratings:

Model	ExLin 3L-1 NE+	ExLin 5L-1 NE+
Voltage	110 up to 254 V AC	110 up to 254 V AC
Power consumption Ø	23 W	45 W
Lumens (clear glass cover) †	2910 lm	5610 lm
Lumens (frosted glass cover) †	2490 lm	4940 lm
Lumens in emergency mode †	2000 lm (1.5 h) 1000 lm (3 h)	2000 lm (1.5 h) 1000 lm (3 h)
Frequency	50 - 60 Hz	50 - 60 Hz
Inrush current	5 A for 1 ms	5 A for 1 ms
Power factor cos ψ @ 230 V	≥ 0.92	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Immunity to surge voltages according to EN6100-4-5	4 kV, L-N and L-PE	4 kV, L-N and L-PE
THD @230V	8%	5%

† Lumen values apply to 5000K light colour, 70 CRI fixtures. Lumen output may vary slightly for different models.

CEAG ExLin NE+

Ordering information

Part number example

ExLin 3L-1 NE+ G C S 7 50 T1 1/6 M25K

CEAG ExLin linear, 5300 lumens, glass lens, clear lens, standard light beam, >70 CRI, 5000K, Type 2410-4 terminals, single-ended wiring, M25 plastic cable gland

ExLin 3L-1 NE+ G C S 7 50 T1 1/6 M25K

1

Version / LED modules

3L-1	2910 lm single sided
5L-1	5610 lm double sided

Emergency light function

NE+	with selfcontained battery

Protective cover material

G	Glass
F	Glass laminated with splitter protection foil

Protective cover type

C	Clear
F	Opaque (Frosted)

Light distribution

S	Standard
N	Narrow beam
W	Wide beam
R	Stray ligth protection grid

CRI

7	>70
8	>80

CCT

30	3000 K**
40	4000 K
50	5000 K

Terminals

T1	Type 2410-4 max 6 mm²
T3	Push-type 5-pole max 4 mm²
XX	On request

Through wiring

1/6	Single-ended
2/6	Twin-ended

Cable gland / thread

M25K	M25 plastic glands
M20M	M20 metallic threads
M25M	M25 metallic threads

Additional terminal, CCT and CRI options available. Please consult factory or authorized Eaton's Crouse-Hinds Division sales representative

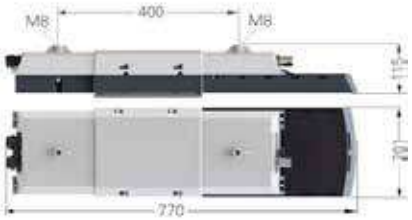
** on request

Example: ExLin NE+	3L-1 NE+ G C S 7 50 T1 1/6 M25K	Order-No.: Key	Example Order-No.: 12320 1 2 0 101	Example: ExLin description
ExLin	3L-1	xxxxx x 2 x xxx	xxxxx x **2** x xxx	
ExLin	5L-1	xxxxx x 4 x xxx		**5300lm single sided**
ExLin	NE+ G	12320 x x x xxx	**12320** x x x xxx	**Standard, glass cover**
ExLin	NE+ F	12321 x x x xxx		
ExLin	C S	xxxxx x x 0 xxx	xxxxx x x **0** xxx	**Clear cover, standard light beam**
ExLin	C N	xxxxx x x 1 xxx		
ExLin	C W	xxxxx x x 2 xxx		
ExLin	C R	xxxxx x x 4 xxx		
ExLin	F S	xxxxx x x 5 xxx		
ExLin	F N	xxxxx x x 6 xxx		
ExLin	F W	xxxxx x x 7 xxx		
ExLin	750	xxxxx 1 x x xxx	xxxxx **1** x x xxx	**CRI >70, CCT 5000 K**
ExLin	740	xxxxx 2 x x xxx		
ExLin	850	xxxxx 3 x x xxx		
ExLin	840	xxxxx 4 x x xxx		
ExLin	1/6 M25K	xxxxx x x x 101	xxxxx x x x **101**	**Single ended wiring with M25 plastic glands**
ExLin	2/6 M25K	xxxxx x x x 103		
ExLin	1/6 M20M	xxxxx x x x 109		
ExLin	2/6 M20M	xxxxx x x x 111		
ExLin	1/6 M25M	xxxxx x x x 609		
ExLin	2/6 M25M	xxxxx x x x 611		

CEAG ExLin NE+

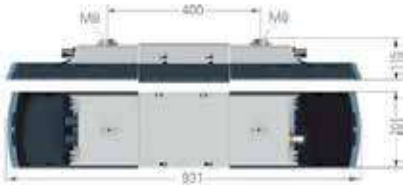
Dimensions (mm)

CEAG ExLin
3L-1 and 5L-1:



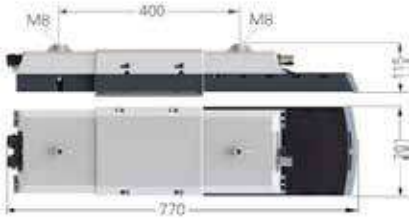
Weight: 6.7 kg

CEAG ExLin
5L-2, 7L-2 and 10L-2:



Weight: 8.0 kg

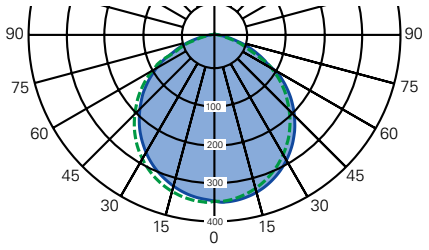
CEAG ExLin NE+
3L-1 and 5L-1:



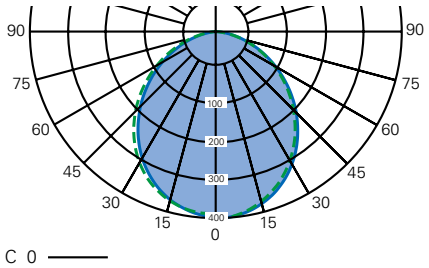
Gewicht: 8.3 kg

Polar curve

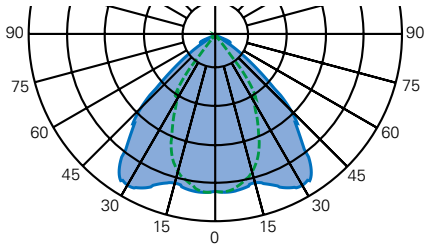
CEAG ExLin / ExLin NE+
standard optic with clear cover



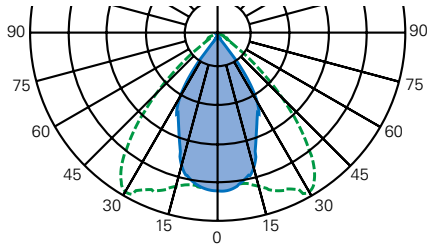
CEAG ExLin / ExLin NE+
standard optic with opaque cover



CEAG ExLin / ExLin NE+
wide beam



CEAG ExLin / ExLin NE+
narrow beam

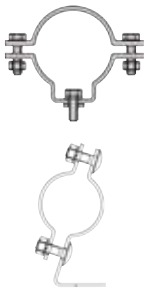


CEAG ExLin NE+

Mounting accessories (order separately)

Pipe Clamps

Ordering Code	Description
2 2480 462 000 *	2 pcs. R12 (1 1/4"), Ø 38 - 42 mm with screws and polyamide washer, hot-dip galvanized
2 2480 472 000 *	2 pcs. R22 (1 1/2"), Ø 47 - 51 mm with screws and polyamide washer, hot-dip galvanized
2 2480 482 000 *	2 pcs. R32 (2"), Ø 56 - 60 mm with screws and polyamide washer, hot-dip galvanized
NOR 000 005 009 211	1 pcs. A8 (1 1/2") D 47 - 51 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized
NOR 000 005 009 229	1 pcs. A9 (2") D 56 - 60 mm for AB 12.. with screws and polyamide washer, hot-dip galvanized
2 2480 550 010	2 pcs. Two-part, for pipe mounting LB 48 - FT with screws and polyamide washer, hot-dip galvanized



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Fixing Accessories

Ordering Code	Description
2 2480 550 013	2 pcs. luminaire mounting bracket with 30° angle, wall mounting LH 30 - FT, hot-dip galvanized
2 2480 550 014	2 pcs. luminaire mounting bracket with 45° angle, wall mounting LH 45 - FT, hot-dip galvanized
2 2480 000 122	2 pcs. wall mounting bracket with 30° angle, with screws and polyamide washer, hot-dip galvanized
NOR 000 005 009 196	1 pcs. wall bracket 45° with screws and polyamide washer, hot-dip galvanized
2 2483 027 000	1 pcs. wall bracket W 27, 15°, for pole-mounting fitting Ø 42 mm, hot-dip galvanized
2 2480 092 000	2 pcs. ceiling mounting bracket D 92 with screws and polyamide washer, stainless steel
2 2480 550 011	2 pcs. C-bracket for luminaire mounting LAB-C50 - ER, stainless steel
2 2480 054 000	2 pcs. hexagon screw M8 x 20 for luminaire mounting, with polyamide washer
2 2480 002 000 *	2 pcs. eye bolt M8 for luminaire mounting, hot-dip galvanized
22480600001	Pole mounting adapter - 42-49mm diameter
22480600002	Pole mounting adapter - 52-62mm diameter
2 2480 550 022 *	2 pcs. wall mounting bracket with adjustable angle (15° step)

* Also available in stainless steel. Consult factory for ordering code.

Metallic cable glands (order separately)

ADE-1F2

Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M201NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0

ADE-4F

			Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
Catalog #	Metric Thread Size	Cable Types	Min.	Max.	Min.	Max.	Min.	Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20		7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3

ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

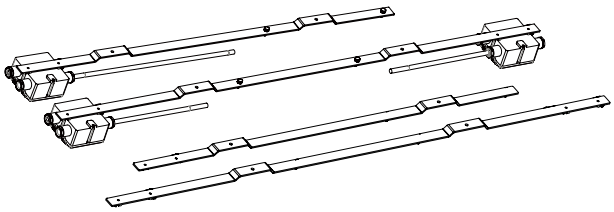
CEAG ExLin NE+

Adapter kits for eLLK retrofits (order separately)

CEAG ExLin LED fixtures are designed with the same fixing point as Crouse-Hinds series CEAG eLLK 2x18W fixtures, making retrofits simple and cost-effective.

Adapter kits allow for easy replacement of 2x36W and 2x58W eLLK fixtures without changing already-installed cables or mounting brackets. Adapter kits include a metal bar, junction box and connection cables between the juntion box and ExLin fixture.

Ordering Code	Description
2 2300 500 001	2 pcs. ExLin adapter kit for retrofitting to eLLK 2x36 W fixture - includes metal bar, junction box, plastic glands and connection cable between box and fixture
2 2300 500 002	1 pcs. ExLin adapter kit for retrofitting to eLLK 2x58W fixture - includes metal bar, two junction boxes, plastic glands and connection cable between boxes and fixture
3 2300 500 001	1 pcs. ExLin mounting metal bar for retrofitting to eLLK 2x36 W fixture - without junction box and connection cable
3 2300 500 002	1 pcs. ExLin mounting metal bar for retrofitting to eLLK 2x58W fixture - without junction box and connection cable - without junction box and connection cable



See for yourself how easy it is to upgrade your eLLK lighting installation to our state-of-the-art ExLin LED solution!

Visit eaton.com/ellk-to-exlin to watch the fast and simple retrofit process using our adapter kit

eLLK 92 Ex LED linear lighting

eLLK/M 92 LED 400A / eLLK/M 92 LED 800A / eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE (Zone 1, 2, 21, 22)

The efficient solution for your explosion-protected lighting concept

The explosion-protected linear light fittings series eLLK/M 92 LED 400A/800A combines the latest LED technology with the protection of a reliable housing solution. As a result, this light fitting series is the ideal solution for lighting tasks in harsh and hazardous environments.

Latest lighting technology for a proven lighting concept

As a leading manufacturer of explosion- protected luminaires, we have redesigned our revolutionary LED module to fit into the eLLK/M... linear light fitting series.

With the new Gen2 modules, our LED linear luminaires are even more efficient and brighter than before. In addition, they now also have an extended temperature range from -25 °C to +55 °C. The new eLLK-2/4-C/W LED module can also be used for converting existing eLLK/M 92 light fittings with fluorescent lamps and an electronic ballast (EVG 09) into LED linear light fittings in just few simple steps.

The LED system design and certification allow the use in the proved Ex e technology of the eLLK/M 92 light fittings. With the use of our electronic ballast EVG 09 as the driver, we can rely on more than 20 years successful and safe operation in harsh and hazardous environments.

The advantages of the LED module:

- Environmentally friendly, no mercury
- Shock and vibration resistant, no filament or glass to break
- Immediate start, instant full illumination
- No life time reduction due to switching cycles
- Reduced disposal costs

Energy and cost savings

- >20% energy savings compared to fluorescent lamps
- Additional energy savings due to operation on demand (night/day and presencemode)
- Reduced maintenance costs compared to standard fluorescent lamps
- Lower overall cost of ownership

Operating life

- The expected operating life of this LED module is up to 110,000 hours. This is a significant improvement compared to traditional light sources.
- Heat sinks are specifically engineered to remove heat from the LEDs to ensure a longer life, better lumen output and accurate colour temperature.
- Fully operational with V-CG-S modules for connection to CEAG central battery emergency lighting systems.
- Also available as self-contained emergency luminaire eLLK 92 LED ... NE.

Easy and cost-effective installation

Like all the luminaires in the eLLK lighting family, our standard LED linear luminaires feature a single-ended throughwiring, which, in conjunction with the generously dimensioned terminal compartment, allows a cost-effective installation. The double- sided locking facility with 10 or 20 latch points allows the protective bowl to be hinged on both sides, meaning that the fitting can be mounted on either side.

Features

- >20 % energy savings compared to similar fluorescent luminaires
- Special LED design with direct light distribution
- Proved technology. The EVG 09 has been used as a driver for more than 20 years
- Various light colour temperatures available - 4000 K / 5700 K
- Selected LED chips with perfect binning, low power loss and long life
- Ex-e technology for easy maintenance
- For ambient temperatures from -25 °C up to +55 °C

eLLK 92 Ex LED linear lighting

eLLK/M 92 LED 400A / eLLK/M 92 LED 800A / eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE (Zone 1, 2, 21, 22)

Ordering details

Type	Version	Terminals	Throughwiring Single ended	Throughwiring Twin ended	Cable gland/ thread	Threaded plug	Blanking plug	Order No for 4000 K	Order No for 5700 K
eLLK 92 LED 400A									
eLLK 92 LED 400A	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2265 505 101	1 2265 504 101
eLLK 92 LED 400A	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2265 505 103	1 2265 504 103
eLLK 92 LED 400A	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2265 505 109	1 2265 504 109
eLLK 92 LED 400A	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2265 505 111	1 2265 504 111
eLLK 92 LED 800A									
eLLK 92 LED 800A	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2266 505 101	1 2266 504 101
eLLK 92 LED 800A	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2266 505 103	1 2266 504 103
eLLK 92 LED 800A	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2266 505 109	1 2266 504 109
eLLK 92 LED 800A	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2266 505 111	1 2266 504 111
eLLM 92 LED 400A/800A									
eLLM 92 LED 400A	1/3-1K	1 x 3	–	–	1 x M25, Plastic			1 2268 505 101	1 2268 504 101
eLLM 92 LED 800A	1/3-1K	1 x 3	–	–	1 x M25, Plastic			1 2269 505 101	1 2269 504 101
eLLK 92 LED 400A NE 3)									
eLLK 92 LED 400A NE	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2260 588 101	1 2260 587 101
eLLK 92 LED 400A NE	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2260 588 103	1 2260 587 103
eLLK 92 LED 400A NE	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2260 588 109	1 2260 587 109
eLLK 92 LED 400A NE	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2260 588 111	1 2260 587 111
eLLK 92 LED 400A NE	1/6-1M [1]	1 x 6	x	–	2 x M25, Metal thread	2 x M25		1 2260 588 609	1 2260 587 609
eLLK 92 LED 400A NE	2/6-2M [1]	2 x 6	–	x	4 x M25, Metal thread	4 x M25		1 2260 588 611	1 2260 587 611
eLLK 92 LED 800A NE 3)									
eLLK 92 LED 800A NE	1/6-1K	1 x 6	x	–	2 x M25, Plastic		1	1 2261 588 101	1 2261 587 101
eLLK 92 LED 800A NE	2/6-2K	2 x 6	–	x	2 x M25, Plastic	2 x M25		1 2261 588 103	1 2261 587 103
eLLK 92 LED 800A NE	1/6-1M [1]	1 x 6	x	–	2 x M20, Metal thread	1 x M20		1 2261 588 109	1 2261 587 109
eLLK 92 LED 800A NE	2/6-2M [1]	2 x 6	–	x	4 x M20, Metal thread	2 x M20		1 2261 588 111	1 2261 587 111
eLLK 92 LED 800A NE	1/6-1M [1]	1 x 6	x	–	2 x M25, Metal thread	2 x M25		1 2261 588 609	1 2261 587 609
eLLK 92 LED 800A NE	2/6-2M [1]	2 x 6	–	x	4 x M25, Metal thread	4 x M25		1 2261 588 611	1 2261 587 611
eLLM 92 LED 400A NE 3)									
eLLM 92 LED 400A NE	1/3-1K	1 x 3	–	–	1 x M25, Plastic		1	2273 588 101	1 2273 587 101

Scope of delivery including LED-module, without fixing material. Metal cable glands see catalogue part 2: 2.3.12 ff

1) with metal thread, without cable gland / 2) for operation with CEAG-emergency supply system / 3) self-contained emergency light fitting

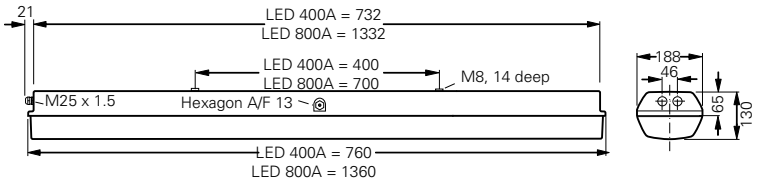
Type		Order No for 4000 K	Order No for 5700 K
eLLK-2-x	LED module for eLLK/M 92 018/18 incl. conversion kit for standard fluorescent light fittings	CCL 1635 129	CCL 1635 127
eLLK-4-x	LED module for eLLK/M 92 036/36 incl. conversion kit for standard fluorescent light fittings	CCL 1635 130	CCL 1635 128
eLLK-2-x	LED module for eLLK/M 92 018/18 LED Ready / eLLK 92 LED 400A	CCL 1634 699	CCL 1634 697
eLLK-4-x	LED module for eLLK/M 92 036/36 LED Ready / eLLK 92 LED 800A	CCL 1634 700	CCL 1634 698
Diffuser	Diffuser Cover for ellk 400A (1pc needed) or ellk 800A (2pcs needed)	CHLPL1403-01	
eLLK-2-x-F	LED module for eLLK/M 92 018/18 incl. conversion kit for standard fluorescent light fittings with diffuser	CCL 1666 002	CCL 1666 000
eLLK-4-x-F	LED module for eLLK/M 92 036/36 incl. conversion kit for standard fluorescent light fittings with diffuser	CCL 1666 003	CCL 1666 001
eLLK-2-x-F	LED module for eLLK/M 92 018/18 LED Ready / eLLK 92 LED 400A with diffuser	CCL 1666 006	CCL 1666 004
eLLK-4-x-F	LED module for eLLK/M 92 036/36 LED Ready / eLLK 92 LED 800A with diffuser	CCL 1666 007	CCL 1666 005

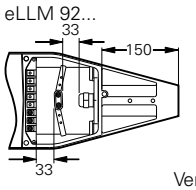
eLLK 92 Ex LED linear lighting

eLLK/M 92 LED 400A / eLLK/M 92 LED 800A / eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE (Zone 1, 2, 21, 22)

Dimensions (mm)

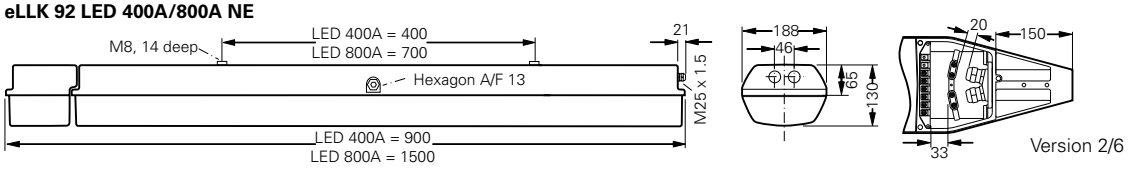
eLLK 92 LED 400A/800A





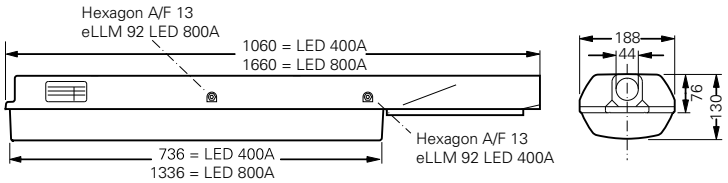
Version 1/3

eLLK 92 LED 400A/800A NE



Version 2/6

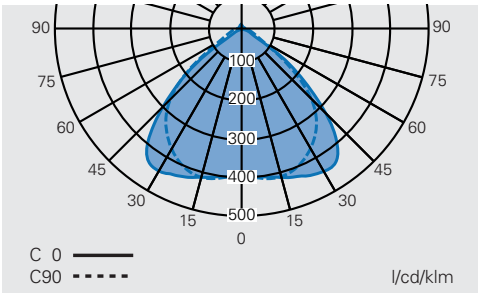
eLLM 92 LED 400A/800A



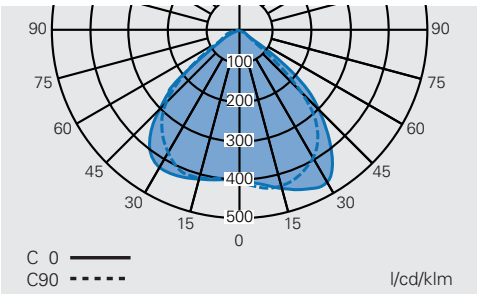
Dimensions in mm

Polar curve

Polar curve eLLK/M 92 LED 400A/800A



Polar curve eLLK/M 92 LED 400A/800A NE in emergency mode



eLLK 92 LED 400A/800A

Technical data

	eLLK/M 92 LED 400A	eLLK/M 92 LED 800A
EC-Type Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking accd. to 2014/34/EU	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66
Marking accd. to IECEx	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C	-25 °C up to +55 °C
IK-class according to IEC/EN 62262	IK 10 =^ 20 J	IK 10 =^ 20 J
Rated voltage	110 V - 254 V AC 110 V - 250 V DC	110 V - 254 V AC 110 V - 250 V DC
Power consumtion	29 W	57 W
Frequency	50 - 60 Hz	50 - 60 Hz
Life expectancy LED module	L 70 = 110.000 h at ta=25 °C L	70 = 110.000 h at ta=25 °C
Power factor cos ψ	≥ 0.95	≥ 0.95
Circuit	EVG	EVG
Protection class	I	I
Immunity to surge voltagesaccording to EN 61000-4-5	4 kV, L - N and L - PE	4 kV, L - N and L - PE
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp / Illuminant	ellk-2-C - 2 x 13 W	ellk-2-C - 2 x 26 W
Light colour	5700K/4000K	5700K/4000K
Rated luminous flux of the luminaire (typical, ± 10 %) [2)]	2700 lm (5700 K) / 2565 lm (4000 K)	5350 lm (5700 K) / 5085 lm (4000 K)
Dimensions (L x W x H)	760 x 188 x 130 mm (eLLK) 1060 x 188 x 130 mm (eLLM)	1360 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	7.2 kg (eLLK) / 9.2 kg (eLLM)	11.1 kg (eLLK) / 13.1 kg (eLLM)
Cable glands / gland plates / enclosure drilling	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal thread[1)]	Ex-e cable glands M25 x 1.5 (plastic), option: M20/M25 x 1.5 metal thread[1)]
Degree of protection accd. to EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonat	Polycarbonat

1) with dustcover if entry/thread is not closed

2) ~15% less output with optional diffuser

eLLK/M 92 LED 400A NE / eLLK 92 LED 800A NE

Technical data

	eLLK/M 92 LED 400A NE	eLLK 92 LED 800A NE
EC-Tye Examination Certificate	BVS 09 ATEX E 034	BVS 09 ATEX E 034
IECEx Certificate of Conformity	IECEx BVS 09.0033	IECEx BVS 09.0033
Marking to 2014/34/EU	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66	Ⓔx II 2 G Ex db eb mb op is IIC T4 Gb Ⓔx II 2 D Ex tb IIIC T80 °C Db IP66
Marking to IECEx	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db	Ex db eb mb ib op is IIC T4 Gb Ex tb IIIC T80 °C Db
Permissible ambient temperature	-25 °C up to +55 °C (specified data: -5 °C up to +35 °C)	-25 °C up to +55 °C (specified data: -5 °C up to +35 °C)
IK-class according to IEC/EN 62262	IK 10 =^ 20 J	IK 10 =^ 20 J
Battery	Battery set with 7 Ah-NC battery,with LED display and monitoring via microprocessor	Battery set with 7 Ah-NC battery,with LED display and monitoring via microprocessor
Rated voltage	120 V - 254 V AC	120 V - 254 V AC
Power consumtion	34 W	62 W
Frequency	50 - 60 Hz	50 - 60 Hz
Charging duration	≥ 14 h	≥ 14 h
Lifetime LED module	L 70 = 110.000 h at ta=25 °C	L 70 = 110.000 h at ta=25 °C
Power factor cos ψ	≥ 0,95	≥ 0,95
Circuit	EVG with emergency lighting supply	EVG with emergency lighting supply
Insulation class	I	I
Illuminance at measurement plane	comparable with luminaires for fluorescent lamps	comparable with luminaires for fluorescent lamps
CRI	> 80	> 80
Lamp/Illuminant	ellk-2-C - 2 x 13 W	ellk-4-C - 2 x 26 W
Light colour	5700K/4000K	5700K/4000K
Rated luminous flux of the luminaire[2] (typical, ± 10 %)	2700 lm (5700 K) / 2565 lm (4000 K)	5350 lm (5700 K) / 5085 lm (4000 K)
Rated luminous flux in emergency operation of the luminaire (one LED-row) 1,5 h[2]	1282 lm (5700 k) / 1217 lm (4000 K)	1739 lm (5700 k) / 1653 lm (4000 K)
Rated luminous flux in emergency operation of the luminaire (one LED-row) 3 h[2]	877 lm (5700 k) / 834 lm (4000 K)	1204 lm (5700 k) / 1144 lm (4000 K)
Rated emergency operating time	1,5 h or 3 h, adjustable on site	1,5 h or 3 h, adjustable on site
luminous flux ratio normal/emergency operation (one LED row)	95 % (1,5 h) - 65 % (3 h)	65 % (1,5 h) - 45 % (3 h)
Dimensions (L x W x H)	900 x 188 x 130 mm / 1500 x 188 x 130 mm	900 x 188 x 130 mm / 1500 x 188 x 130 mm
Connecting terminals	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal	L1, L2, L3, L, N, PE; max. 2 x 6 mm^2 per terminal
Enclosure colour	RAL 7035 light grey	RAL 7035 light grey
Enclosure material	Glass-fibre reinforced polyester	Glass-fibre reinforced polyester
Weight	10.3 kg	14.4 kg
Cable glands / Gland plates / Enclosure drilling	Ex-e-cable glands M25 x 1,5 (plastic), option: M20 x 1,5 metal thread [1]	Ex-e-cable glands M25 x 1,5 (plastic), option: M20 x 1,5 metal thread [1]
Degree of protection accd. EN 60529	IP66/IP67	IP66/IP67
Protective cover / protective bowl	Polycarbonate	Polycarbonate

1) with dustcover if entry/thread is not closed

HPL pendant LED lighting-hazardous area

Product introduction

The Zone 1 HPL product series LED luminaires using high-quality international brand LED chips, have extremely long lifespan. Multiple versions of the HPL LED are available, providing ideal solutions for a wide range of applications.

HPL provides the same durability and reliability of a traditional HID fixture, coupled with the low cost of ownership and energy efficiency of Crouse-Hinds LED technology. High-performance LEDs and a solid-state electronic driver provide light where you need it, at a fraction of the operating costs of HID lighting technologies.

Suitable for Zone 1 & Zone 2 Ex-gas and Zone 21/22 Ex-dust hazardous area, such as heavy industrial, chemical, petrochemical or pharmaceutical facilities, platforms, shipyard, electric power, loading docks, wastewater treatment, paper mill.

The Zone 2 HPL product is also available to cater for customer's specific application environment as an ideal option.

Product features

- **High efficient & Energy saving**
  - Up to 66% energy-saving comparing to HID Luminaire.

Model	Nominal lumens	Wattage	Equivalent HID Luminaire	Energy Savings
HPL-3L	Approx.3000	Approx.30W	70W-100W	Up to 58%
HPL-5L	Approx.5000	Approx.50W	100W-150W	Up to 66%
HPL-8L	Approx.8000	Approx.80W	150W-175W	Up to 60%

- **Industry-best safety reliability**
  - Extremely low profile & light weight
  - Copper free aluminum housing, tempered and impact resistant glass globe, heat & corrosion proof
  - IP66 protection
  - Suitable for Zone 1 & Zone 2, Zone 21 & Zone 22 both gas and dust Ex - hazardous area

- **Perfect temperature and optical performance for wide application**
  - Best T- rating: T6
  - Permissible temp. range:
    -40˚C~+40˚C/45˚C/50˚C(normal)
    -40˚C~+45˚C(EM)
  - Cold white 5700K & warm white 3000K are available

- **Anti shock and vibration**
- **Mercury-free & lead free, environment protection**
- **Instant ON/OFF**
- **Standard product provides pendant mount, optional U shape yoke mount provide the greatest mounting flexibility: wall mounting, ceiling mounting, pole mounting and etc.**
- **Rated life of 5 years at 55˚C provides long term, low-maintencnce operation.**

Ordering information

Product Type	Lumen Output[1)]	Color Temp.	System Watt	Input Voltage	Entry Threaded	Ex e Threaded Plug[2)]	Ambient Ta	Ta Code (Gas)	TC(Dust) Dust Temp.
HPL-3L-1M-S886-T3-1P-B6	3097lm	5700K	30W	100~240V AC 50/60Hz, 108~250V DC	2 x M20	1 x M20	-40˚C~+50˚C	T6	T80C
HPL-5L-1M-S886-T3-1P-B6	4929lm	5700K	50W		2 x M20	1 x M20	-40˚C~+50˚C	T6	T80C
HPL-8L-1M-S886-T3-1P-B6	7796lm	5700K	75W		2 x M20	1 x M20	-40˚C~+45˚C	T6	T80C
HPL-5L-D1-B6	4929lm	5700K	50W		2 x M20	1 x M20	-40˚C~+50˚C	T6	T80C
HPL-8L-D1-B6	7796lm	5700K	75W		2 x M20	1 x M20	-40˚C~+45˚C	T6	T80C
HPL-5L-1M-S886-T3-1P-B6-EM1[4)]	4929lm	5700K	50W		2 x M20	1 x M20	-40˚C~+45˚C	T6	T80C
HPL-3L-W-1M-S886-T3-1P-B6	2828lm	3000K	35W		2 x M20	1 x M20	-40˚C~+50˚C	T6	T80C
HPL-5L-W-1M-S886-T3-1P-B6	4772lm	3000K	60W		2 x M20	1 x M20	-40˚C~+50˚C	T6	T80C
HPL-6L-W-1M-S886-T3-1P-B6	5942lm	3000K	75W		2 x M20	1 x M20	-40˚C~+45˚C	T6	T80C

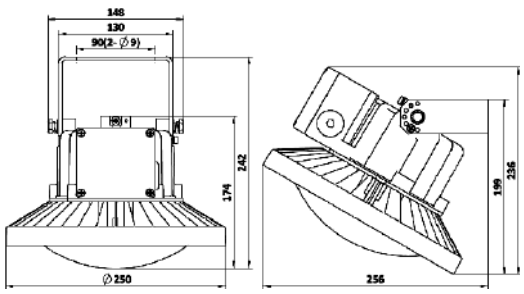
[1)] Tolerance +/- 10%
[2)] Standard version without cable gland. if need, please order separately
[3)] Contact your local sales representative for special requirements.
[4)] Emergency type can do with Zone 2 type specifically and contact sales representative for it.

HPL pendant LED lighting-hazardous area

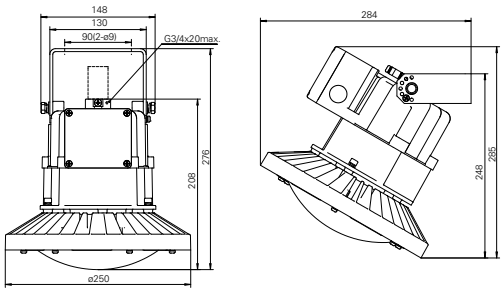
Technical data

EC-Type Examination Certificate	EPT 16 ATEX 2405X
IECEx-Certification of Conformity	IECEx NEP 20.0022X
GB Certificate	GYB20.1753X
Marking accd.to 94/9/EC	Ⓔx II 2 G Ex db eb mb IIC T6 Gb Ⓔx II 2 D Ex tb op is IIIC T80˚C Db
Marking accd. to IECEx	Ex db e mb IIC T6 Gb Ex tb IIIC T80˚C Db IP66
Marking accd. to GB	Ex d e mb IIC T6 Gb Ex tD A21 IP66 T80˚C
Power consumption	Refer to order information table
Rated voltage	AC 100V - 240V 50/60Hz; DC 108-250V
THD	<15%
Power factor	≥ 0.9
Cable entry	M20 as standard, M25 is available. 1 Ex e entry plugged
Terminal	Max 6 pole 6 mm^2, L, N, PE; solid: 0.5mm^2-6mm^2; flexible: 0.5mm^2-4mm^2
Permissible ambient temperature	-40˚C~+40˚C/45˚C/50˚C (Normal); -40˚C~+45˚C (EM)
Degree of protection	IP66
Insulation class	I
Dimension	Ø250 x 174 (mm)
Net weight	<5kg, <6.5kg (EM)
Emergency lumen output	EM1=1.5H, 30% output(only for 5L)

Dimension



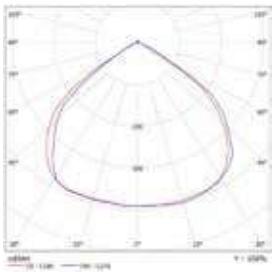
Normal version



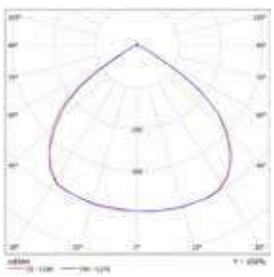
Emergency version

Polar curve

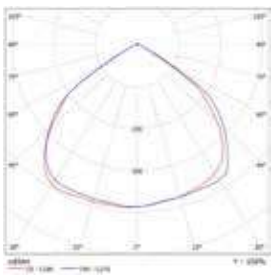
HPL-3L



HPL-5L



HPL-8L



HPLN LED lighting for hazardous areas

Product introduction

The hazardous rated HPLN LED luminaire is used for general lighting in areas where flammable or explosive vapors or gases are present.

The HPLN features a compact, high-efficacy design with custom optics to ensure maximum efficiency and mounting flexibility. It is designed for both pendant and floodlight application.

Model	Nominal* lumens	Wattage	HID Equivalent
HPLN-3L	3483	26	70W-100W
HPLN-5L	5323	40	100W-150W
HPLN-7L	6684	50	150W-175W
HPLN-9L	9574	70	175W-250W
HPLN-11L	11466	85	250W-450W
HPLN-15L	14783	110	400W
HPLN-21L	21128	163	600W
HPLN-25L	24229	190	600W-1000W

*tolerance±10%, nominal lumen data for 5700K,clear glass,wide bean angle

Application

- Locations requiring continuous and consistent light levels in extreme temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants, heavy industrial, chemical, petrochemical or pharmaceutical facilities, platforms, loading docks and tunnels etc.

Rated life of 5 years at 55°C provides long term, low-maintencnce operation.

HPLN LED benefits

- Instant illumination and strike
- Cold temperature operation/no warm up requirement
- Multiple mounting flexibility and easy maintenance
- Contains no mercury or other hazardous substance
- Shock-and vibration-resistant
- IP66 protection
- Ambient temperature: -40˚C to +55˚C

Standard materials

- Body and mounting modules – copper-free aluminum with C5M coating
- Lens-tempered and impact resistant glass globe
- Gaskets – silicone
- Guard – stainless steel

LED system

- Cold white 5700K,CRI70 as standard, optional: 2700k, 3000k, 4000K, 5000K
- 120˚ wide beam as standard, Narrow (25˚) / medium (60˚) beam optics as option
- Lumen efficiency up to 130 lm/w to save more energy

HPLN LED lighting for hazardous areas

Electrical rating

	3L	5L	7L	9L	11L	15L	21L	25L
Voltage range VAC	100~240	100~240	100~240	100~240	100~240	100~240	100~240	100~240
Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Input power (watts)*	26	40	50	70	85	110	163	190
Input amps at 100~240 VAC	0.8A max@100VAC 0.35A max@240VAC			1.3A max@100VAC 0.6A max@240VAC		1.6A max@100VAC 0.7A max@240VAC	2.6A max@100VAC 1.2A max@240VAC	
Power factor	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95	≥0.95
Voltage range VDC	127~250	127~250	127~250	127~250	127~250	127~250	127~250	127~250
THD	<10%	<10%	<10%	<10%	<10%	<10%	<10%	<10%

*1) Tolerance +/- 5%

Certifications and compliances

- Marking accd.to IECEx:
  Ex db eb mb op is IIC T4 Gb
  Ex tb op is IIIC T95˚C Db
- Marking accd.to 2014/34/EU:
  II 2 G Ex db eb mb op is IIC T4 Gb
  II 2 D Ex tb op is IIIC T95˚C Db
- Certificate No.
  IECEx PRE 19.0058X
  Presafe 19 ATEX 09286X
  IECEx_PRE_20.0006X

Weight

Model	Appr. kg
3L-11L	11kg
15L	14kg
21/25L	15kg

Ordering information

Part no.	Product type	T.amb	T code
CCL1753627	HPLN-3L-C3-20C-W	-40˚C~+55˚C	T4
CCL1753755	HPLN-5L-C3-20C-W		
CCL1753883	HPLN-7L-C3-20C-W		
CCL1754139	HPLN-11L-C3-20C-W		
CCL1754267	HPLN-15L-C3-20C-W		
CCL1754395	HPLN-21L-C3-20C-W		
CCL1754523	HPLN-25L-C3-20C-W		

HPLN LED lighting for hazardous areas

Ordering information

HPLN **-9L*** **-C3** **-20C** **-W**

Total lm	
3L	3483
5L	5323
7L	6684
9L	9574
11L	11466
15L	14783
21L	21128
25L	24229

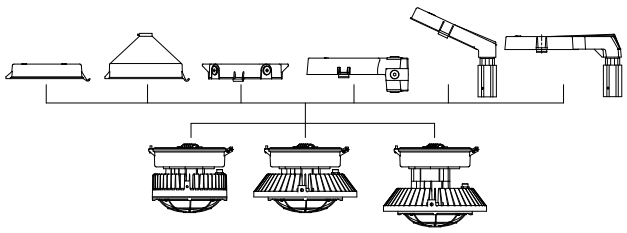
Color Temp.	
C3	5700K**

Mounting type	
J***	1-½" Stanchion, 25˚Angled
P***	1-½" Stanchion, Straight
20A	20mm Pendant
25A	25mm Pendant
20C	20mm Ceiling
25C	25mm Ceiling
20TW	20mm Wall
25TW	25mm Wall

Bean angle	
W	Wide(120˚)
M	Medium(60˚)
N	Narrow(25˚)

*tolerance±10%, nominal lumen data for 5700K,clear glass,wide bean angle
**5700K is standard version, if other option, pls contact Crouse-Hinds sales for details.
***with J and P stanchion mounting type, need to tell internal entry size
Contact your local sales representative for special requirements:foggy, guard...etc,.

Pendant Cone Ceiling Wall Stanchion



Tunnion

Stanchion mounting type

Safety Chain

Mounting type	Config	Part no
Ceiling with U bracket	3L-25L	CHR6196
		CCL1625591
Other mounting	3L-11L	CHR7005
	15L-25L	CCL1622490

Trunnion mounting bracket(for ceiling mounting only)

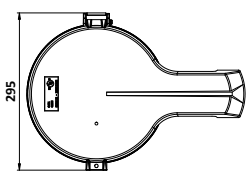
Part no	Config
CHLAS2182-06	Trunnion bracket for 3L-11L
CHLAS2183-06	Trunnion bracket for 15L
CHLAS2184-06	Trunnion bracket for 21L-25L

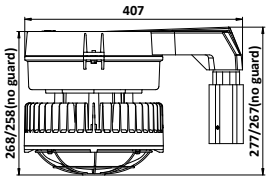
HPLN LED lighting for hazardous areas

Mounting options and dimensions
3- 11L

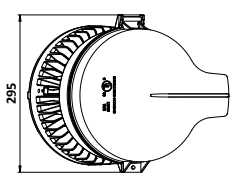
1

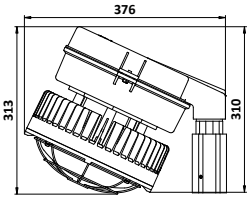
Stanchion – straight



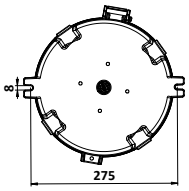


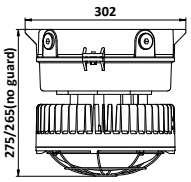
Stanchion – 25° angled



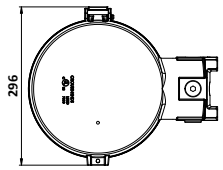


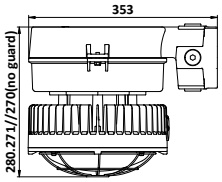
Ceiling



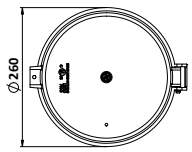


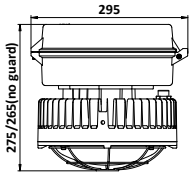
Wall



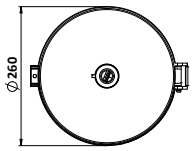


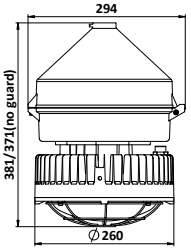
Pendant



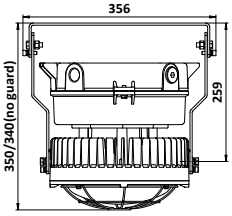


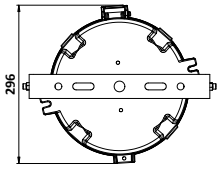
Cone pendant

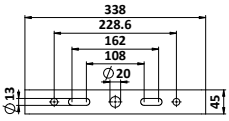




Trunnion

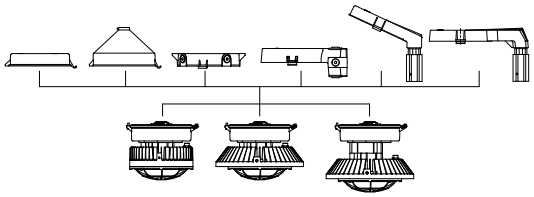






Mounting module series

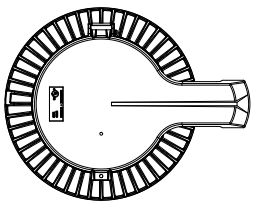
Pendant Cone Ceiling Wall Stanchion

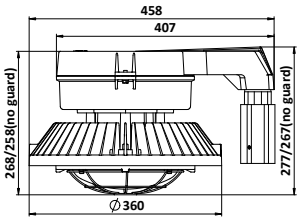


HPLN LED lighting for hazardous areas

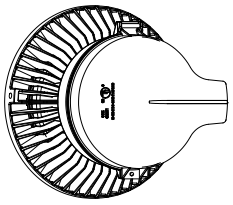
Mounting options and dimensions
15L

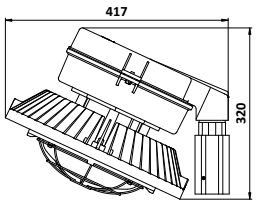
Stanchion – straight



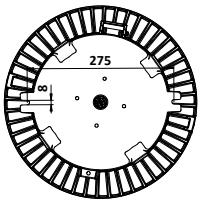


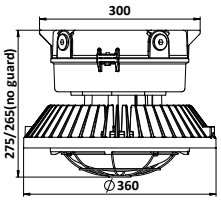
Stanchion – 25° angled



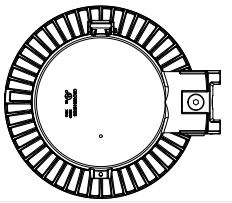


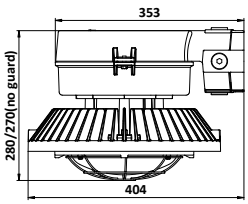
Ceiling



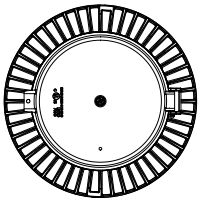


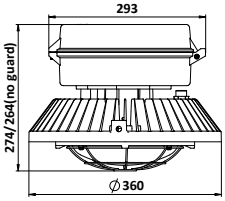
Wall



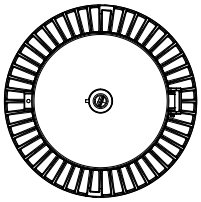


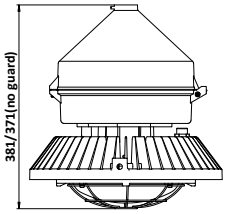
Pendant



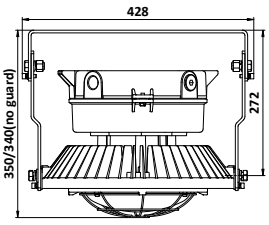


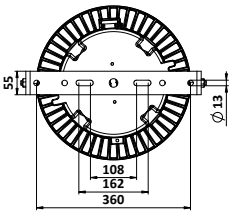
Cone pendant

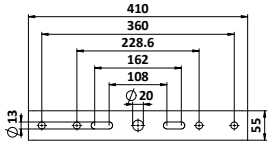




Trunnion

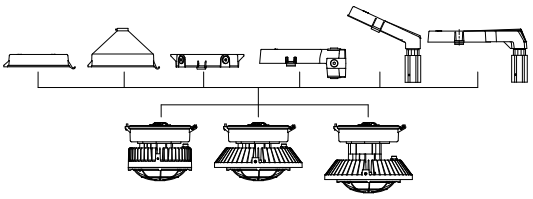






Mounting module series

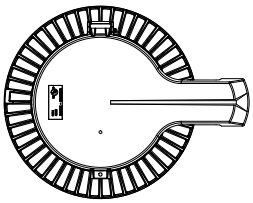
Pendant Cone Ceiling Wall Stanchion

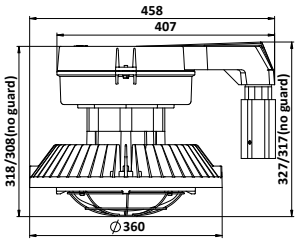


HPLN LED lighting for hazardous areas

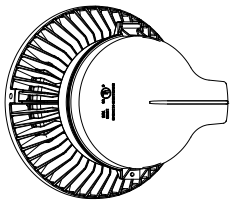
Mounting options and dimensions
21L/25L

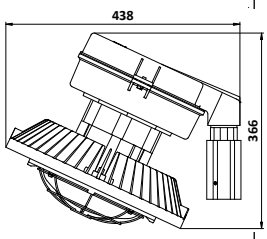
Stanchion – straight



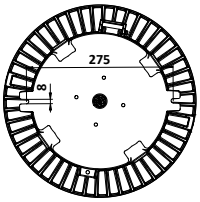


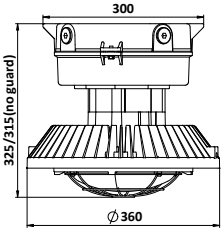
Stanchion – 25˚ angled



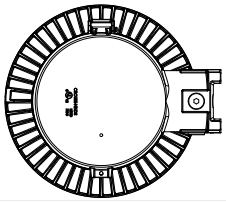


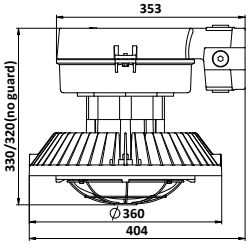
Ceiling



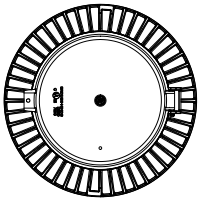


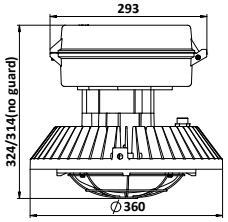
Wall



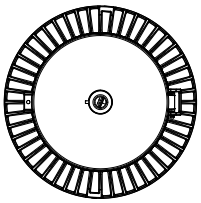


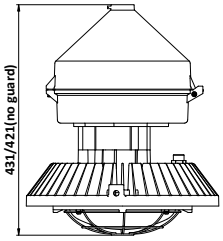
Pendant



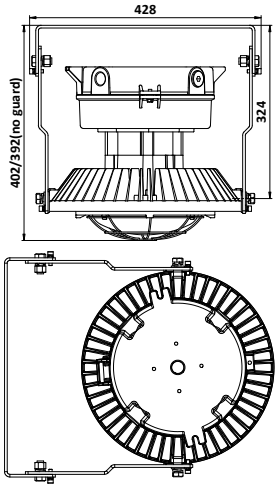


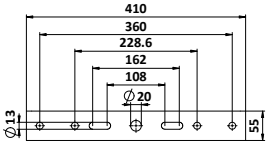
Cone pendant





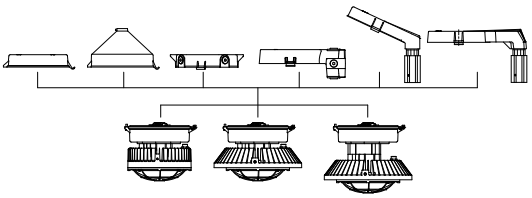
Trunnion





Mounting module series

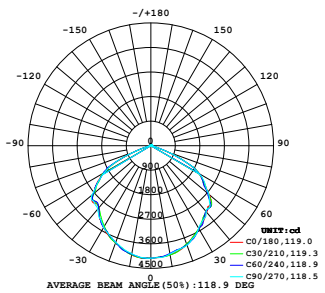
Pendant Cone Ceiling Wall Stanchion



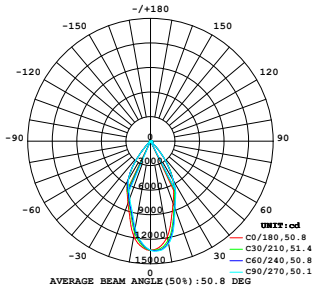
HPLN LED lighting for hazardous areas

Polar curves

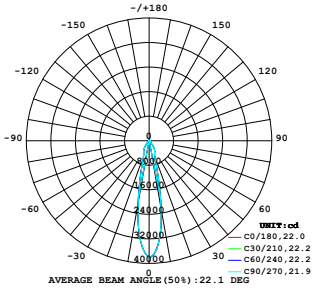
3L-25L wide 120°



3L-25L medium 60°



3L-25L narrow 25°



LPL Ex high power LED pendant

Product introduction

The Zone 1 LPL product Series LED Luminaires are designed to provide full-spectrum, white light. Multiple version of the LPL LED are available, providing ideal solutions for a wide range of applications.

LPL offering provides the same durability and reliability of a traditional HID fixture, coupled with the low cost of ownership and energy efficiency of Crouse-Hinds LED technology. High-performance LEDs and a solid-state electronic driver provide light where you need it, at a fraction of the operating costs of HID lighting technologies.

Suitable for Zone 1 & Zone 2 Ex-gas and Zone 21/22 Ex-dust hazardous area, such as heavy industrial, chemical, petrochemical or pharmaceutical facilities, platforms, shipyard, electric power, loading docks, wastewater treatment, paper mill.

Product features

- **High Efficient**

Model	Nominal lumens	Wattage	Equivalent HID Luminaire
LPL18-C57-4L	4270lm	43W	70W-100W
LPL18-C57-5L	4994lm	53W	70W-100W
LPL18-C57-6L	6418lm	62W	150W-175W
LPL18-C57-7L	6680lm	70W	150W-175W
LPL18-C57-9L	8998lm	87W	175W
LPL18-C57-10L	9974lm	105W	250W
LPL18-C57-12L	11700lm	125W	250W-400W
LPL18-C57-14L	13721lm	141W	400W

*Warm color limen Please contact Crouse-Hinds sales.

- **Outstanding Safety & Reliability; Robust Construction, Maintenance Free**
  - Copper free aluminum housing, temped and impact resistant glass globe, heat & corrosion proof.
  - IP66 Protection.
  - Ex de design, suitable for Zone 1 & Zone 2, Zone 21 & Zone 22 both gas and dust Ex - hazardous area.
- **Perfect Temperature and Optical Performance for Wide Application**
  - Best T- Rating: T6/T5
  - Permissible temp. range: -40˚C~+55˚C
  - Standard product cool white 5700K LED
  - Warm white 3000K is available for special environment such as smoke and dust environment.
- **Standard products are suitable for pendant mount.** Optional mounting accessories U shape bracket and pole mounting bracket is also available. Provides the greatest mounting flexibility, it can be installed as ceiling wall mount And pole mount. Please refer to below drawing for details.
- **Lead-free and environment-friendly**
- **LPL LED Benefits:**
  - Instant illumination and restrike
  - Cold temperature operation / no warm-up required
  - Redundancy in drivers with multiple series circuits connected to each driver to avoid complete loss of illumination
  - Energy-efficient technology - up to 65% energy savings over HID fixtures
  - Contains no mercury or other hazardous substances
  - Shock- and vibration-resistant solid-state luminaires have no filaments or glass components that could break - greatly reduces the risk of premature failure
  - Life time ≥ 50,000h@55°C for 4L~12L
  - Life time ≥ 50,000h@40°C for 14L*

    *14L was certified at 55°C, for life time of 55°C, pls contact Crouse-Hinds sales.

LPL Ex high power LED pendant

Technical information

Marking acc. to ATEX	Ⓔx II 2 G Ex db eb IIC T6/T5 Gb Ⓔx II 2 D Ex tb IIIC T80˚C/T95˚C Db
ATEX Cert	EPT 17 ATEX 2592X
Marking acc. to IECEx	Ex db eb IIC T6/T5 Gb Ex tb IIIC T80˚C/T95˚C Db
IECEx Cert	IECEx CQM 16.0043X, IECEx SEV 19.0052X
Marking acc. to GB	Ex d e IIC T6/T5 Gb Ex tD A21 T80˚C/T95˚C
GB Cert	GYB22.2491X
EMC compliance	EN55015:2006+A1:2007+A2:2000; EN61000-3-2:2006+A1:2009+A2:2009; EN61000-3-3:2008; EN61000-6-2:2005; EN61547:2009
Rated voltage	Nor: 100~277V AC 50/60Hz, 127~250V DC EM: 100~240V AC 50/60Hz, 127~250V DC
THD	<15% @120V~230V AC <20% @277V AC
Power factor	≥ 0.9
CRI	5700K(CRI 70)/ 3000K(CRI 80)
Cable entry	2xM25x1.5 or 2xM20x1.5, 1 entry plugged
Terminal	L, N, PE; solid: 0.5mm^2-6mm^2; Flexible: 0.5mm^2-4mm^2
Permissible ambient temperature	-40˚C~+40˚C/45˚C/55˚C(Nor), -40˚C~+55˚C(EM)
Emergency Duration	EM1=100% lumen output(4L) EM2=35% lumen output(6L&7L) EM3=25% lumen output(6L&7L)
Degree of protection	IP66
Insulation class	I
Dimension	Ø350 x 240 (mm)
Net weight	Nor: 17kg, EM: 20kg

Ordering information

Part No.	Product Type [1]	Lumen Output [2]	Color Temp.	System Watt	Input Valtage	Ambient Ta	Ta Code (Gas)	TC(Dust) Dust Temp.
CCL1624878	LPL18-C57-4L-V07-2M-LT1-CG	4270lm	5700K	43W	100~277VAC 50/60Hz 127~250VDC	-40˚C~+55˚C	T6	T80˚C
CCL1624879	LPL18-C57-5L-V07-2M-LT1-CG	4994lm		53W			T6	T80˚C
CCL1624880	LPL18-C57-6L-V07-2M-LT1-CG	6418lm		62W			T6	T80˚C
CCL1624801	LPL18-C57-7L-V07-2M-LT1-CG	6680lm		70W			T6	T80˚C
CCL1624803	LPL18-C57-9L-V07-2M-LT1-CG	8998lm		87W			T6	T80˚C
CCL1624804	LPL18-C57-10L-V07-2M-LT1-CG	9974lm		105W			T6	T80˚C
CCL1624805	LPL18-C57-12L-V07-2M-LT1-CG	11700lm		125W			T5	T95˚C
CCL1624807	LPL18-C57-14L-V07-2M-LT1-CG	13721lm		141W			T5	T95˚C
CCL1624898	LPL18-C57-4L-V09-1M-LT1-CG-EM1	4059lm	5700K	43W	100~240V AC 50/60Hz, 127~250V DC	-40˚C~+55˚C	T6	T80C
CCL1624899	LPL18-C57-6L-V09-1M-LT1-CG-EM2	6410lm		62W			T6	T80C
CCL1624900	LPL18-C57-7L-V09-1M-LT1-CG-EM2	6680lm		73W			T6	T80C

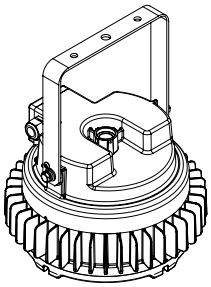
[1] Standard version without cable gland. if need, please order separately
[2] Tolerance +/- 10%
[3] Contact your local sales representative for special requirements.

LPL Ex high power LED pendant

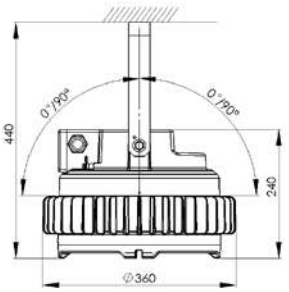
Mounting accessories (order separately)

Material Code	Product Description
CCL1202180	Standard U mounting bracket
CCL1624750	Universal mounting bracket, painted steel
CCL1076003	Pole mounting bracket, painted steel

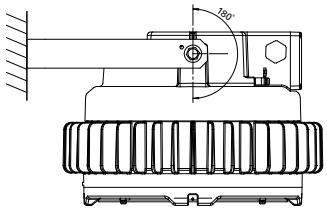
Installation and dimension



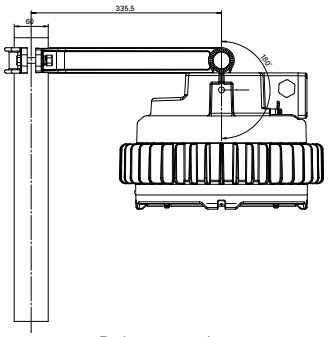
Standard U mounting bracket



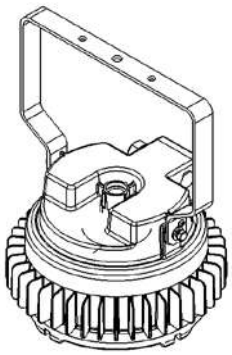
Ceiling mounting



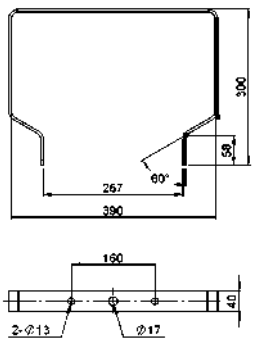
Wall mounting



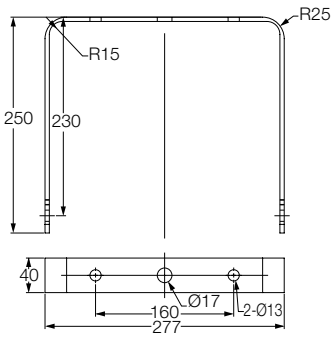
Pole mounting



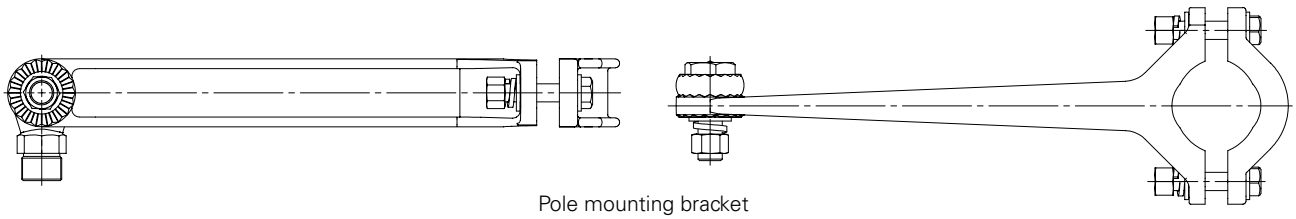
Universal U mounting bracket



Universal mounting bracket



Standard mounting bracket



Pole mounting bracket

Note: 1. Scope of supply exclude pole mounting accessories, please purchase separately.

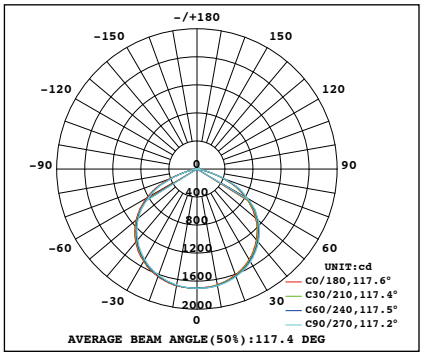
2. As shown in figure, angle locator is included, to install the bracket vertically to adjust the aim light to 90˚ past vertical.

LPL Ex high power LED pendant

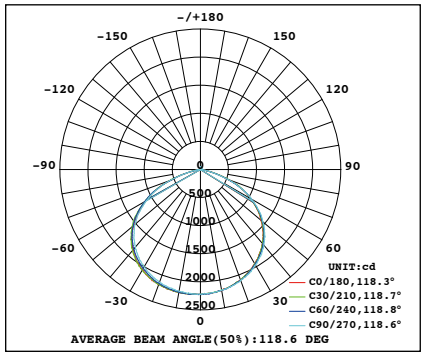
Polar curve

Wide Beam

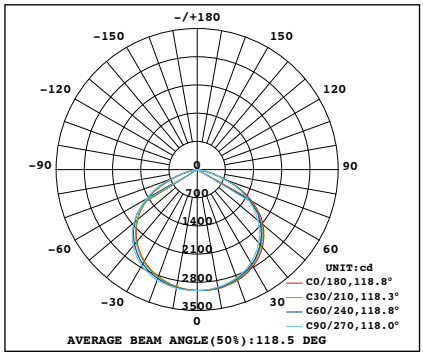
LPL18-C57-5L



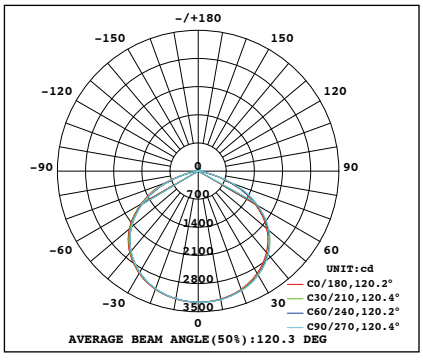
LPL18-C57-7L



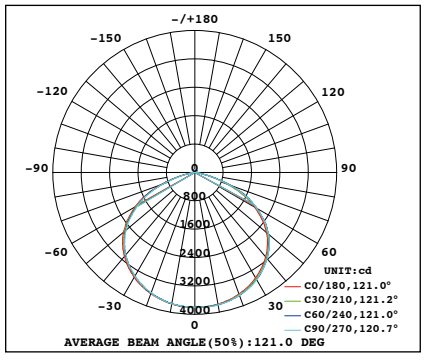
LPL18-C57-9L



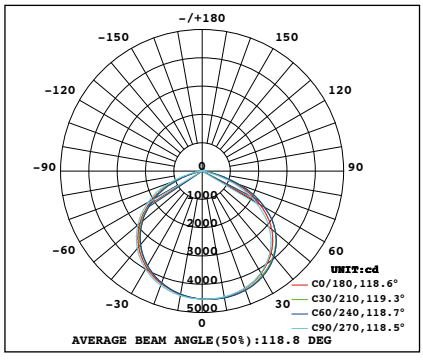
LPL18-C57-10L



LPL18-C57-12L

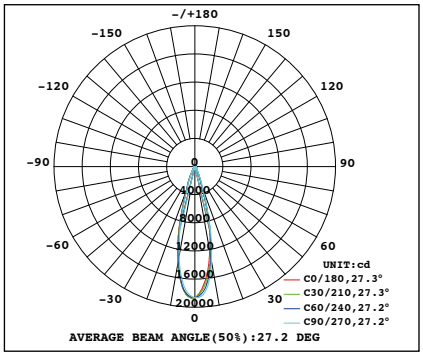


LPL18-C57-14L

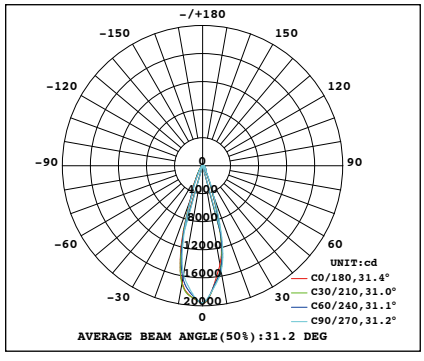


Narrow Beam Optional

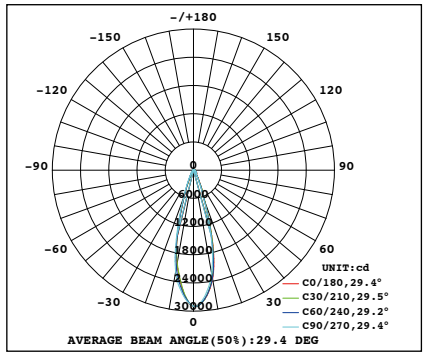
LPL18-C57-5L-NB



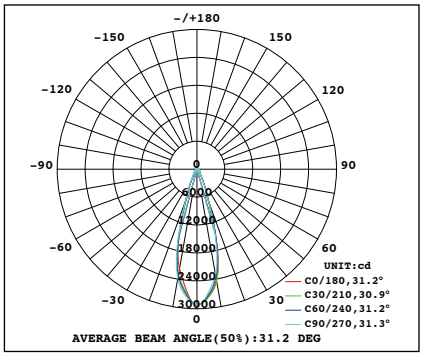
LPL18-C57-7L-NB



LPL18-C57-9L-NB



LPL18-C57-10L-NB



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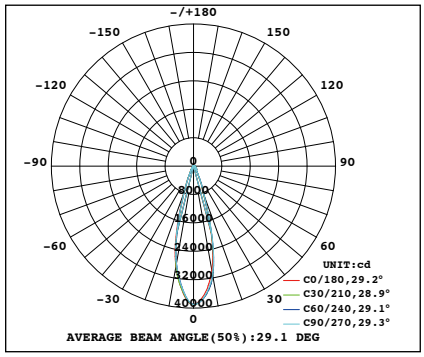

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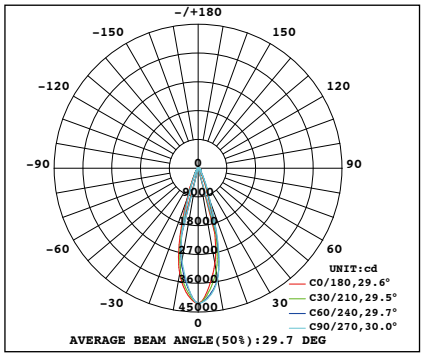


Champ VMVL LED luminaires

3,000 to 13,000 lumens

The Champ VMVL LED family

Champ® VMVL LED luminaires are engineered to provide maintenance-free illumination in the most demanding hazardous rated environments.

The Champ VMVL features a compact, high efficacy design with custom optics to ensure maximum efficiency and mounting flexibility, including the ability to retrofit the Crouse-Hinds installed base to service both LED upgrades and new projects.

Model	Nominal lumens[2)]	Watts	Efficacy	Equivalent HID luminaire
VMVL-3	3,250	28	123 lm/W	70W
VMVL-5	5,537	45	127 lm/W	100W
VMVL-7	7,442	61	127 lm/W	175W
VMVL-9	9,234	76	126 lm/W	250W
VMVL-11	11,114	92	122 lm/W	320W
VMVL-13	13,100	95	125 lm/W	400W

3,000 to 13,000 lumens

Applications

- For areas with mounting heights of up to 30 feet
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, indoor/outdoor spotlighting, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Extremely corrosive, wet, dusty, hot and/or cold conditions
- Classified and hazardous locations

Features

- Instant illumination and restrike
- Cold temperature operation/no warm-up required
- Option for redundancy in drivers with multiple series circuits connected to each driver to avoid complete loss of illumination
- Easy installation – compact modular fixture attaches onto existing Champ mounting module
- Energy-efficient technology – up to 77% energy savings over HID fixtures
- Contains no mercury or other hazardous substances
- Shock- and vibration-resistant solid state luminaires have no filaments or glass components that could break – greatly reduces the risk of premature failure
- Operating ambient: -40°C to 65°C
- Up to 60,000 hours lifetime at 55°C
- 5 year fixture warranty

Certifications and compliances

NEC/CEC/IEC:

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2, AEx ec mb IICT[1)] GC
- Class II, Groups E, F, G
- Class III
- Zone 21 tb IIIC
- Simultaneous Presence
- Wet locations, Type 4X, IP66

UL standards:

- UL844 – Hazardous (Classified)
- UL1598 – Luminaires
- UL1598A – Marine

CSA standard:

- CSA C22.2 No. 137

IEC/ATEX standards[1)]:

- IEC 60079-0:2011, 6th Edition / EN 60079-0:2012
- IEC 60079-7:2010, 5.1 Edition / EN 60079-7:2015
- IEC 60079-31:2008, 2nd Edition / EN 60079-31:2014
- IEC 60529:2001 / EN 60529:2001
- IEC 60598-1:2008 / EN 60598-1:2008
- IEC 60598-2:2008 / EN 60598-2:2008
- IEC 60079-18:2017, 4.1 Edition / EN 60079-18:2015 + A1:2017

Luminaire markings:

- IECEx UL 13.0052X
- DEMKO 13 ATEX 1305741X
- DEMKO 13 ATEX 1475031X

100-277 VAC/127-250 VDC (UNV1 luminaire only)

- Ex II 3 G EX ec mb IIC T5 Gc -40°C to +40°C
- Ex II 3 G EX ec mb IIC T5 Gc -40°C to +55°C
- Ex II 3 G EX ec mb IIC T4 Gc -40°C to +65°C
- Ex II 2 D Ex tb IIIC T72°C Db -40°C to +40°C
- Ex II 2 D Ex tb IIIC T87°C Db -40°C to +55°C
- Ex II 2 D Ex tb IIIC T92°C Db -40°C to +65°C

Qualifications and compliances:

- DesignLights Consortium® Qualified (pending)[3)]

[1)] IEC/ATEX certifications applicable for voltage ranges: 100-277 VAC, 127-250 VDC.

[2)] Nominal lumens based on Type V optics, 5000K CCT with clear glass lens. Wattage measured at 120 VAC.

[3)] Refer to www.designlights.org Qualified Products List under family models for full listing details. Not all models are approved for all application categories.

[4)] Custom optics not available with colored LEDs.

Champ VMVL LED luminaires

3,000 to 13,000 lumens

Standard materials

- Lamp housing and adapter – die cast aluminum with Corro-free epoxy powder coat
- Lens – heat- and impact-resistant glass
- Gaskets – silicone
- External hardware – stainless steel
- Factory sealed, no external seals required

LED system

- High intensity discrete power emitters
- Cool white (5000K, 70 CRI) (standard); warm white (3000K, 80 CRI) or neutral white (4000K, 70 CRI) (optional)
- Custom Type I, III and V optics available

Colored LED options

- Available in green and amber[4)]
- Reduction in light pollution for night space observation and sky glow due to isolating blue wavelength in red and amber colors
- Wildlife-friendly
- Improves visibility for telescopes in observatories during night sky space exploration

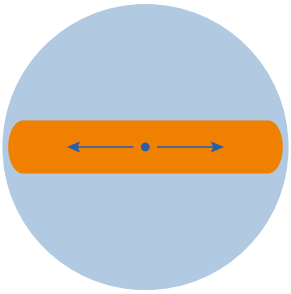
Net luminaire weights

Model	Lbs.	Kg.
VMVL-3 to VMVL-7	19.00	8.62
VMVL-9 to VMVL-13	19.20	8.70
Add mounting modules:		
Pendant	1.25	0.57
Cone pendant	4.00	1.81
Flexible pendant	1.50	0.68
Ceiling	2.75	1.25
Wall	4.50	2.04
Angled stanchion	3.50	1.59
Straight stanchion	4.50	2.04

1

Custom optics

Three optical options to maximize light distribution and intensity:

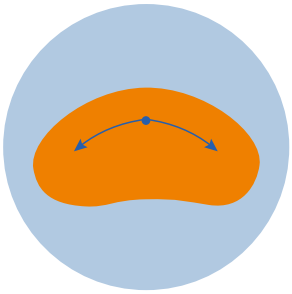


TYPE I

Long and rectangular for hallways, walkways, loading docks, catwalks.

Ideal for:

- Mining conveyor belts
- Aisleways and hallways
- Catwalks and walkways
- Ramps and loading docks
- Tunnels with overhead mounts

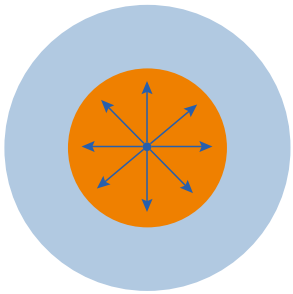


TYPE III

Stanchion and wall mount light distribution, minimizing spillover on the wall.

Ideal for:

- Narrow crosswalks or passages with wall mounted fixtures
- Tunnels with wall mount
- Wall or stanchion mount requiring 180° forward throw beam patterns



TYPE V

Regular circular distribution pattern for high/low bay indoor and outdoor ceiling or pendant mount lighting.

Ideal for:

- Pendant, ceiling or stanchion mount overhead building mounts
- Processing mills, industrial plants, large buildings, warehouses, etc.

Champ VMVL LED luminaires

3,000 to 13,000 lumens

Electrical ratings

UNV1 driver	Input power (watts)	Input amps at 100-277 VAC
VMVL-3	27	0.27 - 0.10
VMVL-5	45	0.45 - 0.16
VMVL-7	61	0.61 - 0.21
VMVL-7-S892	60	0.60 - 0.23
VMVL-9	76	0.76 - 0.26
VMVL-9-S892	80	0.80 - 0.29
VMVL-11	92	0.92 - 0.32
VMVL-11-S892	97	0.97 - 0.35
VMVL-13	95	1.10 - 0.42
VMVL-13-S892	99	1.10 - 0.36

UNV34 driver	Input power (watts)	Input amps at 347-480 VAC
VMVL-3	28	0.08 - 0.06
VMVL-5	44	0.13 - 0.09
VMVL-7	57	0.16 - 0.12
VMVL-7-S892	61	0.18 - 0.13
VMVL-9	68	0.20 - 0.14
VMVL-9-S892	73	0.22 - 0.15
VMVL-11	83	0.24 - 0.17
VMVL-11-S892	86	0.25 - 0.18
VMVL-13	91	0.29 - 0.17
VMVL-13-S892	96	0.31 - 0.19

All models	
Power factor	≥0.90

THD	≤15%

UNV1	
Voltage range, VAC[7]	100-277V at 50/60 Hz
Voltage range, VDC	127-250V

UNV34	
Voltage range, VAC[7]	347-480V at 50/60 Hz

EMC / CE compliance:

If the dimming interface of the LED driver is connected to an external dimmer which is not provided with the luminaire, a ferrite core must be used on the input and dimming lines.

Approved ferrite cores are: Fair-Rite P/N 0431167281.

Temperature performance data – UNV1 driver

UNV1: VMVL-3 to VMVL-11	40°C	55°C	65°C
Class I, Division 2	T5	T5	T4A
Class II, Division 1	T6	T6	T4A
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4	T3C
Class I, Zone 2 AEx ec mb; Ex ec mb	T5	T5[10]	T4
Class III, Division 1 Class II, Division 1, Groups E, F, G Zone 21, AEx tb IIIC	T72	T87	T92

UNV1: VMVL-7, -9 & -11-S892	40°C	55°C	65°C
Class I, Division 2	T5	T4A	T4A
Class II, Division 1	T6	T6	T5
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4	T3C
Class I, Zone 2 AEx ec mb; Ex ec mb	T4	T4	T4
Class III, Division 1 Class II, Division 1, Groups E, F, G Zone 21, AEx tb IIIC	T72	T87	T92

UNV1: VMVL-13	40°C	55°C
Class I, Division 2	T4A	T4A
Class II, Division 1	T6	T6
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4A
Class I, Zone 2 AEx ec mb; Ex ec mb	T5	T4
Class III, Division 1 Class II, Division 1, Groups E, F, G Zone 21, AEx tb IIIC	T64	T77

UNV1: VMVL-13-S892	40°C	55°C
Class I, Division 2	T5	T4A
Class II, Division 1	T6	T6
Simultaneous rating Class I, Divisions 1 & 2	T5	T4A
Class I, Zone 2 AEx ec mb; Ex ec mb	T4	T4
Class III, Division 1 Class II, Division 1, Groups E, F, G Zone 21, AEx tb IIIC	T64	T77

Temperature performance data – UNV34 driver

UNV34: VMVL-3 to VMVL-11	40°C	55°C	65°C
Class I, Division 2	T5	T5[8]	T4A
Class II, Division 1	T6	T6	T5
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4	T3C

UNV34: VMVL-7, -9, & -11-S892	40°C	55°C	65°C
Class I, Division 2	T5	T5[9]	T4A
Class II, Division 1	T6	T6	T5
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4	T3C

UNV34: VMVL-13	40°C	55°C
Class I, Division 2	T4A	T4A
Class II, Division 1	T6	T6
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4A

UNV34: VMVL-13-S892	40°C	55°C
Class I, Division 2	T4A	T4A
Class II, Division 1	T6	T6
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4A

[6] FIEC/ATEX certifications applicable for voltage ranges: 100-277 VAC, 127-250 VDC.

[7] GIEC voltage: 100-240 VAC at 50/60 Hz. For VMVL-3: PF>0.9 from 100-255 VAC.

[8] HT-code is T4A for VMVL-11 with R1, R3 optics.

[9] IT-code is T4A for VMVL-11-S892 with R1, R3 optics.

[10] JT-code is T4 for R1, R3 optics.

Champ VMVL LED luminaires

3,000 to 13,000 lumens

Ordering information

Part number example

VMVL-3-N-2A-R1-G-UNV1-S831-S891-UPLT

VMVL -3 -N -2A -R1 -G -UNV1 -S831 -S891 -UPLT

Light source / intensity

3	3,250 nominal lumens
5	5,537 nominal lumens
7	7,442 nominal lumens
9	9,234 nominal lumens
11	11,114 nominal lumens
13[12]	13,100 nominal lumens
A	Amber – 5,200 lumens
G	Green – 4,300 lumens

Color temperature

BLANK	Cool white (5000K), 70 CRI
N[13]	Neutral white (4000K), 70 CRI
W	Warm white (3000K), 80 CRI

Guard

BLANK	No guard
G	Wire guard

Voltage[15]

UNV1	100-277 VAC, 50/60 Hz; 127-250 VDC
UNV34	347-480 VAC, 50/60 Hz

Lens material

BLANK	Clear glass
S891	Diffused glass
S896[18]	Teflon coated lens
S903	Polycarbonate
UPLT[19]	Uplight refractor lens

Accessories and options[16]

S812[14]	Trunnion mount kit with pin
S831	Safety cable
S890	Quick Clip
S891	Diffused lens
S892[17]	Redundant driver
TB6[18]	Six-pole terminal block

Mounting style

BLANK	No mounting module
J	1 1/2" stanchion, 25° angled
P	1 1/2" stanchion, straight
2A	3/4" pendant
3A	1" pendant
20A	20mm pendant
25A	25mm pendant
2B	3/4" cone pendant
3B	1" cone pendant
2C	3/4" ceiling
3C	1" ceiling
20C	20mm ceiling
25C	25mm ceiling
2HA	3/4" flexible pendant
2TW	3/4" wall
3TW	1" wall
20TW	20mm wall
25TW	25mm wall

Optics

BLANK	Type V optic standard
R1	Type I optic (all mounts minus ceiling)
R1A[14]	Type I optic (ceiling with conduit 45° counterclockwise from top hat hinge)
R1B[14]	Type I optic (ceiling with conduit 135° clockwise from top hat hinge)
R3	Type III optic (all mounts minus ceiling)
R3AP[14]	Type III optic (select when using Appleton® top hat adapter with Champ fixture)
R3A1[14]	Type III optic (ceiling with conduit 45° counterclockwise from top hat hinge)
R3A2[14]	Type III optic (ceiling with conduit 135° clockwise from top hat hinge)
R3B1[14]	Type III optic (ceiling with conduit 45° clockwise from top hat hinge)
R3B2[14]	Type III optic (ceiling with conduit 135° counterclockwise from top hat hinge)

[11] IEC/ATEX certifications applicable for voltage ranges: 100-277 VAC, 127-250 VDC.

[12] For 13L models, add suffix -M2 at the end of the part number. Example: VMVL-13-2A-R1-UNV1-S831-M2.

[13] Consult factory for lead time. 5700K and 6500K are available upon request; consult factory. Not available for amber or green LED.

[14] Available with ceiling mount modules only.

[15] IEC voltage: 100-240 VAC at 50/60 Hz.

[16] Ordered with fixture or available separately.

[17] Available for VMVL-7, -9, -11 and -13 only.

[18] For NEC/CEC only.

[19] Recommended for use with Type V optic.

Champ VMVL LED luminaires

3,000 to 13,000 lumens

Accessories (ordered separately)

Replacement driver kits	
VMVL-3-5-7L-UNV1-DRIVER KIT	UNV1 replacement driver kit for VMVL-3, -5 and -7
VMVL-9-11L-UNV1-DRIVER KIT	UNV1 replacement driver kit for VMVL-9 and -11
VMVL-96W-13L-UNV1-M2-DRIVER-REPL-KIT	UNV1 replacement driver kit for VMVL-13
VMVL-3L-5L-UNV34-DRIVER-KIT	UNV34 replacement driver kit for VMVL-3 and -5
VMVL-7L-UNV34-DRIVER-KIT	UNV34 replacement driver kit for VMVL-7
VMVL-9L-UNV34-DRIVER-KIT	UNV34 replacement driver kit for VMVL-9
VMVL-11L-UNV34-DRIVER-KIT	UNV34 replacement driver kit for VMVL-11
VMVL-13-M2-DRIVER-KIT	UNV34 replacement driver kit for VMVL-13
VMVL-7L-S892-UNV1-DRIVER-KIT	UNV1 replacement redundant driver kit for VMVL-7
VMVL-9L-11L-S892-UNV1-DRIVER-KIT	UNV1 replacement redundant driver kit for VMVL-9 and -11
VMVL-13-UNV1-S892-M2-DRIVER-KIT	UNV1 replacement redundant driver kit for VMVL-13
VMVL-7L-S892-UNV34-DRIVER-KIT	UNV34 replacement redundant driver kit for VMVL-7
VMVL-9L-S892-UNV34-DRIVER-KIT	UNV34 replacement redundant driver kit for VMVL-9
VMVL-11L-S892-UNV34-DRIVER-KIT	UNV34 replacement redundant driver kit for VMVL-11
VMVL-13-UNV34-S892-M2-DRIVER-KIT	UNV34 replacement redundant driver kit for VMVL-13
VMVL-AL-GL-UNV1-DRIVER-KIT	UNV1 replacement driver kit for amber or green models

Mounting and hardware	
VMVL S812 K1	Trunnion mount kit with pin[21]
VMVL S812 K1 DBR	PVC coated trunnion mount kit with pin[21]
VMVL S831 K1	Safety cable
VMVL S890 K1	Quick Clip

Mounting adapters	
CHMM1	For Appleton MercMaster III mounts
CHMM2	For MercMaster II mounts
CHMM3	For Thomas & Betts HazLux mounts
CHMM4	For GE H2 Filtr-Gard mounts

Refractor kit	
PVML-UPLT-KIT	Uplight refractor lens

Photocells	
D2S20	Photocell, 120V
D2S208 277	Photocell, 208-277V

Lens guard	
P3001	Wire guard

[20] IEC/ATEX certifications applicable for voltage ranges: 100-277 VAC, 127-250 VDC.
[21] Available with ceiling mounted modules only.

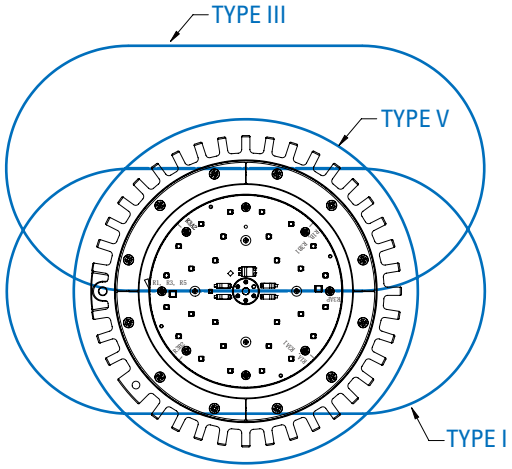
Champ VMVL LED luminaires

3,000 to 13,000 lumens

Optics options

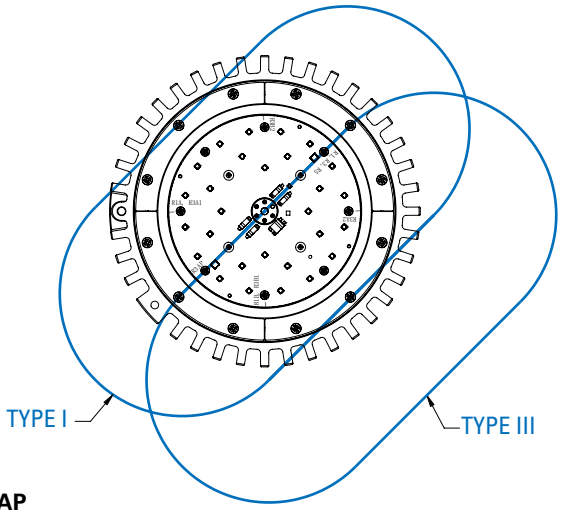
R1, R3 and BLANK

Type I, III and V optics with all mounts minus ceiling



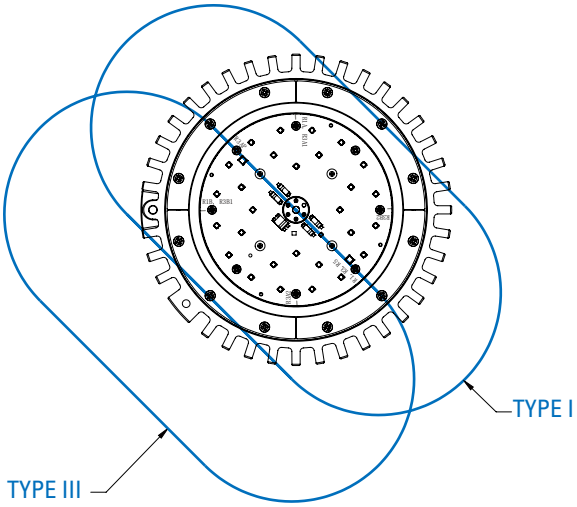
R1A and R3A1

Type I and Type III ceiling mount only



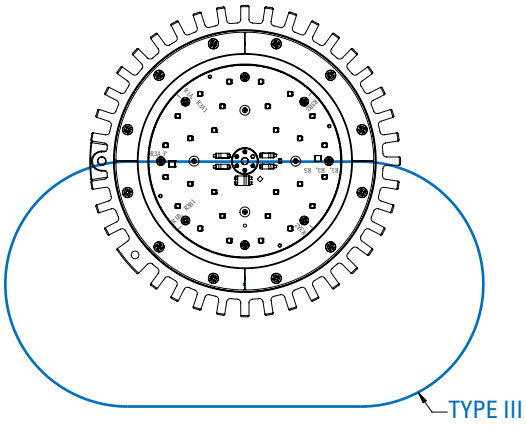
R1B and R3B1

Type I and Type III ceiling mount only



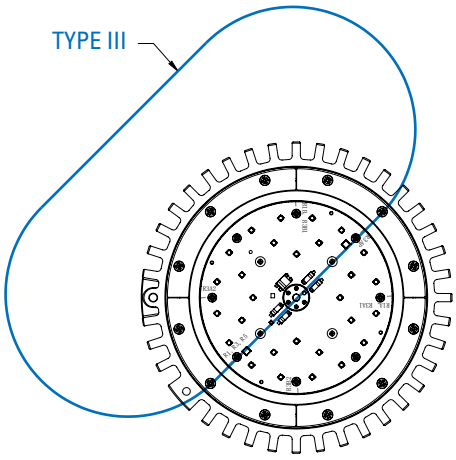
R3AP

Type III wall mount



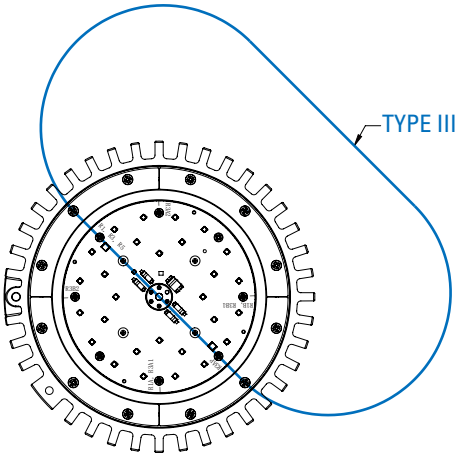
R3A2

Type III ceiling mount only



R3B2

Type III ceiling mount only

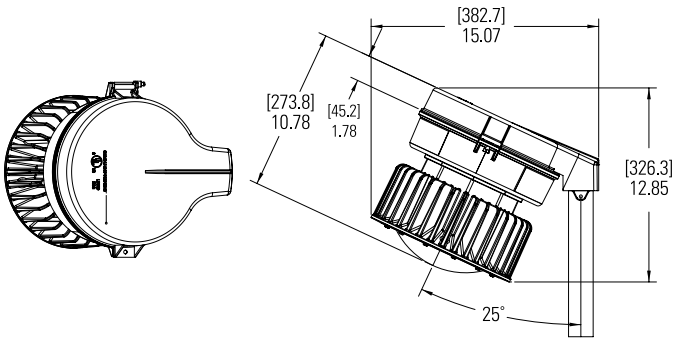


Champ VMVL LED luminaires

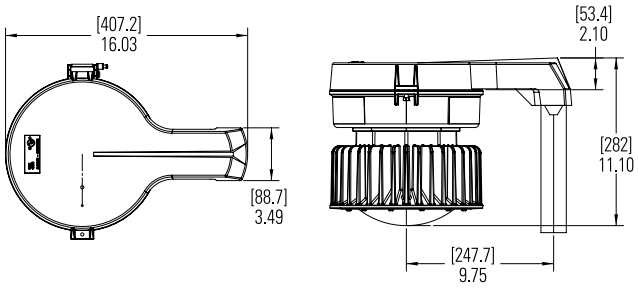
3,000 to 13,000 lumens

Dimensions

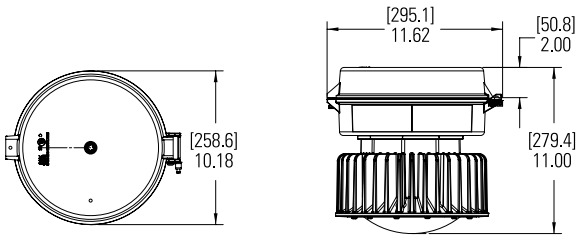
Stanchion - 25° angled



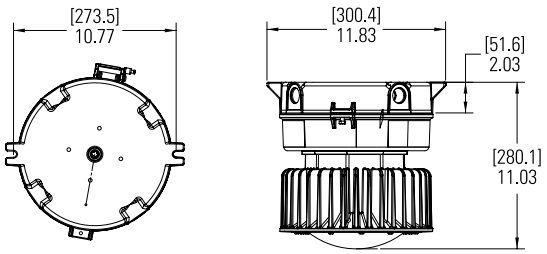
Stanchion - straight



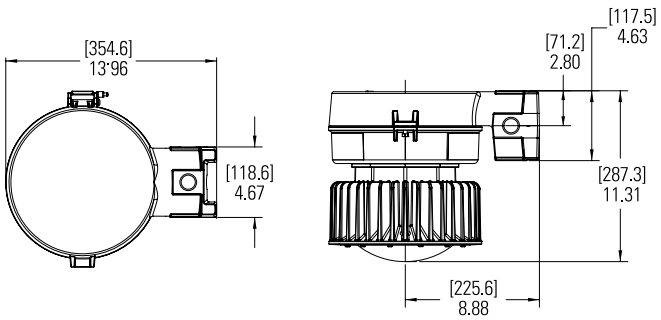
Pendant



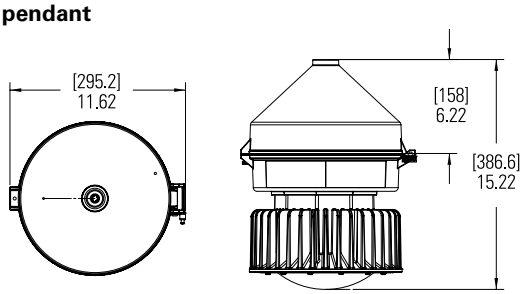
Ceiling



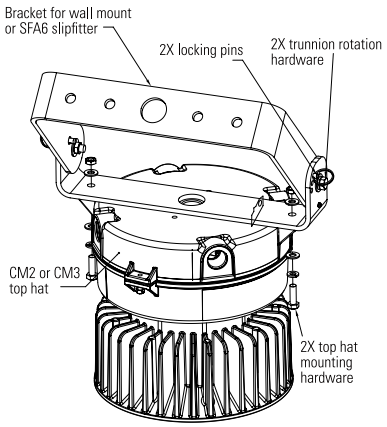
Wall



Cone pendant

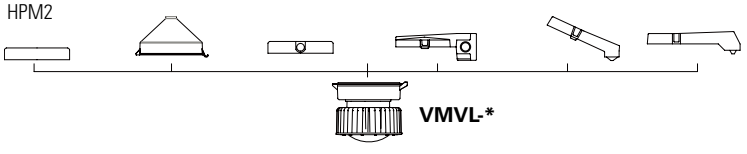


Trunnion



Mounting module series:

Pendant	Cone	Ceiling	Wall	Stanchion	
APM2	BPM2	CM2	TWM2	JM5	PM5
APM3	BPM3	CM3	TWM3		
HPM2					



Champ VMVL LED luminaires

17,000 to 25,000 lumens

The Champ VMVL LED family

Champ® VMVL LED luminaires are engineered to provide maintenance-free illumination in the most demanding harsh and hazardous rated environments.

The Champ VMVL features a compact, high efficacy design with custom optics to ensure maximum efficiency and mounting flexibility, including the ability to retrofit the Crouse-Hinds installed base to service both LED upgrades and new projects.

Model	Typical lumens[1]	Watts	Lumens per watt	Equivalent HID luminaire	Typical energy savings / lifetime
VMVL-17	17,800	147	121	400W-600W	Up to 75%
VMVL-21	21,500	172	125	600W-750W	Up to 77%
VMVL-25	25,000	206	121	750W-1000W	Up to 80%

Applications

- For areas with mounting heights of up to 60 feet
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, indoor/outdoor spotlighting, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Extremely corrosive, wet, dusty, hot and/or cold conditions
- Classified and hazardous locations

Features

- Instant illumination and restrike
- Cold temperature operation/no warm-up required
- Option for redundancy in drivers with multiple series circuits connected to each driver to avoid complete loss of illumination
- Easy installation – compact modular fixture attaches onto existing Champ mounting module
- Energy-efficient technology – up to 125 lumens per watt
- Contains no mercury or other hazardous substances
- Shock- and vibration-resistant solid state luminaires have no filaments or glass components that could break – greatly reduces the risk of premature failure
- Operating ambient: -40°C to 55°C
- Up to 60,000 hours lifetime at 55°C
- 5 year fixture warranty

Certifications and compliances

NEC/CEC:

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2, nA
- Class II, Groups E, F, G
- Class III
- Zone 21 tb (UNV1 model only)
- Simultaneous Presence
- Wet locations, Type 4X, IP66

UL standards:

- UL844; UL1598 Luminaires; UL1598A Marine; UL8750; UL50; UL50E

CSA standard:

- cUL Listed to CSA standard CSA C22.2 No. 137

IEC standards[2]:

- IEC 60079-0:2011; IEC 60079-15:2010; IEC 60079-31:2013; IEC 60598-2-1:1979; IEC 60529:2001
- Ex nA IIC T* Gc -40 to +40
- Ex nA IIC T* Gc -40 to +55
- Ex tb IIIC T*°C Db -40 to +40
- Ex tb IIIC T*°C Db -40 to +55
- IECEx UL 14.0031X

ATEX/CE[2]:

- EN 60079-0:2012 +A11:2013; EN 60079-15:2010; EN 60079-31:2014; EN 60598-2-1:1989; EN 60929:1991 +A1:2001
- Ⓔx II 3 G Ex nA IIC T* Gc -40 to +40
- Ⓔx II 3 G Ex nA IIC T* Gc -40 to +55
- Ⓔx II 2 D Ex tb IIIC T*°C Db IP66 -40 to +40
- Ⓔx II 2 D Ex tb IIIC T*°C Db IP66 -40 to +55
- DEMKO 14 ATEX 1324722X; DEMKO 14 ATEX 2274231X

Qualifications and compliances:

- DesignLights Consortium® Qualified (some models are not DLC qualified)[3]

[1] Tolerance +/- 10%. Typical lumens is measured with Type V optics.

[2] IEC/ATEX certifications applicable for voltage ranges: 100-277 VAC, 127-250 VDC.

[3] Refer to www.designlights.org Qualified Products List under family models for full listing details. Not all models are approved for all application categories.

*See temperature code tables for details.

Champ VMVL LED luminaires

17,000 to 25,000 lumens

Standard materials

- Lamp housing and adapter – die cast aluminum with Corro-free epoxy powder coat
- Lens – heat- and impact-resistant glass
- Gaskets – silicone
- External hardware – stainless steel
- Factory sealed, no external seals required

LED system

- High intensity discrete power emitters
- Cool white (5000K, 70 CRI) (standard); warm white (3000K, 80 CRI) or neutral white (4000K, 70 CRI) (optional)
- Custom Type I, III and V optics available
- Optics clocking in field to align Type I and Type III light patterns to illumination path for VMVL-17 to VMVL-25

Drivers

Option	Voltage: VMVL-17 to VMVL-21
UNV1	100-277 VAC, 50/60 Hz; 127-250 VDC, 50/60 Hz
UNV34	347-480 VAC, 50/60 Hz

Net luminaire weights

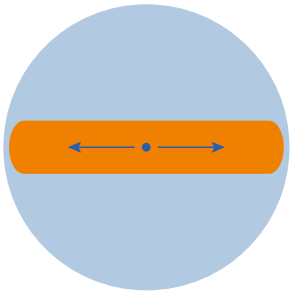
Model	Lbs.	Kg.
VMVL-17 to VMVL-25	25.15	11.41
Add mounting modules:		
Pendant	1.25	0.57
Cone pendant	4.00	1.81
Flexible pendant	1.50	0.68
Ceiling	2.75	1.25
Wall	4.50	2.04
Angled stanchion	3.50	1.59
Straight stanchion	4.50	2.04

Champ VMVL LED luminaires

17,000 to 25,000 lumens

Custom optics

Three optical options to maximize light distribution and intensity:

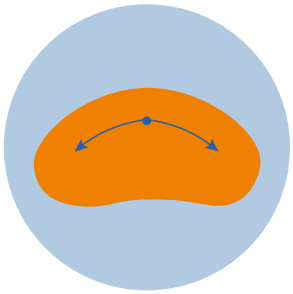


TYPE I[4)]

Long and rectangular for hallways, walkways, loading docks, catwalks.

Ideal for:

- Mining conveyor belts
- Aisleways and hallways
- Catwalks and walkways
- Ramps and loading docks
- Tunnels with overhead mounts

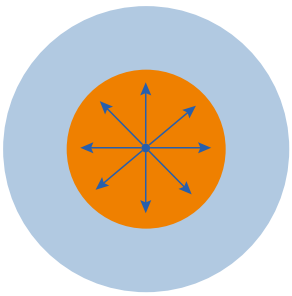


TYPE III[4)]

Stanchion and wall mount light distribution, minimizing spillover on the wall.

Ideal for:

- Narrow crosswalks or passages with wall mounted fixtures
- Tunnels with wall mount
- Wall or stanchion mount requiring 180° forward throw beam patterns



TYPE V

Regular circular distribution pattern for high/low bay indoor and outdoor ceiling or pendant mount lighting.

Ideal for:

- Pendant, ceiling or stanchion mount overhead building mounts
- Processing mills, industrial plants, large buildings, warehouses, etc.

1

Electrical ratings

UNV1	VMVL-17	VMVL-21	VMVL-25
Voltage range UNV1 (VAC 50/60 Hz)	100-277	100-277	100-277
Voltage range UNV1 (VDC 50/60 Hz)	127-250	127-250	127-250
Input power (watts)	147	172	206
Input amps at 100-277 VAC	0.52 - 1.47	0.61 - 1.72	0.72 - 2.06
Input amps at 127-250 VDC	0.56 - 1.14	0.66 - 1.33	0.79 - 1.58

UNV34	VMVL-17	VMVL-21	VMVL-25
Voltage range UNV34 (VAC 50/60 Hz)	347-480	347-480	347-480
Input power (watts)	141	164	195
Input amps at 347-480 VAC	0.29 - 0.41	0.34 - 0.47	0.40 - 0.56

All models			
Power factor	>0.90	THD	<20%

Temperature performance data

	VMVL-17		VMVL-21 & -25	
UNV1	40°C	55°C	40°C	55°C
Class I, Division 2	T4A	T4	T4A	T4
Class II, Division 1	T5	T4A	T5	T4A
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4	T4A	T4
Class I, Zone 2 AEx nA nR; Ex nA nR	T4	T3	T4	T4
Class III, Division 1 Class II, Division 1, Groups E, F, G Zone 21, AEx tb IIIC	T61°C	T73°C	T62°C	T75°C

	VMVL-17		VMVL-21 & -25	
UNV34	40°C	55°C	40°C	55°C
Class I, Division 2	T4A	T4	T4A	T4
Class II, Division 1	T5	T4A	T5	T4A
Simultaneous rating Class I, Divisions 1 & 2	T4A	T4	T4A	T4

Champ VMVL LED luminaires

17,000 to 25,000 lumens

Ordering information

Part number example

VMVL-17-W-2A-R1-G-UNV1-S890-M2

VMVL -17 -W -2A -R1 -G -UNV1 -S890 -M2

1

Lamp / function

17	17,800 lumen LED
21	21,500 lumen LED
25	25,000 lumen LED

Optics

BLANK	Type V optic
R1	Type I optic
R3	Type III optic

Voltage

UNV1	120-277 VAC, 50/60 Hz; 108-250 VDC
UNV34	347-480 VAC, 50/60 Hz

Color temperature[5]

BLANK	Cool white (5000K) or colored
N	Neutral white (4000K)
W	Warm white (3000K)

Guard

BLANK	No guard
G	Wire guard

Options

S812[6]	Trunnion mount kit with pin
S831[7]	Safety cable
S890	Quick Clip
S891[7]	Diffused lens
S896[7]	Teflon coated lens
S903	Polycarbonate lens
TB6	Six-pole terminal block

Mounting style

BLANK	No mounting module	2C	3/4" ceiling
J	1 1/2" stanchion, 25° angled	3C	1" ceiling
P	1 1/2" stanchion, straight	20C	20mm ceiling
2A	3/4" pendant	25C	25mm ceiling
3A	1" pendant	2HA	3/4" flexible pendant
20A	20mm pendant	2TW	3/4" wall
25A	25mm pendant	3TW	1" wall
2B	3/4" cone pendant	20TW	20mm wall
3B	1" cone pendant	25TW	25mm wall

Accessories (ordered separately)

Mounting and hardware

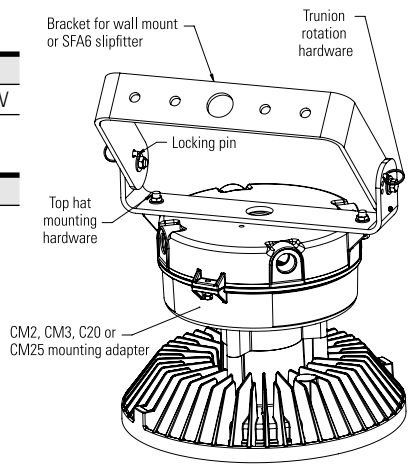
VMVL S812 K1	Trunnion mount kit with pin[6]
VMVL S812 K1 DBR	PVC coated trunnion mount kit with pin[6]
VMVL S831 K1	Safety cable
VMVL S890 K1	Quick Clip
CHMM1	Mounting adapter for Appleton MercMaster III mounts
CHMM2	Mounting adapter for Appleton MercMaster II mounts
CHMM3	Mounting adapter for Thomas & Betts HazLux mounts
CHMM4	Mounting adapter for GE H2 Filtr-Gard mounts

Photocells

D2S20	Photocell, 120V
D2S208 277	Photocell, 208-277V

Lens guard

P3002	Wire guard



Replacement drivers UNV1

VMVL-17L-UNV1-DRIVER-KIT	UNV1 replacement driver kit for VMVL-17
VMVL-21L-25L-UNV1-DRIVER-KIT	UNV1 replacement driver kit for VMVL-21, -25
VMVL-17L-25L-UNV34-DRIVER-KIT	UNV34 replacement driver kit for VMVL-17, -21, -25

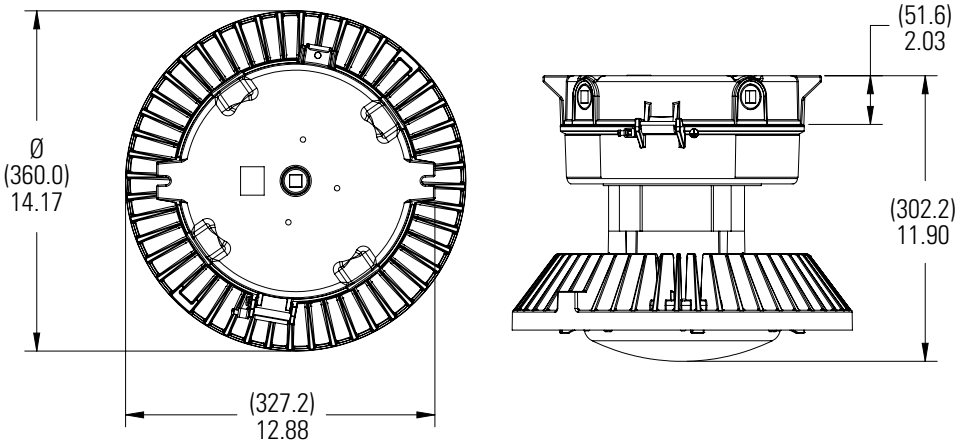
[5] EConsult factory for additional color temperature options.
[6] Available with ceiling mount modules only.
[7] For NEC/CEC only.

Champ VMVL LED luminaires

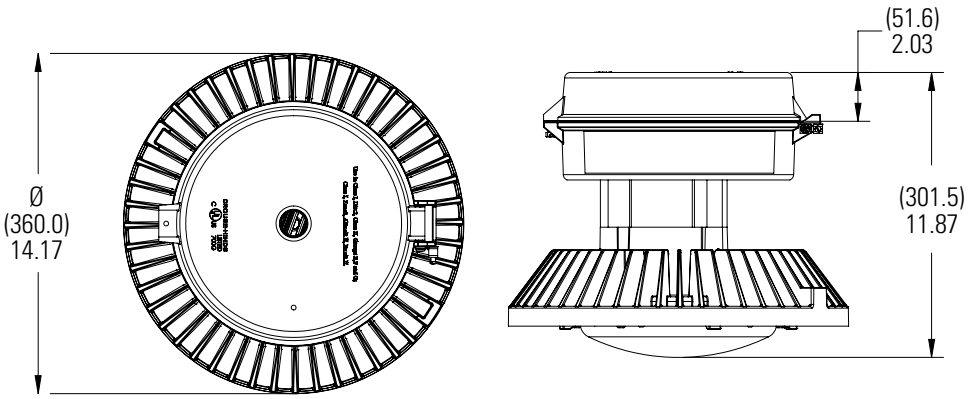
17,000 to 25,000 lumens

Dimensions

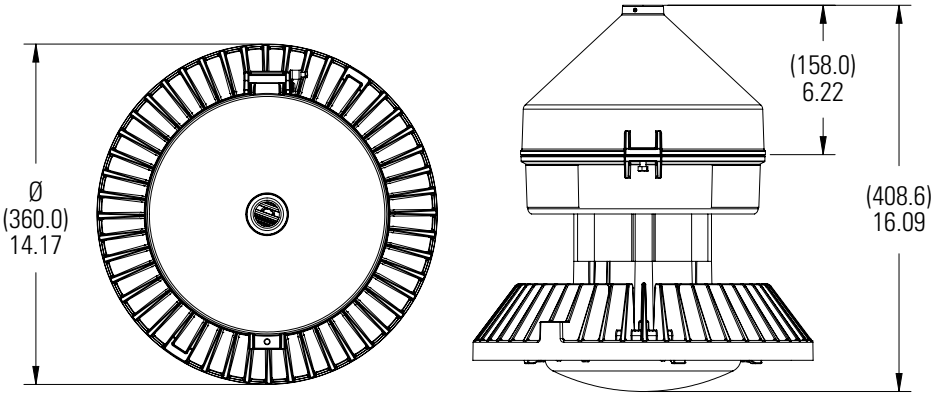
Ceiling



Pendant



Cone pendant

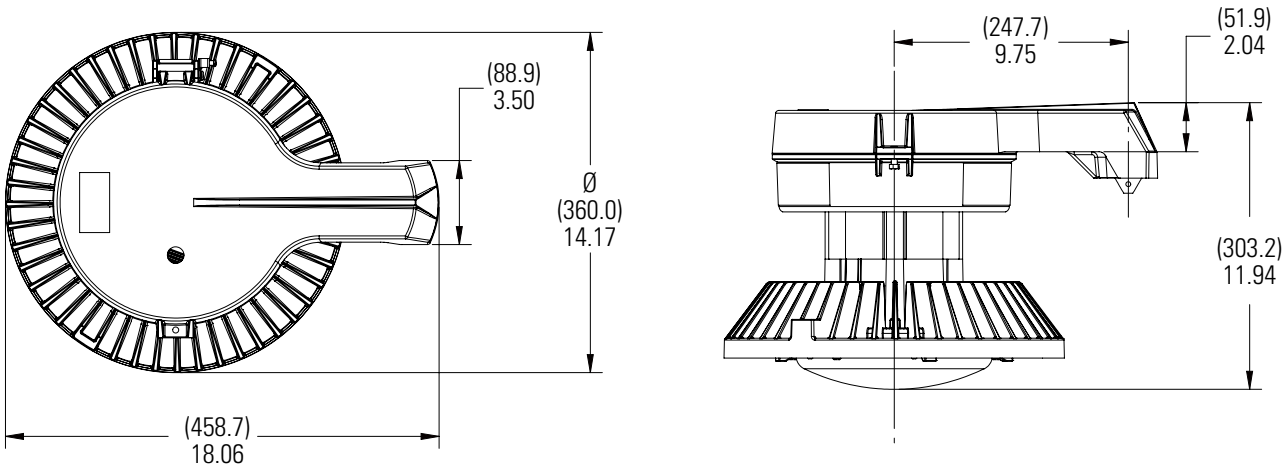


Champ VMVL LED luminaires

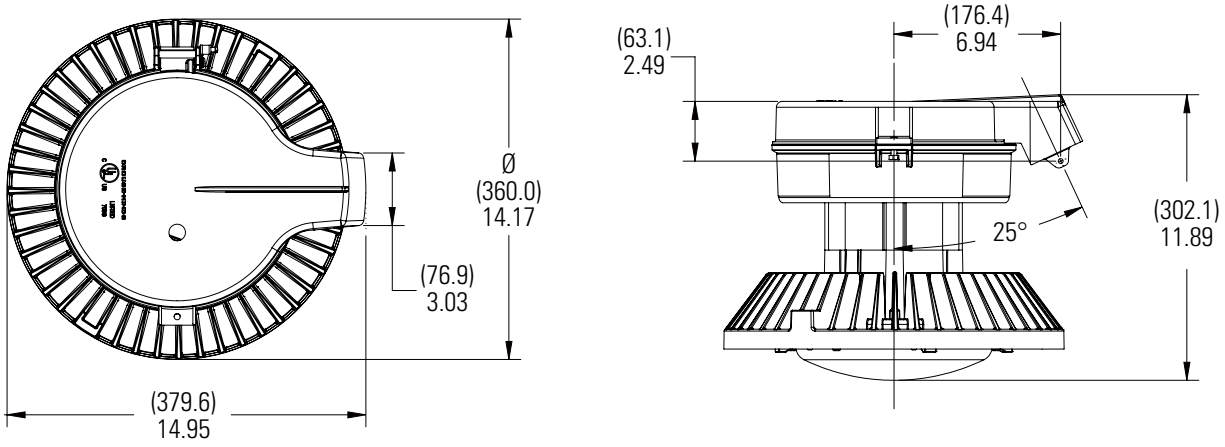
17,000 to 25,000 lumens

Dimensions (continued)

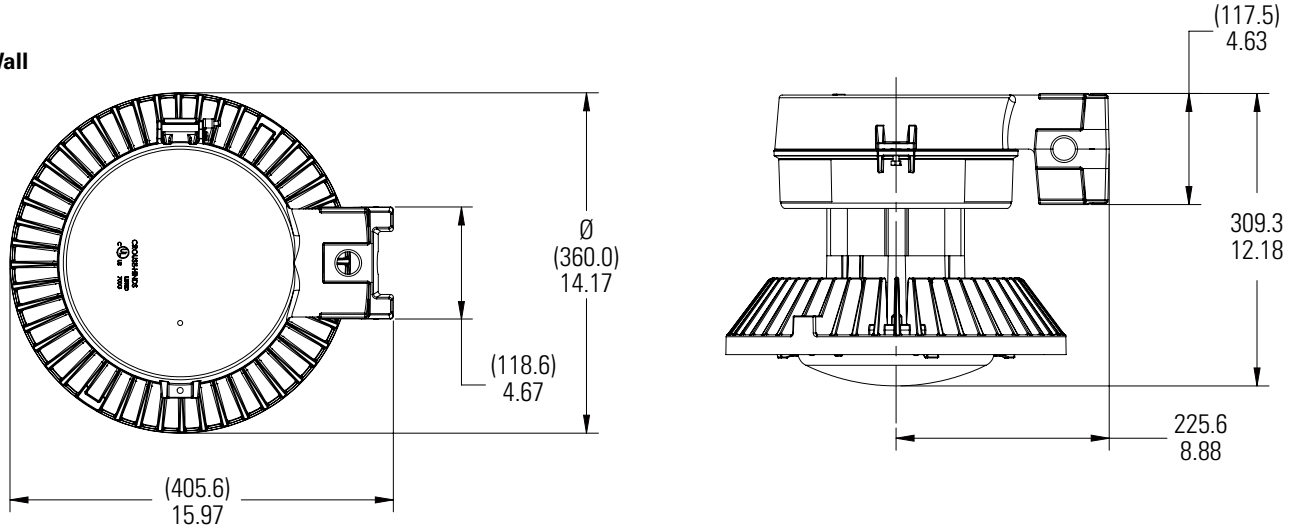
Stanchion straight



25° angled stanchion



Wall



Champ FMVA LED floodlights

The Champ FMVA LED family

Champ® FMVA LED floodlights are designed to provide full-spectrum, crisp, white light.
Seven versions of the FMVA LED are available, from 3,000 to 15,000 lumens, providing ideal solutions for a wide range of harsh and hazardous applications.

Model	Nominal lumens[1)]	Watts	Lumens per watt	Equivalent HID luminaire	Energy savings
FMVA3L	3,312	26	129	70W	Up to 75% reduction in energy costs and 150,000 hours of continuous operation
FMVA5L	5,381	45	133	100W	
FMVA7L	7,274	58	132	175W	
FMVA9L	9,479	69	142	250W	
FMVA11L	11,776	84	144	320W	
FMVA13L	13,362	95	143	400W	
FMVA15L	15,183	113	140	500W	

Applications

- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- IP66, Type 4X, marine, wet locations and hose down environments
- Classified and hazardous locations

Features

- Instant illumination and restrike
- Better visibility with crisp, white light
- Cold temperature operation/no warm-up required
- Minimum T3C temperature rating – safely operate in the most hazardous environments and any non-hazardous location
- Serviceable drivers
- Easy installation – yoke design to mount to SFA6
- Energy-efficient technology – up to 72% energy savings over HID fixtures
- 60,000 hours of rated life at 55°C – eliminates need for frequent lamp replacement
- Contains no mercury or other hazardous substances
- Shock- and vibration-resistant solid state luminaires have no filaments or glass components that could break – greatly reduces the risk of premature failure
- Operating ambient: -40°C to 65°C (NEC only; IEC: -40°C to 55°C)
- 5 year fixture warranty

Certifications and compliances

- DesignLights Consortium® Qualified (pending)[2)]

NEC/CEC:

- Class I, Division 2, Groups A, B, C, D; Class I, Zone 2; Class II, Groups E, F, G
- Wet locations, Type 4X, IP66

UL standards[6)]:

- UL844; UL1598; UL1598A; UL8750 IEC standardsF:
- IEC 60079-0, 6th Edition (2011-06) + Corr. 1 (2012-01) + Corr. 2 (2013-12) + I-SH 01 (2013-11) + I-SH 02 (2014-10)/EN 60079-0:2012 + A11:2013
- IEC 60079-7, Edition 5.1 (2017-08)/EN 60079-7: 2015 +A1:2018
- IEC 60079-31, 2nd Edition (2013-11)/EN 60079-31:2014
- IEC 60598-1:2008/EN60598-1:2008
- IEC 60598-2:2008/EN60598-2:2008

IECEx/ATEX[6)]:

- 0359
- IECEx UL15.0029X
- DEMKO 15 ATEX 1377X
- DEMKO 15 ATEX 1383
- Ex II 3 G Ex ec mb IIC T5 Gc Tamb -40° - +55°C
- Ex II 3 G Ex ec mb IIC T5 Gc Tamb -40° - +40°C[5)]
- Ex ec IIC T5 Gc Tamb -40°C - +40°C
- Ex ec IIC T4 Gc Tamb -40°C - +55°C
- Ex II 2 D Ex tb IIIC T65 Db Tamb -40°C - +40°C
- Ex II 2 D Ex tb IIIC T80 Db Tamb -40°C - +55°C
- Ex tb IIIC T65 Db Tamb -40°C - +40°C
- Ex tb IIIC T80 Db Tamb -40°C - +55°C

Standard materials

- Lamp housing and adapter – die cast aluminum with Corro-free epoxy powder coat
- Lens – heat- and impact-resistant glass (standard)
- Gaskets – silicone and neoprene
- External hardware – stainless steel

Fixture life

- Rated life of 60,000 hours at 55°C operating ambient and 24/7 continuous operation for 365 days
- Economic life of 150,000 hours at 25°C ambient

Champ FMVA LED floodlights

LED system

- Cool white (5000K, 70 CRI) and warm white (3000K, 80 CRI)
- Custom designed optics – 7x6 standard; 3x3 (optional)

Photometrics

- Refer to www.eaton.com (under the Resources tab of each product family) for specific photometric IES files

Electrical ratings

Model	Input powerlumens (watts)	Input amps at 120-277 VAC
FMVA3L	26	0.27 - 0.10
FMVA5L	40-41	0.41 - 0.16
FMVA7L	54-56	0.56 - 0.21
FMVA9L	67-69	0.78 - 0.28
FMVA11L	81-84	0.84 - 0.30
FMVA13L	91-95	0.95 - 0.34
FMVA15L	107-113	1.12 - 0.40

FMVA3L-FMVA15L	
Voltage range, VAC[3]	100-277V at 50/60 Hz
Voltage range, VDC	127-250V
Power factor	>0.90[4]

1) Tolerance +/- 10%; at 120 VAC, 25°C ambient, 7x6 optics.
2) Refer to www.designlights.org Qualified Products List under family models for full listing details. Not all models are approved for all application categories.
3) IEC voltage; 100-250 VAC at 50/60 Hz, UNV34 option for FMVA9L-15L only.
4) For FMVA3L: PF >0.90 from 100-255 VAC. From 255-277V, it varies +/- 10%. All other lumen levels are above 0.90 PF across full voltage range.
5) T4 from -40°C to +40°C when used with 3x3 optic.
6) Not applicable for FMVA9L-15L UNV34.

High lumen output

- Up to 144 lumens per watt
- Up to 72% energy savings over traditional HID fixtures (compared to 400W MH)

Versatile design

- Can be used for outdoor or indoor applications, and for a wide range of mounting heights depending on model and light level requirement

Smaller and lighter

- 25% smaller footprint than previous model
- 10 lbs. (4.5 kg) less weight than previous model

Full-frame yoke

- Designed to utilize the SFA6 slipfitter and SWB6 wall mount bracket, making it ideal for retrofit or new installations

Multiple lens options

- Tempered clear glass lens standard
- Polycarbonate and diffused glass lens options available

Rugged heat sink

- Heat sink designed to perform and provide maximum light levels in high ambient temperatures up to +65°C and as low as -40°C
- Thick walled castings make for a tough, rugged housing that keeps the internal driver and LED temperature down

Champ FMVA LED floodlights

Ordering information

Part number example

FMVA7LCY-UNV1-76-M20-S891-BZ

FMVA 7L C Y - UNV1 - 76 - M20 - S891 - BZ

Light source / intensity

3L	3,312 nominal lumens[7]
5L	5,381 nominal lumens[7]
7L	7,274 nominal lumens[7]
9L	9,479 nominal lumens[7]
11L	11,776 nominal lumens[7]
13L	13,362 nominal lumens[7]
15L	15,183 nominal lumens[7]

Color temperature

C	5000K, 70 CRI (cool white)
W	3000K, 80 CRI (warm white)

Mounting

Y	Yoke

Voltage

/UNV1[8]	100-277 VAC, 50/60 Hz;127-250 VDC
/UNV34[9]	347-480 VAC, 50/60 Hz

Optical distribution

76	7x6 floodlight pattern optics
33	3x3 floodlight pattern optics

Entries

BLANK	3/4" NPT
M20	20mm
M25	25mm

Lens material

BLANK	Clear glass lens
S891	Diffused glass lens
S903	Polycarbonate lens

Paint

BLANK	Gray
BZ	Bronze
WH	White

Options:

Description	Suffix
• Diffused glass len	S891
• Polycarbonate lens	S903

Accessories (ordered separately)

Description	Cat. #
• Bull horn, gray	BLHN
• Bull horn, bronze	BLHN-BZ
• Bull horn, white	BLHN-WH
• Bolt-on visor	DSV2
• Bolt-on wire guard	P62
• 316 stainless steel safety cable	SC831
Can be added in the field	
• Floodlight slipfitter	SFA6
• Slipfitter wall mount adapter	SWB6

Replacement driver kits (ordered separately)

FMVA 3-5-7L UNV1 DRIVER KIT	UNV1 replacement driver kit for 3L, 5L and 7L models
FMVA 9-11-13L UNV1 DRIVER KIT	UNV1 replacement driver kit for 9L, 11L and 13L models
FMVA 15L UNV1 DRIVER KIT	UNV1 replacement driver kit for 15L model
FMVA 9L-11L UNV34 DRIVER KIT	UNV34 replacement driver kit for 9L and 11L models
FMVA 13L-15L UNV34 DRIVER KIT	UNV34 replacement driver kit for 13L and 15L models

[7] 7x6 model.
[8] IEC voltage; 100-250V at 50/60 Hz.
[9] Available for FMVA9L-15L only.

Champ FMVA LED floodlights

Temperature performance data

Model	Ambient temp. °C	Class I, Div. 2	Class II, Div. 1	Simultaneous rating: Class I, Div. 2; Div. 1	Class I, Zone 2	ATEX 3G	ATEX 2D	Minimum wire temp. °C
FMVA3L-FMVA15L	40	T5	T4	T4	T5	T5[10]	T65	105
	55	T4A	T3C	T3C	T4	T4	T80	105
	65	T4A	T3C	T3C	T4	–	–	105

Drivers

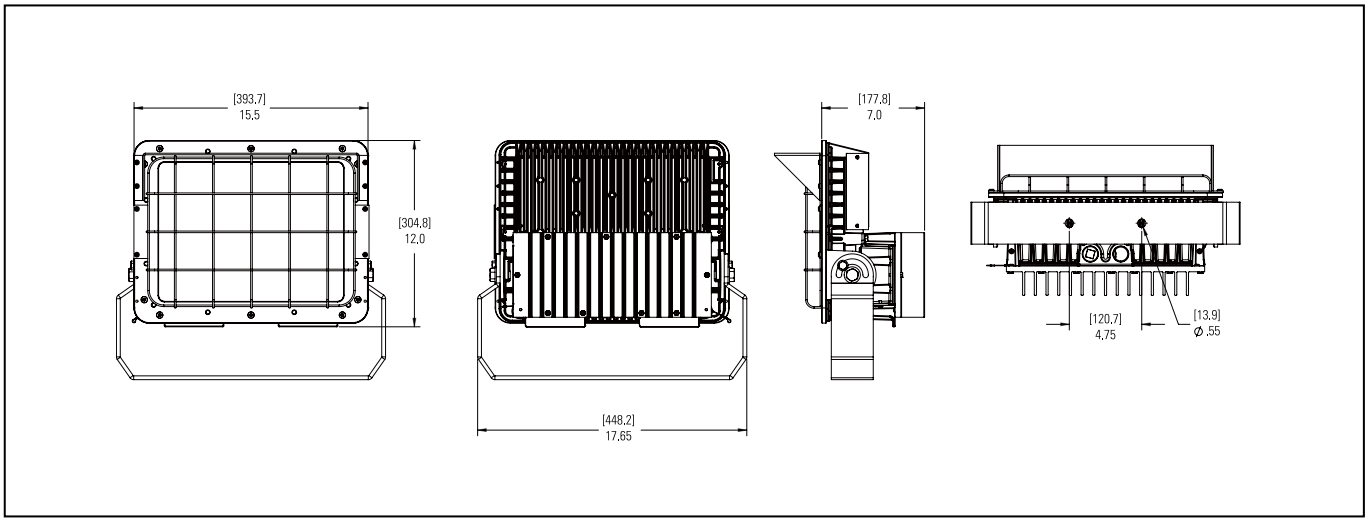
Option	FMVA3L-FMVA15L
/UNV1	NEC: 100-277 VAC, 50/60 Hz; 127-250 VDC; IEC: 100-240 VAC, 50/60 Hz; 127-250 VDC
/UNV34[11]	NEC/CEC only: 347-480 VAC, 50/60 Hz

1

Temperature performance data

Model	Lbs.	Kg.	Width in.	Width mm.	Height in.	Height mm.	Depth in.	Depth mm.
FMVA3L-FMVA15L	32.00	14.50	15.50	393.70	12.00	304.80	7.00	177.80

Dimensions (mm)



[10] T4 when using the 3x3 floodlight pattern optic.
[11] UNV34 driver available for FMVA9L-15L only.

Champ FMVA high lumen LED floodlights

The Champ FMVA LED family

39% lighter than the previous design with a small footprint

Champ® FMVA high lumen LED floodlights are designed to provide full-spectrum, crisp, white light. Four versions of the FMVA are available, providing ideal solutions for a wide range of applications.

Model	Nominal lumens	Watts[1)]	Equivalent MH luminaire	Typical energy savings / lifetime
FMVA20L	20,500	177	600W-750W	Up to 78% reduction in energy costs and 120,000 hours of continuous operation
FMVA25L	25,500	217	750W-1000W	
FMVA40L	40,500	340	1500W+	
FMVA50L	50,500	400		

FMVA20L/FMVA25L

FMVA40L/FMVA50L

Applications

- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present

Features

- Rugged design – engineered to perform in ambient temperatures from -40°C to 55°C
- High efficiency – engineered to deliver 117 lumens per watt
- Full frame yoke – designed to utilize the SFA6 slipfitter and SWB6 wall mount bracket, making it ideal for retrofit or new installations[2)]
- Custom optics – standard 7x6 pattern provides maximum light distribution
- 5 year fixture warranty

Standard materials

- Lamp housing and adapter – die cast aluminum with Corro-free epoxy powder coat
- Lens – heat- and impact-resistant glass (standard)
- Gaskets – silicone and neoprene
- External hardware – stainless steel

Fixture life

- Rated life of 60,000 hours at 55°C operating ambient and 24/7 continuous operation for 365 days

Photometrics

- Refer to www.eaton.com (under the Resources tab of each product family) for specific photometric IES files

Certifications and compliances

- DesignLights Consortium® Qualified (pending)[3)]

NEC model:

NEC/CEC:

- Class I, Division 2, Groups A, B, C, D
- Class I, Zone 2
- Class II, Division 1, Groups E, F, G
- Type 4X, IP66

UL standards:

- UL844; UL1598; UL1598A; UL1850

CSA standard:

- CSA C22.2 No. 137

Certifications and compliances (continued)

IEC/ATEX model:

IEC:

- IEC 60079-0:2011+ Corr.1(2012-01) + Corr. 2 (2013-12) + I-SH 01 (2013-11) + I-SH 02 (2014-10) / EN 60079-0:2012 + A11:2013
- IEC 60079-7:2017/ EN 60079-7:2015
- IEC 60079-31:2013/ EN 60079-31:2014
- IEC 60598-1:2008/EN60598-1:2008
- IEC 60598-2:2008/EN60598-2:2008
- IP66

IECEx/ATEX:

- IECEx UL 15.0029X
- DEMKO 15 ATEX 1377X
- DEMKO 15 ATEX1383
- Ex ec IIC T4 Gc Tamb -40°C to +40°C
- Ex ec IIC T4 Gc Tamb -40°C to +55°C
- Ex tb IIIC T81C Db Tamb -40°C to +40°C
- Ex tb IIIC T94°C Db Tamb -40°C to +55°C
- Ⓔx II 3 G Ex ec IIC T4 Gc -40°C to +40°C
- Ⓔx II 3 G Ex ec IIC T4 Gc -40°C to +55°C
- Ⓔx II 2 D Ex tb IIIC T81C Db IP66 -40°C to +40°C
- Ⓔx II 2 D Ex tb IIIC T94C Db IP66 -40°C to +55°C

1) UNV1 at 120 VAC.

2) SFA6 slipfitter and SWB6 wall mount bracket sold separately (20L/25L models only).

3) Refer to www.designlights.org Qualified Products List under Family Models for full listing details. Not all models are approved for all application categories.

Champ FMVA high lumen LED floodlights

Smaller and lighter

- 25% smaller footprint than previous model
- 20 lbs. less weight than previous model

Full frame yoke

- Designed to utilize the SFA6 slipfitter and SWB6 wall mount bracket, making it ideal for retrofit or new installation *(for 20L and 25L models)*

Versatile design

- Can be used for outdoor or indoor applications, and for a wide range of mounting heights depending on model and light level requirement

High lumen output

- Up to 120 lumens per watt
- Up to 78% energy savings over traditional HID fixtures (compared to 400W MH)

Multiple lens options

- Tempered clear glass lens standard
- Diffused glass lens optional

Rugged heat sink

- Heat sink designed to perform and provide maximum light levels in high ambient temperatures up to +55°C and as low as -40°C
- Thick walled castings make for a tough, rugged housing that keeps the internal driver and LED temperature down

Champ FMVA high lumen LED floodlights

Electrical ratings – NEC model

	120-277 VAC at 50/60 Hz		347-480 VAC at 50/60 Hz	
Model	**Input power**	**Input amps**	**Input power**	**Input amps**
FMVA20L	177W	1.76A	177W	0.52A
FMVA25L	217W	2.18A	216W	0.63A
FMVA40L	340W	3.35A	337W	1.24A
FMVA50L	400W	4.14A	400W	1.54A

All models *(UNV1 only)*	
Voltage range, VDC	127-300V at 50/60 Hz

All models	
Power factor	>0.90

Electrical ratings – IEC/ATEX model

	120-277 VAC at 50/60 Hz		347-440 VAC at 50/60 Hz	
Model	**Input power**	**Input amps**	**Input power**	**Input amps**
nFMVA20L	177W	1.76A	177W	0.52A
nFMVA25L	217W	2.18A	216W	0.63A
nFMVA40L	340W	3.35A	337W	1.24A
nFMVA50L	400W	4.14A	400W	1.54A

All models *(UNV1 only)*	
Voltage range, VDC	127-300V at 50/60 Hz

All models	
Power factor	>0.90

Temperature performance data – NEC model

Model	**Ambient temp. °C**	**Class I, Division 2**	**Class II, Division 1**	**Simultaneous presence Cl. I, Div. 2; Cl. II, Div. 1**	**Min. supply wire temp. °C**
FMVA20L	+40	T4A	T3C	–	90
FMVA25L	+55	T4A	T3C	–	90
FMVA40L	+40	T4A	T4A	T4	90
FMVA50L	+55	T4A	T4	T3C	90

Temperature performance data – IEC/ATEX model

Model	**Ambient temp. °C**	**IEC Zone 2**	**IEC Zone 22**	**Min. supply wire temp. °C**
nFMVA20L	+40	T4	T4	90
nFMVA25L	+55	T4	T4	90
nFMVA40L	+40	T81°C	T81°C	90
nFMVA50L	+55	T94°C	T94°C	90

Champ FMVA high lumen LED floodlights

Ordering information

Part number example

FMVA20LCY/UNV34 76 M20 S891 BZ

FMVA 20L C Y /UNV34 76 M20 S891 BZ

1

Model

FMVA	NEC
nFMVA	IEC/ATEX

Light source / intensity

20L	20,500 nominal lumens
25L	25,500 nominal lumens
40L	40,500 nominal lumens
50L	50,500 nominal lumens

Color temperature

C	5000K, 70 CRI (cool white)
W	3000K, 80 CRI (warm white)

Mounting

Y	Yoke

Voltage

/UNV1	100-277 VAC, 50/60 Hz; 127-300 VDC
/UNV34	347-480 VAC, 50/60 Hz

Optical distribution

76	7x6 floodlight pattern optics
33	3x3 floodlight pattern optics

Entries

BLANK	3/4" NPT
M20	20mm
M25	25mm

Lens material

BLANK	Clear glass lens
S891	Diffused glass lens

Paint

BLANK	Gray
BZ	Bronze
WH	White

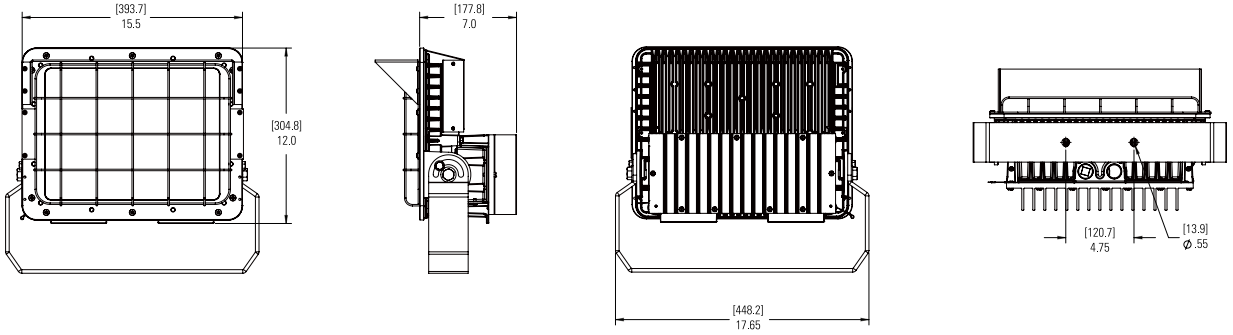
Accessories (ordered separately)

Description	Cat. #
• Bull horn, 2 tenon, gray	BLHN2
• Bull horn, 2 tenon, bronze	BLHN-BZ2
• Bull horn, 2 tenon, white	BLHN-WH2
• Bull horn, 3 tenon, gray	BLHN3
• Bull horn, 3 tenon, bronze	BLHN-BZ3
• Bull horn, 3 tenon, white	BLHN-WH3

Description	Cat. #
• Bolt-on visor	DSV2
• Bolt-on wire guard	P62
• Safety cable	SC831
• Slipfitter	SFA6[4)]
• Slipfitter wall mount adapter	SWB6[4)]

Champ FMVA high lumen LED floodlights

Dimensions and weights – FMVA20L/FMVA25L

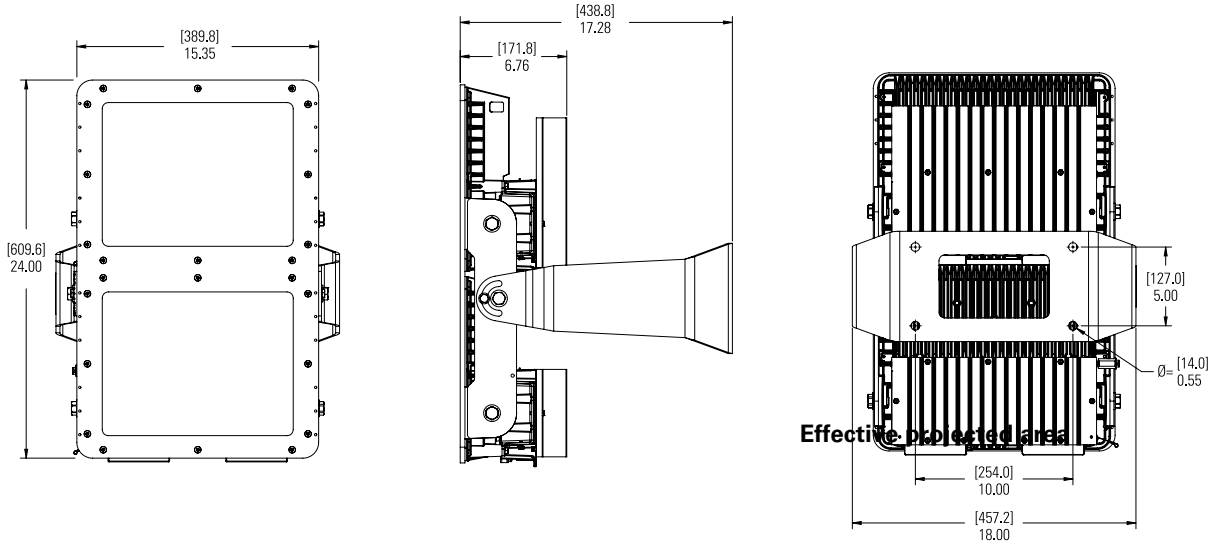


Model	Width		Height		Depth		Weight	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.
FMVA20L & 25L	15.50	393.70	12.00	304.80	7.00	177.80	34.00	15.40

Effective projected area

Position (tilt)	ft.-sq.
at 0°	1.50
at 45°	backwards 1.10
at 60°	forward 0.80

Dimensions and weights – FMVA20L/FMVA25L



Model	Width		Height		Depth		Weight	
	in.	mm.	in.	mm.	in.	mm.	in.	mm.
FMVA40L & 50L	18.00	457.20	24.00	609.60	17.28	438.80	77.00	34.90

Effective projected area

Position (tilt)	ft.-sq.
at 0°	3.20
at 45° backwards	3.25
at 60° forward	3.62

[4] D20L and 25L models only.

NHLL linear LED lighting-hazardous area

Product introduction

NHLL series is an extremely robust liner LED luminaire in an aluminum housing with a high impact polycarbonate diffuser for use in Zone 2 and 22 hazardous environments.

The use of high quality LED chips, along with Crouse-Hinds' industry knowhow in extracting heat from electrical products in hazardous, gaseous environment, ensures benchmark longevity for NHLL in operation. With the added benefits of energy savings, lower maintenance, overall lower cost of ownership and importantly, contributes to a greener environment.

Product features

Model	Length	Color temp.	Nominal lumens	Wattage	Equivalent fluorescent luminaire
NHLL-2-C2-3L	735mm	5700K	3000lm	30W	2x18W
NHLL-2-C2-4L	735mm	5700K	4500lm	40W	2x36W
NHLL-4-C2-5L	1335mm	5700K	6200lm	60W	2x36W
NHLL-4-C2-8L	1335mm	5700K	7700lm	80W	2x58W

- Reliability
  - Polycarbonate, 4J impact resistant
  - Cooper free aluminum for excellent corrosion and heat transfer properties
  - IP66 protection
  - Suitable for zone 2 gas and 22 dust atmospheres
  - Highest temperature class T6
- Permissible ambient temperature:
  - Standard luminaire: -40˚C~+50˚C/55˚C
  - Emergency luminaire: -25˚C~+50˚C/55˚C
  - Available for 3000K, 4000K,5000K and 5700K
- Anti shock and vibration proof
- Mercury-free
- Instant ON without time delay
- Rated life of 5 years at 55˚C provides long term, low-maintencnce operation.

Technical data

EC-Type examination certificate	SEV 18 ATEX 0171X
IECEx-certification of conformity	IECEx NEP 18.0003X, IECEx SEV 19.0054X
Ex marking	Ex db ec IIC T5/T6 Gc Ex ec IIC T5/T6 Gc Ex db ec ib mb IIC T5/T6 Gc Ex ec ib mb IIC T5/T6 Gc Ex tb IIIC T80˚C Db
Ambient temp	-40°C ~ +50°C/55°C (Normal) -25°C ~ +50°C/55°C (Emergency)
Rated input volt	110~240 VAC; 108~250 VDC
Power factor	>0.9
CRI	Cool white>70 as standard, CRI>80 is optional
System watt	2 series: 30W/40W 4 series: 60W/80W
Lumen output*	2 series: 3000Lm/4500Lm 4 series: 6200Lm/7700Lm
Material	Aluminum
Weight	2 series normal: 5kg 2 series Em: 6kg 4 series normal: 10kg 4 series Em: 12kg
Terminals	6mm²
Out line dimension	2 series: 735x180x130(mm) 4 series: 1335x180x130(mm)
Backup duration & lumen percentage	EM1=1.5h, 25% output, EM2=3h, 25% output, EM3=3h(for 8L)
IP (IEC60529)	IP66

* Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.
* Tolerance+/-10%

NHLL linear LED lighting-hazardous area

Ordering information

Product Type	Colour Temp[1]	Terminals	Throughwiring[2] Single-ended	Throughwiring[2] Twin-ended	Entry Threaded	Ex e Threaded Plug[3]	Part No.[4]
NHLL 2 Feet							
NHLL-2-C2-3L-1/6-220-N	5700K	1x6	●	-	2xM20	1	CCL1653436
NHLL-2-C2-3L-2/6-220-N		2x6		●	4xM20	2	CCL1653444
NHLL 2 Feet Emergency							
NHLL-2-C2-3L-EM1-1/6-220-N	5700K	1x6	●	-	2xM20	1	CCL1653452
NHLL-2-C2-3L-EM1-2/6-220-N		2x6		●	4xM20	2	CCL1653460
NHLL 4 Feet 5L							
NHLL-4-C2-5L-1/6-220-N	5700K	1x6	●	-	2xM20	1	CCL1653596
NHLL-4-C2-5L-2/6-220-N		2x6		●	4xM20	2	CCL1653604
NHLL4 Feet 5L Emergency							
NHLL-4-C2-5L-EM1-1/6-220-N	5700K	1x6	●	-	2xM20	1	CCL1653612
NHLL-4-C2-5L-EM1-2/6-220-N		2x6		●	4xM20	2	CCL1653620

[1] Tolerance +/- 10%
[2] Through wiring 6 x 2.5 mm^2
[3] Standard version without cable gland. if need, please order separately
[4] Contact your local sales representative for special requirements.

Metallic Cable Glands (Order Separately)

ADE-1F2

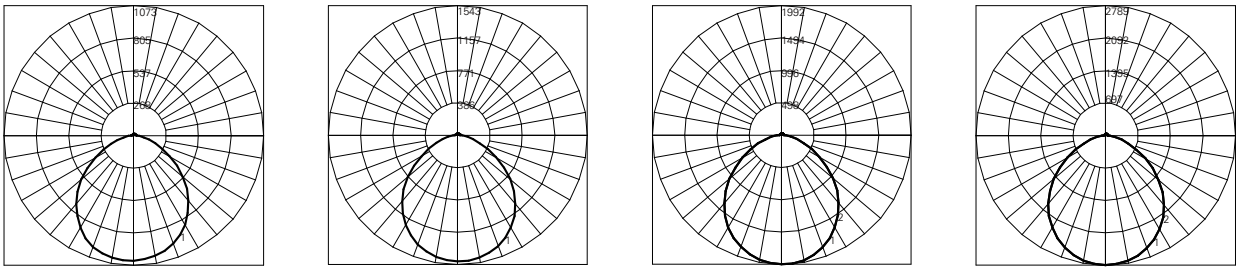
Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M201NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0

ADE-4F

			Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
Catalog #	Metric Thread Size	Cable Types	Min.	Max.	Min.	Max.	Min.	Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20		7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3

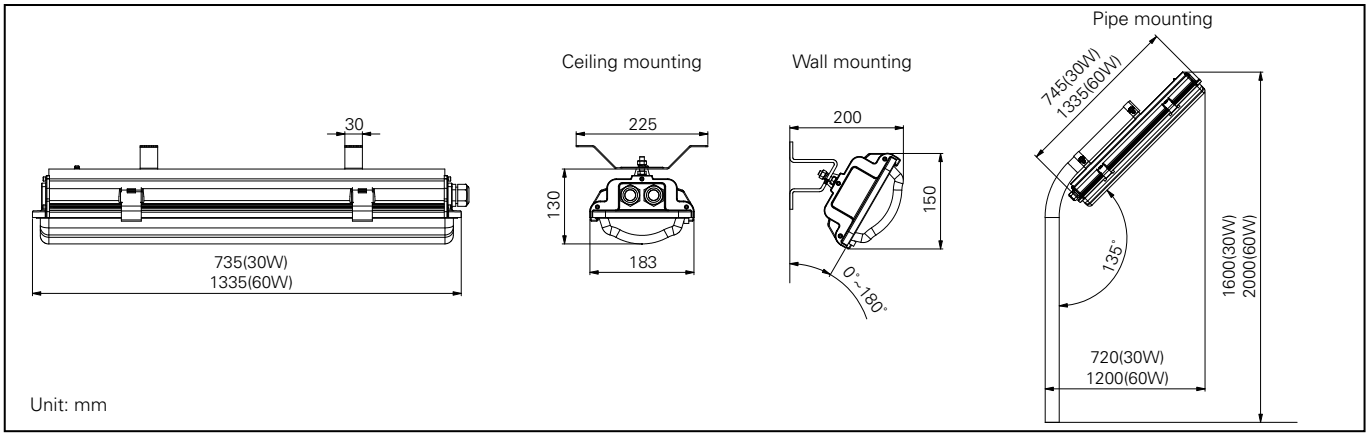
ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

Polar curve



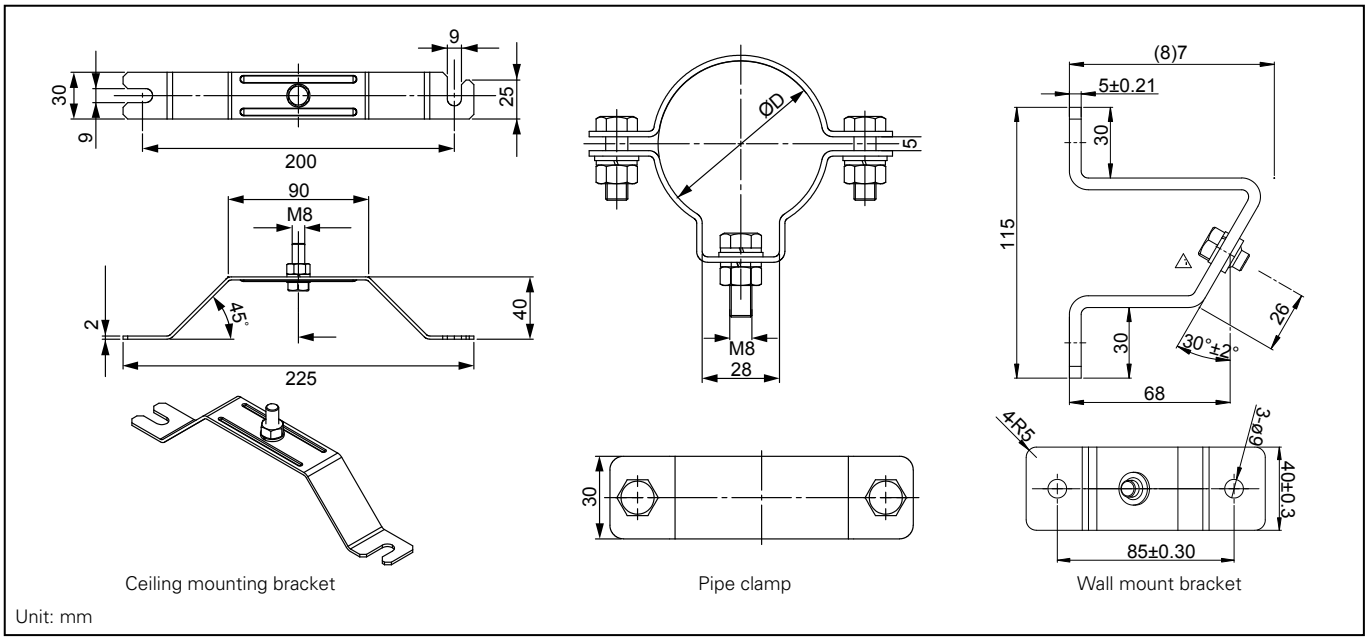
NHLL linear LED lighting-hazardous area

Dimension



Unit: mm

Mounting accessories (To be ordered separately)



Ceiling mounting bracket

Pipe clamp

Wall mount bracket

Unit: mm

Pipe mounting

Part No	Description	Quantity per luminaire
CHR11076	Pipe clamp assy D42 316S/S	2
CHR11079	Pipe clamp assy D51 316S/S	2

Wall mounting

Part No	Description	Quantity per luminaire
CHR11073	Wall suspension 316S/S	2

Ceiling mounting

Part No	Description	Quantity per luminaire
CHR11099	Ceiling mounting BKT 316S/S	2

NLE pendant LED lighting-hazardous area

Product introduction

The Zone 2 NLE product Series LED Luminaires using high-quality international brand LED chips, have extremely long lifespan. Multiple version of the NLE LED are available, providing ideal solutions for a wide range of applications.

NLE provides the same durability and reliability of a traditional HID fixture, coupled with the low cost of ownership and energy efficiency of Crouse-Hinds LED technology. High-performance LEDs and a solid-state electronic driver provide light where you need it, at a fraction of the operating costs of HID lighting technologies.

Suitable for Zone 2 Ex-gas and 22 Ex-dust hazardous area, such as heavy industrial, chemical, petrochemical or pharmaceutical facilities, platforms, shipyard, electric power, loading docks, wastewater treatment, paper mill.

Product features

- **High Efficient & Energy saving**
  Up to 66% energy-saving comparing to HID Luminaire.

Model	Nominal lumens	Wattage	Equivalent HID Luminaire	Energy Savings
NLE-3L	Approx.3731	Approx.30W	70W-100W	Up to 58%
NLE-5L	Approx.5000	Approx.50W	100W-150W	Up to 66%
NLE-7L	Approx.7000	Approx.70W	150W-175W	Up to 60%
NLE-8L	Approx.8000	Approx.80W	150W-175W	Up to 60%

- **Industry-Best Safety Reliability**
  - Extremely low profile & light weight.
  - Copper free aluminum housing, tempered and impact resistant glass globe, heat & corrosion proof.
  - IP66 Protection.

- **Perfect Temperature and Optical Performance for Wide Application**
  - Best T- Rating: T6/T5.
  - Permissible temp. range*:
    3L/5L: -40˚C~+55˚C T6
    7L/8L: -40˚C~+55˚C T5
  - Cold white 5700K & Warm white 3000K are available

  * Please contact Crouse-Hinds sales for other temp. range request.

- **Anti Shock and vibration**
- **Mercury-free & lead free, environment protection**
- **Instant ON/OFF**
- **Standard Product provides pendant mount, optional U shape yoke mount provide the greatest mounting flexibility: wall mounting ,ceiling mounting , pole mounting and etc.**
  Separate pole mounting bracket is also available, please refer to below drawing for details.
- **Rated life of 5 years at 55˚C provides long term, low-maintencnce operation.**

NLE pendant LED lighting-hazardous area

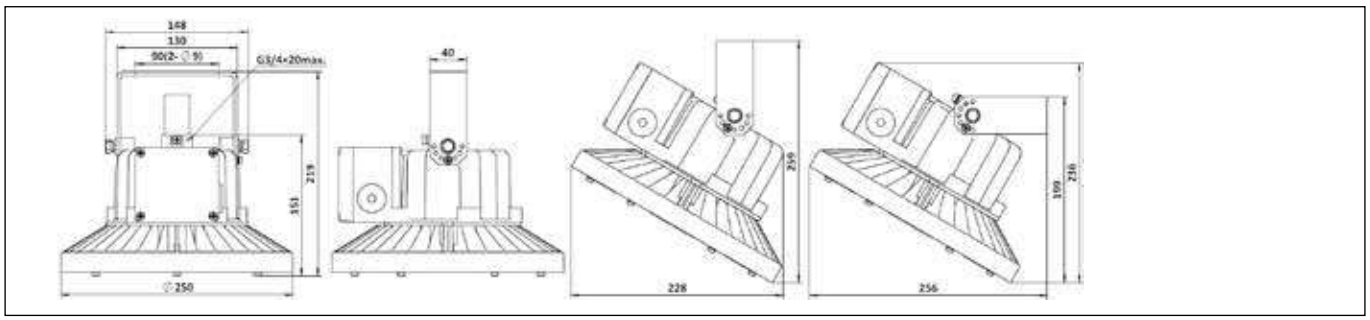
Technical information

Certification of conformity	IECEx NEP 21.0002X., EPT 16 ATEX 2452X, IECEx SEV 19.0056X
Ex Marking	Ex nR IIC T6/T5 Gc Ex tb IIIC T80˚C/T100˚C Db
Power consumption	Refer to below table
Rated voltage	AC 100V - 240V 50/60Hz; DC 108-250V
THD	<15%
Power factor	≥ 0.9
Cable entry	M20 as standard, M25 is available. 1 Ex e entry plugged
Terminal	Max 6 pole 6 mm^2, L, N, PE; solid: 0.5mm^2-6mm^2; Flexible: 0.5mm^2-4mm^2
Permissible ambient temperature	-40˚C~+55˚C
Degree of protection	IP66
Insulation class	I
Dimension	Ø250 x 174 (mm)
Net weight	<5kg

Ordering information

Part No.	Product Type	Lumen Output[1)]	Color Temp.	System Watt	Input Valtage	Entry Threaded	Ex e Threaded Plug [2)]	Ambient Ta	Ta Code (Gas)	TC(Dust) Dust Temp.
CCL1506975	NLE-3L-1M-S886-T3-1P-B6	3188lm	5700K	28W	100~240V AC 50/60Hz, 108~250V DC	2 x M20	1 x M20	-40˚C~ +55˚C	T6	T80C
CCL1507107	NLE-5L-1M-S886-T3-1P-B6	5090lm	5700K	50W		2 x M20	1 x M20		T6	T80C
CCL1606173	NLE-7L-1M-S886-T3-1P-B6	7300lm	5700K	70W		2 x M20	1 x M20		T5	T100C
CCL1507371	NLE-8L-1M-S886-T3-1P-B6	7867lm	5700K	75W		2 x M20	1 x M20		T5	T100C
CCL1507239	NLE-3L-W-1M-S886-T3-1P-B6	2997lm	3000K	35W		2 x M20	1 x M20		T6	T80C
CCL1507503	NLE-5L-W-1M-S886-T3-1P-B6	5070lm	3000K	60W		2 x M20	1 x M20		T6	T80C
CCL1612807	NLE-6L-W-1M-S886-T3-1P-B6	6385lm	3000K	75W		2 x M20	1 x M20		T5	T100C

Installation and dimension



Polar curve

Weatherproof lighting

Contents

PLLE linear LED lighting-harsh & heavy industrial area

Product introduction

The PLLE product Series LED Luminaires are using high-quality international brand LED chips, have extremely long lifespan. Multiple version of the LED are available, providing ideal solutions for indoor or outdoor areas to retrofit existing fluorescent fixtures.

Product features

Model	Length	Color temp.	Nominal lumens*	Wattage	Equivalent fluorescent luminaire
PLLE-2-C2-3L	735mm	5700K	3000lm	30W	2x18W
PLLE-2-C2-4L	735mm	5700K	4000lm	40W	2x36W
PLLE-4-C2-5L	1335mm	5700K	5000lm	60W	2x36W
PLLE-4-C2-8L	1335mm	5700K	8000lm	80W	2x58W

* Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.
* Tolerance+/-10%

- Reliability
  - Polycarbonate, 4J impact resistant
  - Cooper free aluminum for excellent corrosion and heat transfer properties
  - IP66 protection
- Permissible ambient temperature:
  - Standard luminaire: -40˚C~+55˚C
  - Emergency luminaire: -25˚C~+55˚C
  - Standard 5700K, also avaliable for 3000K, 4000K, 5000K, 6500K.
- Anti shock and vibration proof
- Mercury-free
- Instant ON without time delay
- Rated life of 50,000 hours at 55 °C provides long term, lowmaintenance operation

Technical data

Ambient temp	-40°C ~ 55°C (Normal) -25°C ~ 55°C (Emergency)
Rated input volt	100~240 VAC; 108~250 VDC
Power factor	>0.9
CRI	Cool white>70 as standard, CRI>80 is optional
System watt*	2 series: 30W/40W 4 series: 60W/80W
Lumen output	2 series: 2000Lm/3000Lm/4000Lm 4 series: 4000Lm/5000Lm/7000Lm/8000Lm
Material	Aluminum
Weight	2 series normal: 5kg 2 series Em: 6kg 4 series normal: 10kg 4 series Em: 12kg
Terminals	6mm²
Out line dimension	2 series: 735x180x130(mm) 4 series: 1335x180x130(mm)
Backup duration & lumen percentage	EM1=1.5h, 25% output, EM2=3h, 25% output, EM3=3h, 20% output
IP (IEC60529)	IP66

*Tolerance+/-5%

PLLE linear LED lighting-harsh & heavy industrial area

Ordering Information

Product Type	Colour Temp	Terminals	Throughwiring Single-ended	Throughwiring Twin-ended	Cable gland/ Threaded	Threaded Plug	Entry Opening	Part No.
PLLE-3L								
PLLE-2-C2-3L-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1652794
PLLE-2-C2-3L-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1652802
PLLE-3L Emergency								
PLLE-2-C2-3L-EM1-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1652810
PLLE-2-C2-3L-EM1-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1652818
PLLE-4L								
PLLE-2-C2-4L-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1652890
PLLE-2-C2-4L-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1652898
PLLE-4L Emergency								
PLLE-2-C2-4L-EM3-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1652906
PLLE-2-C2-4L-EM3-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1652914
PLLE- 5L								
PLLE-4-C2-5L-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1652954
PLLE-4-C2-5L-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1652962
PLLE- 5L Emergency								
PLLE-4-C2-5L-EM1-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1652970
PLLE-4-C2-5L-EM1-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1652978
PLLE- 8L								
PLLE-4-C2-8L-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1653050
PLLE-4-C2-8L-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1653058
PLLE- 8L Emergency								
PLLE-4-C2-8L-EM3-1/6-220-N	5700K	1x 6/6	●	-	2xM20	1	1	CCL1653066
PLLE-4-C2-8L-EM3-2/6-220-N		2x 6/6	-	●	4xM20	2	2	CCL1653074

PLLE linear LED lighting-harsh & heavy industrial area

Metallic Cable Glands (Order Separately)

ADE-1F2

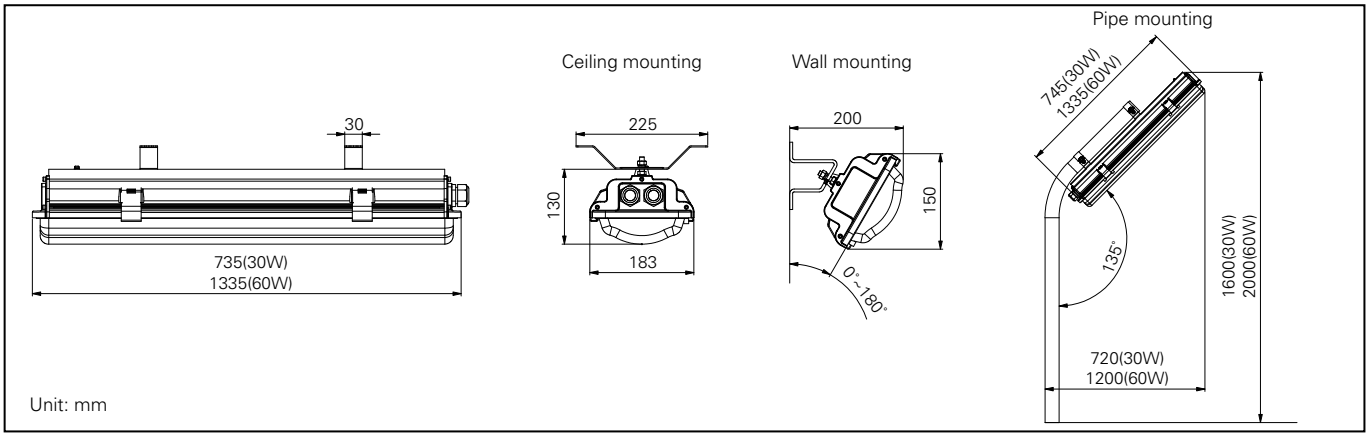
Catalog #	Metric Thread Size	Cable Types	Cable sealing range - Min	Cable seaing range - Max
ADE1M201NPN	M20	Non-armoured, Marine shipboard, Type P, Tray cable (armoured)	4.5	8.5
ADE1M202NPN	M20		7.0	12.0
ADE1M203NPN	M20		10.0	16.0

ADE-4F

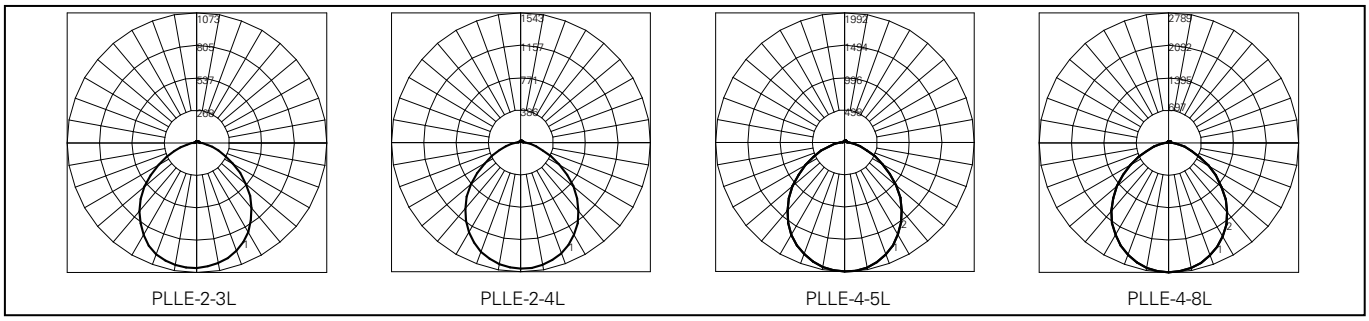
Catalog #	Metric Thread Size	Cable Types	Cable sealing range inner sheath		Cable sealing range outer sheath		Armor	
			Min.	Max.	Min.	Max.	Min.	Max.
ADE4M201NPN	M20	SWA, SWB, STA, Braided marine shipboard, Type P; Leadsheathed cable (with addition of earthing washer)	4.5	8.0	7.0	12.0	0.2	0.9
ADE4M202NPN	M20		7.0	12.0	10.0	16.0	0.2	1.3
ADE4M203NPN	M20		10.0	15.5	13.5	21.0	0.2	1.3

ADE-1F2 and ADE-4F catalog numbers are for nickel-plated brass; For other material options, please contact our sales representative.

Dimension

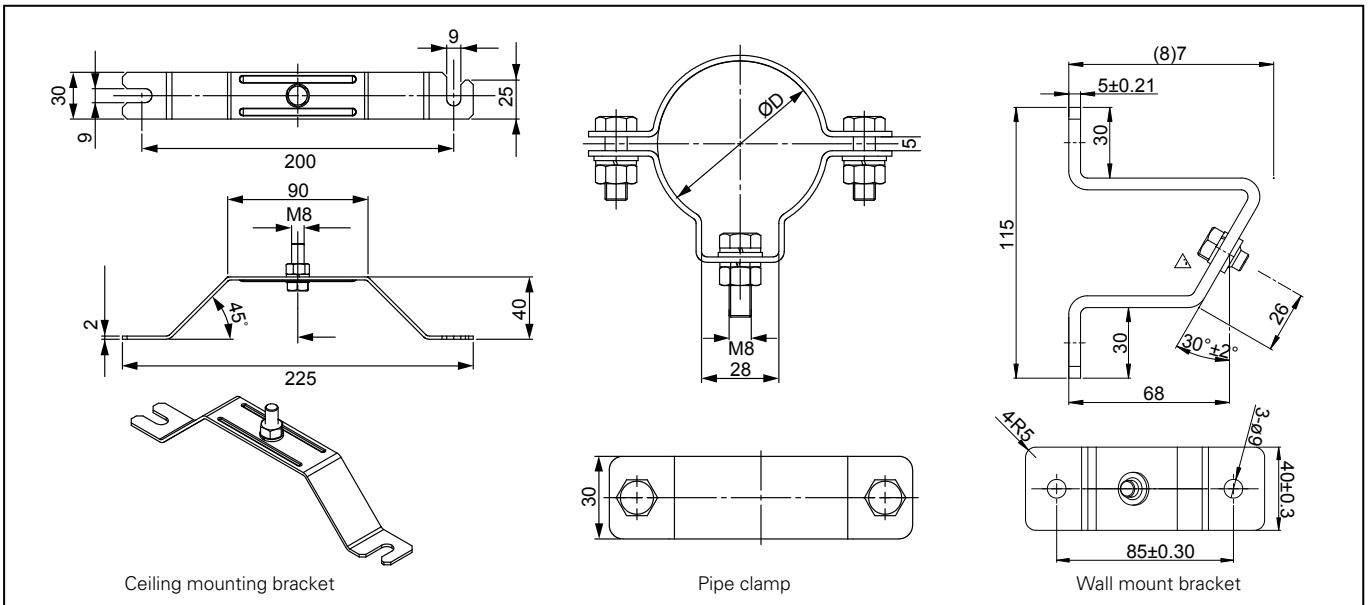


Polar curve



PLLE linear LED lighting-harsh & heavy industrial area

Mounting accessories (To be ordered separately)



Ceiling mounting bracket

Pipe clamp

Wall mount bracket

Unit: mm

Pipe mounting

Part No	Description	Qty*
CHR11076	Pipe clamp assy D42 316S/S	2
CHR11079	Pipe clamp assy D51 316S/S	2

Wall mounting

Part No	Description	Qty*
CHR11073	Wall suspension 316S/S	2

Ceiling mounting

Part No	Description	Qty*
CHR11099	Ceiling mounting BKT 316S/S	2

* For above part no. need to order 2pcs for one lighting fixture.

PLE pendant LED lighting-harsh & heavy industrial area

Product introduction

The PLE product series LED luminaires using high-quality international brand LED chips, have extremely long lifespan. Multiple version of the PLE LED are available, providing ideal solutions for a wide range of applications. Perfect substitutes for 70W-175W HID Luminarie.

High intensity aluminum housing, tempered and impact resistant glass globe, heat & corrosion proof with IP66 Protection. Provide energy-efficient, safe and reliable LED lighting solution for the customers.

2

Product features

- **High Efficient & Energy saving**
  Up to 66% energy-saving comparing to HID Luminaire.

Model	Nominal lumens	Wattage	Equivalent HID Luminaire	Energy Savings
PLE-3L	Approx.3000	Approx.30W	70W-100W	Up to 58%
PLE-5L	Approx.5000	Approx.50W	100W-150W	Up to 66%
PLE-7L	Approx.7000	Approx.70W	150W-175W	Up to 60%
PLE-8L	Approx.8000	Approx.80W	150W-175W	Up to 60%

Lumen values apply to 5700K color temperature.
Lumen outputs may vary slightly for different modules.

- **Industry-Best: Safety & Reliability**
  - Extremely low profile & light weight
  - High intensity aluminum housing, tempered and impact resistant glass globe, heat & corrosion proof.
  - IP66 Protection.
  - 5 year lifespan
  - Cold white CCT 5700K & Warm white 3000K are available
  - Coating color optional

- **Perfect Temperature and Optical Performance for Wide Application**
  - Permissible temp. range: -40˚C~+55˚C(Normal)
    -25˚C~+45˚C(EM)
  * Please contact Crouse-Hinds sales for other temp.

- **Anti Shock and vibration**
- **Mercury-free & lead free, environment protection**
- **Instant ON/OFF**
- **Standard Product provides pendant mount, optional U shape yoke mount provide the greatest mounting flexibility: wall mounting ,ceiling mounting , pole mounting and etc.**
- **Rated life of 5 years at 55˚C provides long term, low-maintencnce operation.**

Application area-ordinary non-hazardous locations

- Heavy industrial, mine site processing areas, platforms, loading docks, tunnels,indoor/outdoor spotlighting, outdoor wall,and areas requiring frequent on-and-off of lights
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist

PLE pendant LED lighting-harsh & heavy industrial area

Technical information

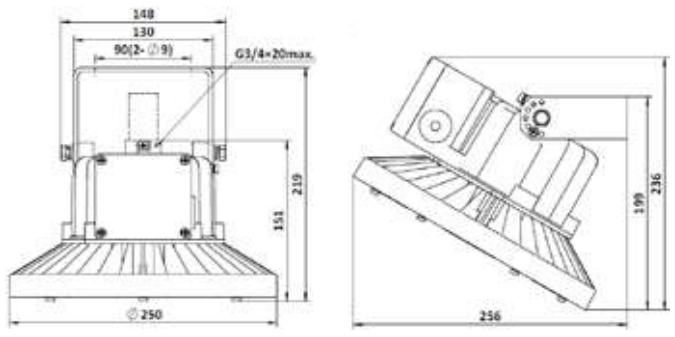
Power consumption	30W-80W
Rated voltage	AC 100V-240V 50Hz/60Hz; DC 108-250V
Power factor	≥0.9
CCT	5700K/3000K
CRI	>70
Degree of protection	IP66
Insulation class	I
Permissible ambient temperature	-40˚C~+55˚C (Normal); -25˚C~+45˚C (EM)
Net weight	<5kg, <6.5kg (EM)
Certificate	CE
Emergency flumen output	EM1=1.5H, 30% output

Ordering information

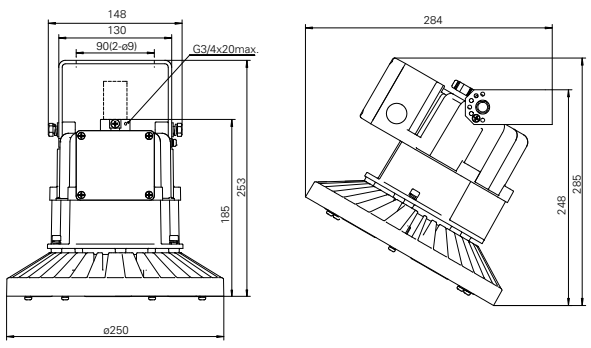
Part No.	Product Type	Lumen Output[1)]	Color Temp.	System Watt	Input Valtage	Entry Threaded	Ex e Threaded Plug [2)]	Ambient Ta
CCL12013110	PLE-3L-1M-S886-T2-1P-B6	3188lm	5700K	28W	100~240V AC 50/60Hz, 108~250V DC	2 x M20	1 x M20	-40˚C~+55˚C
CCL12013878	PLE-5L-1M-S886-T2-1P-B6	5090lm	5700K	50W		2 x M20	1 x M20	
CCL1605867	PLE-7L-1M-S886-T2-1P-B6	7300lm	5700K	70W		2 x M20	1 x M20	
CCL12014646	PLE-8L-1M-S886-T2-1P-B6	7867lm	5700K	75W		2 x M20	1 x M20	
CCL1620882	PLE-5L-1M-S886-T2-1P-B6-EM1	5090lm	5700K	50W		2 x M20	1 x M20	-25˚C~+45˚C

[1)] Tolerance +/- 10%
[2)] Standard version without cable gland. if need, please order separately
[3)] Contact your local sales representative for special requirements.

Installation and dimension

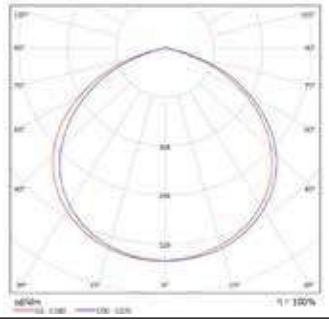


Normal version



Emergency version

Polar curve



ECH-SHB LED high bay light

Product introduction

The ECH-SHB product series LED luminaires using high-quality international brand LED chips, have extremely long lifespan.

The light is used for heavy industrial, mine site processing areas, platforms, loading docks, tunnels, indoor/outdoor spotlighting, outdoor wall, and areas requiring frequent on-and off of lights, and where extremely corrosive, wet, dusty, hot and/or cold conditions exist.

Product features

- High intensity aluminum housing
- IP65 protection
- 5 year lifespan
- Cold white CCT 5700K & warm white 3000K are available
- Coating color optional

2

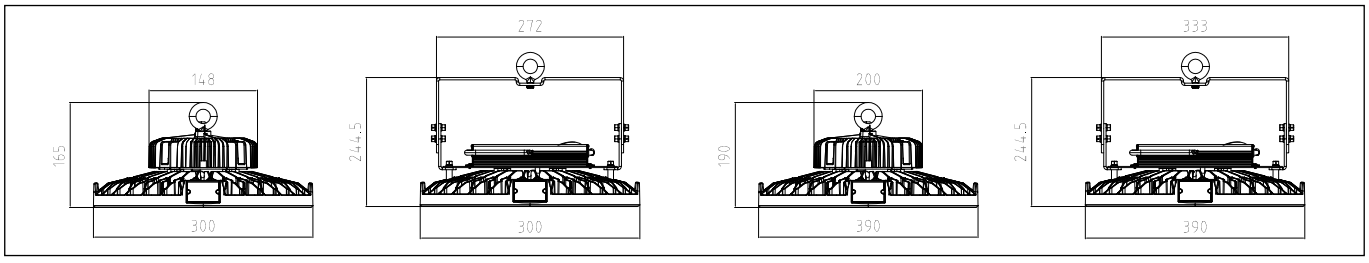
Technical data

Certificate	CE
IP class	IP65
Ambient temperature	- 30°C~50°C
Standard material	Aluminum die casting housing
Input voltage	AC100-277V, 50/60Hz
Cable entry	without cable gland, pre-wiring

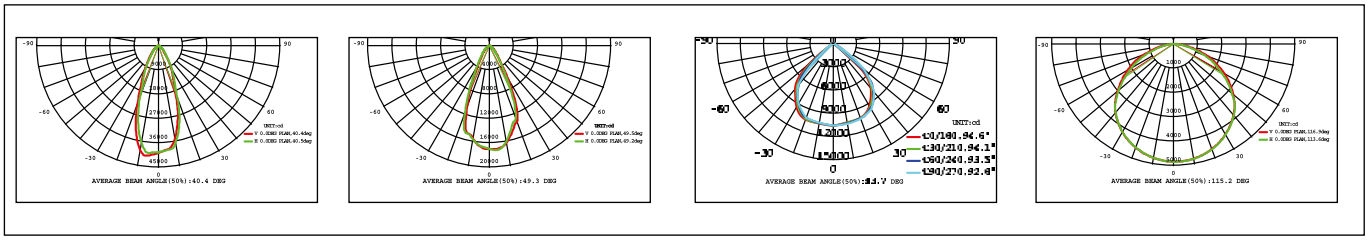
Ordering logic

ECH-SHB	-60W	-57	-120	-P	-R
Product group	**Power**	**Color temperature**	**Polar curve**	**Mounting bracket**	**Driver type**
ECH-SHB	80W	**30:** 3000K	**30** Degree(up 150W)	**P:** Pendant eyebolt	**R:** Rectangle
	120W	**57:** 5700K	**60** Degree	**C:** Ceiling mounting	(under 240W)
	150W		**90** Degree(under 150W)		**C:** Circular
	240W		**120** Degree		

Dimension



Polar curve



ECH-FDL03 LED flood light

Product introduction

Patented design combined with many advanced technologies, ECH-FDL can resist impact and corrosion with high strength aluminum extruded housing.

Product features

- Perfect integrative heat sink insures good performance of LED lamp.
- Single or multiple LEDs module arrays, to provide more wattage as needed.
- LED modular design offers a simple maintenance.
- Multiple beam angles as your options, to suit your needs.

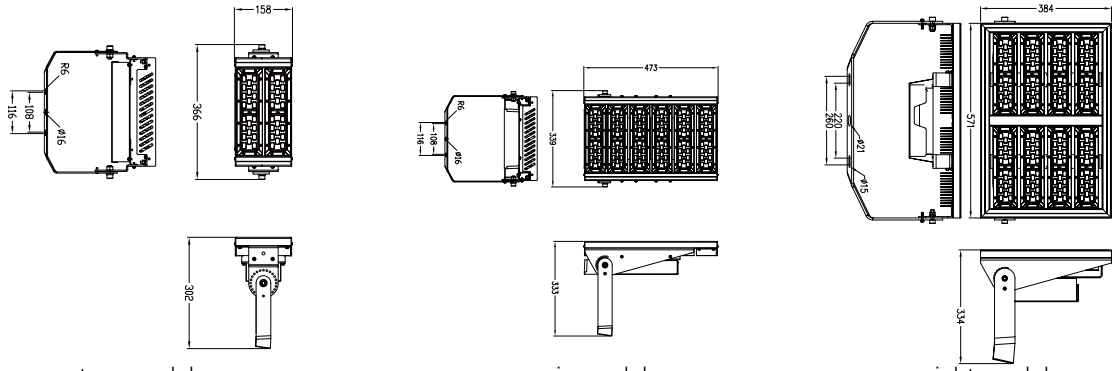
Technical data

Compliance	CE
IP class	IP66
Ambient temperature	-25˚C~50˚C
Standard material	Aluminum extruded housing
Input voltage	AC100-277V, 50/60Hz
Cable entry	without cable gland, pre-wiring

Ordering logic

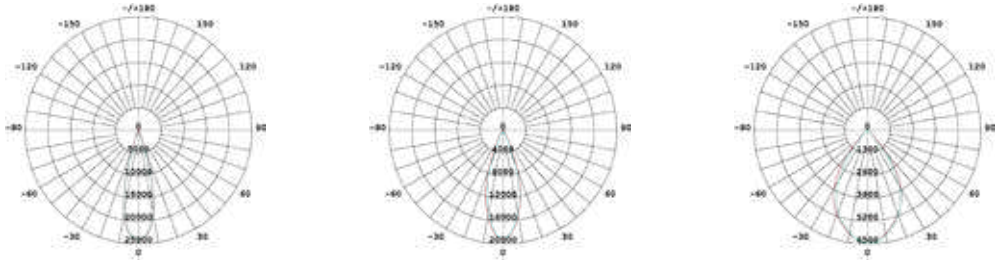
ECH-FDL03	-120W	-WT*	-N
Product group	**Power**	**Color temperature**	**Porlar curve**
ECH-FDL03	60W 120W 180W 240W 360W	WT=3000K, >110lm/W MT=4000K, >125lm/W CT=5700K, >125lm/W	N=25° M=40° W=60°

Dimension



two modules six modules eight modules

Polar curve



25˚ 40˚ 60˚

*Tolerance+/-10%

ECH-STL LED street light

Product introduction

ECH-STL can resist impact and corrosion with die casting aluminum housing. Street light housing is a shelter for LED module to prevent dust. It has independent heat sink and light distribution system in each LED module.

Product features

- Single or multiple LED module arrays at your options, to provide more wattage.
- LED modular design offers a simple maintenance.

2

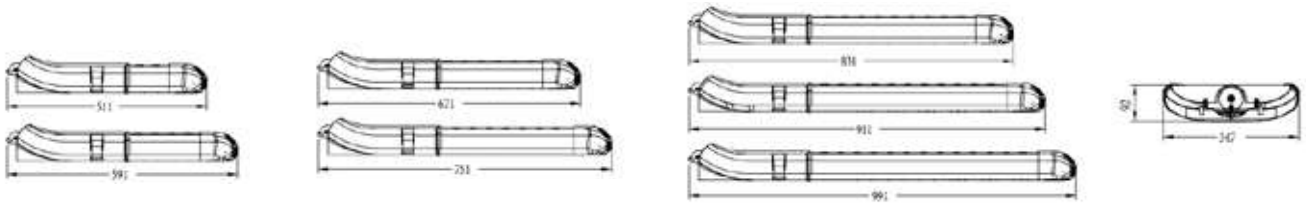
Technical data

Compliance	CE
IP class	IP66
Ambient temperature	-40˚C~45˚C
Standard material	Die casting aluminum housing
Input voltage	AC100-277V, 50/60Hz
Pole entry	48-60mm

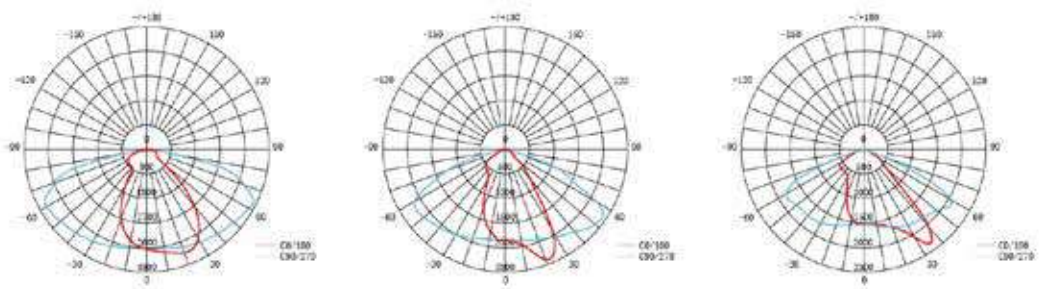
Ordering logic

ECH-STL	-120W	-WT	-T1
Product group	**Power**	**Color temperature**	**Porlar curve**
ECH-STL	60W 120W 180W 240W	WT=3000K, >90lm/W MT=4000K, >110lm/W CT=5700K, >110lm/W	T1=Type I T2=Type II T3=Type III

Dimension



Polar curve



Type I Type II Type III

Marine lighting

Contents

CDLL LED down light

Product introduction

Housing
Galvanized Steel, with RAL9016 white powder coated, optional SS316L

Diffuser
IP44 sealed diffuser on trim ring

Electric
LED driver
110~240V, 50/60Hz
*Dimming driver is optional

Lumen output
LED 10W 850lm
LED 20W 2000lm

Application area
IP44, meeting room, entertaining room or other interior spaces

Mounting
Recessed mounting, 150mm cut-out, thickness of ceiling less than 75mm

Entries
Two Ø20.5 or Ø27 holes for cable glands

Terminal block
3 pole 6mm^2 max

Ambient temp
-30 ˚C~+50 ˚C

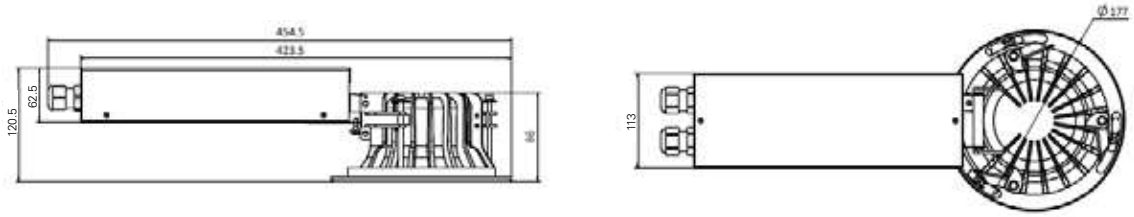
Certificate
DNV

3

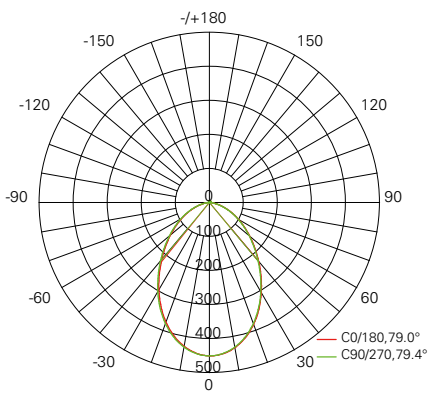
Ordering logic

CDLL	-00	-10	-D	-H	-W	-N
	Housing material	**Wattage**	**Driver type**	**Ceiling thickness**	**Color temperature**	**Standard version**
	00-Galvanized steel	**10**-10W	**Default**—Normal driver	**Default**-≤50mm ceiling	**Default**-5000K	**Default**-IEC Version
		20-20W		**H**-≤75mm ceiling	**W**-3500K	**N**-NEC Version

Dimension



Polar curve



CMBL berth LED light

Product introduction

Housing
Galvanized Steel, with RAL9016 white powder coated, optional SS316L

Switch
Double pole switch and receptacle provided

Diffuser
Acrylic

Electric
LED driver
110~240V, 50/60Hz

Lumen output
LED 6W 720lm

Application area
IP22, berth light or desk light

Mounting
Surface mounting

Entries
Two Ø5mm holes on back, with rubber grommet

Terminal block
3 pole 6mm^2 max

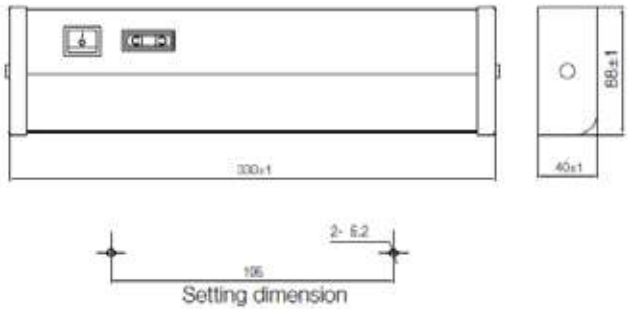
Ambient temp
-25 ˚C~+45 ˚C

Certificate
DNV

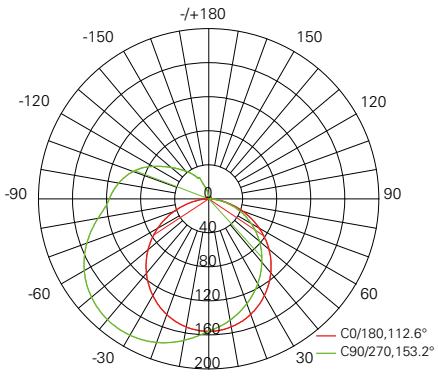
Ordering logic

CMBL	-00	-06	-NR	-W
	Housing material	**Wattage**	**Optional socket**	**Color temperature**
	00-Galvanized steel	**06**-6W	**Default**—with socket	**Default**-5000K
	16-Stainless steel 316L		**NR**—without socket	**W**-3500K

Dimension



Polar curve



CMML mirror LED light

Product introduction

Housing
Galvanized Steel, with RAL9016 white powder coated, optional SS316L

Switch
Double pole switch and receptacle provided

Diffuser
PC

Electric
LED driver
110~240V, 50/60Hz

Lumen output
LED 6W 450lm

Application area
IP44, for bathroom, mirror or berth

Mounting
Surface mounting, under cabinet

Entries
Two Ø15mm holes on back, with rubber grommet

Terminal block
3 pole 6mm^2 max

Ambient temp
-25 ˚C~+45 ˚C

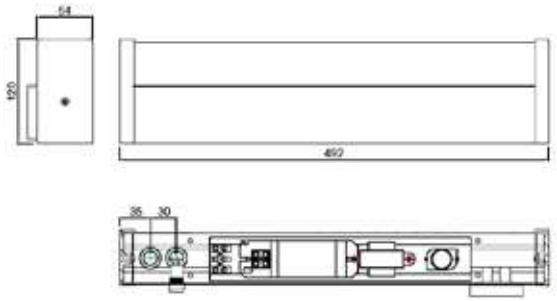
Certificate
DNV

3

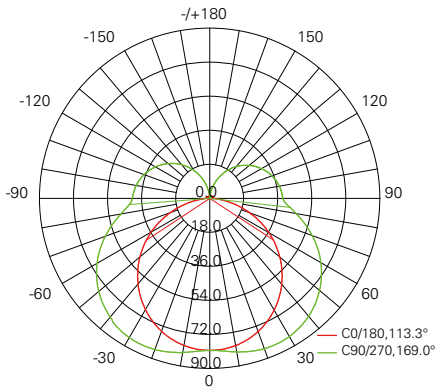
Ordering logic

CMML	-00	-06	-NR	-W
	Housing material	**Wattage**	**Optional socket**	**Color temperature**
	00-Galvanized steel	**06**-6W	**Default**—with socket	**Default**-5000K
	16-Stainless steel 316L		**NR**—without socket	**W**-3500K

Dimension



Polar curve



CMRL recessed LED luminaire

Product introduction

Housing
Galvanized Steel, with RAL9016 white powder coated, optional SS316L

Diffuser
Translucent white pc

Electric
LED driver
110~240V, 50/60Hz
*Dimming driver is optional

Lumen output
LED 20W 1800lm
LED 40W 3700lm

Application area
IP42, for office, wheelhouse, stateroom, and etc.

Mounting
Recessed mounting

Entries
Two or four entry holes on back, with rubber grommet

Terminal block
6 pole 6mm^2 max

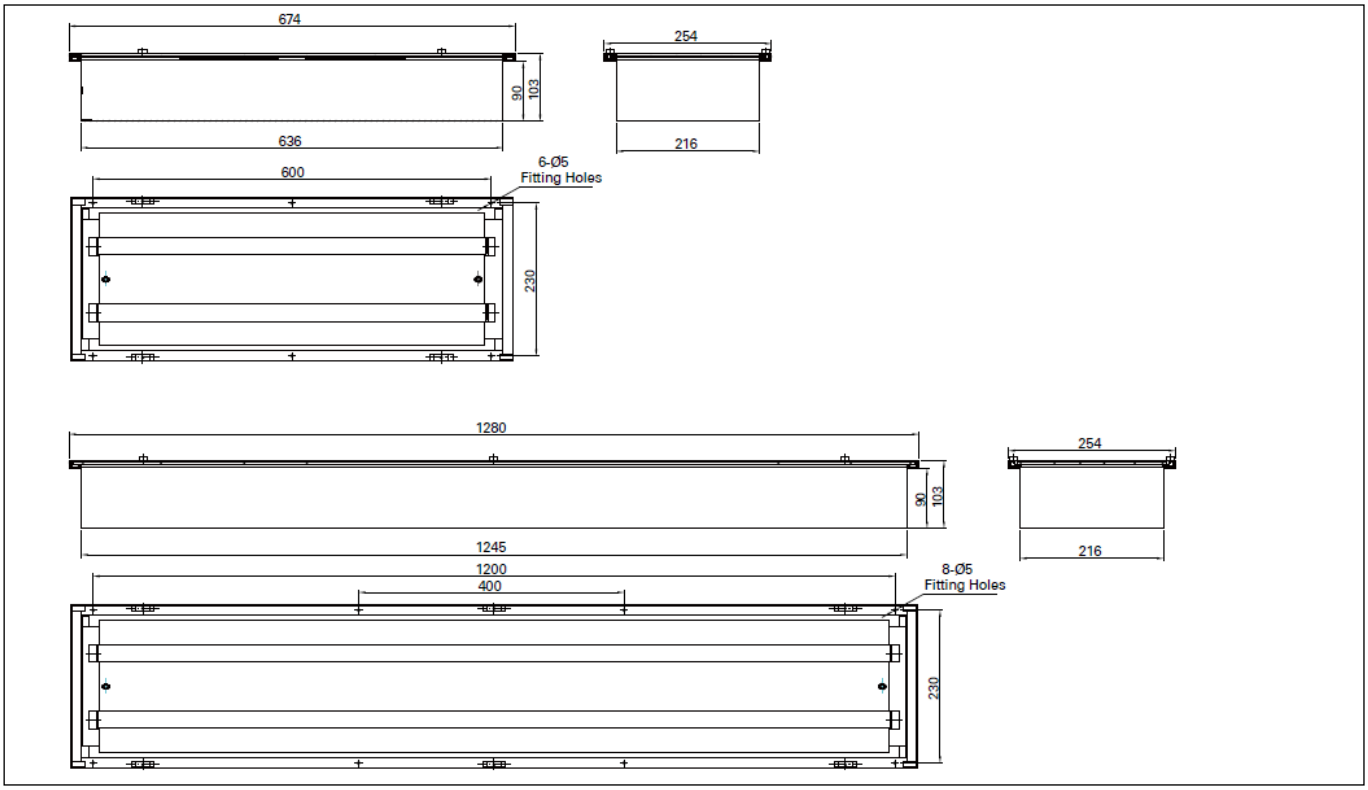
Ambient temp
-30 ˚C~+50 ˚C

Certificate
DNV

Ordering logic

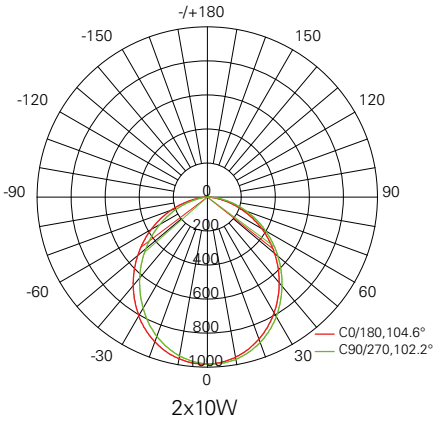
CMRL	-00	-210	-E	-EM	-20	-W
	Housing material	**Wattage**	**Driver type**	**Emergency duration**	**Cable entry**	**Color temperature**
	00-Galvanized steel	**210**-2x10W **220**-2x20W	**E**-110-240V 50/60Hz	**EM**-1.5hrs **EM3**-3hrs **Default**—non-emergency	**20**-Ø20.5 **25**-Ø25.5 entry holes with rubber grommet	**Default**-5000K **W**-3500K

Dimension

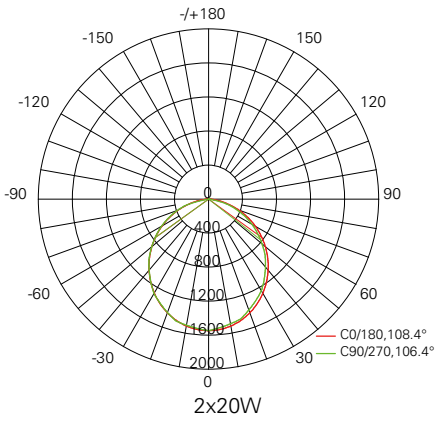


CMRL recessed LED luminaire

Polar curve



2x10W



2x20W

3

CMRL/C recessed LED luminaire

Product introduction

Housing
Galvanized Steel, with RAL9016 white powder coated, optional SS316L

Diffuser
Translucent white pc

Electric
LED driver
110~240V, 50/60Hz
*Dimming driver is optional

Lumen output
LED 20W 1800lm
LED 40W 3700lm

Application area
IP44, for office, wheelhouse, stateroom, and etc.

Mounting
Recessed mounting

Entries
Two or four entry holes on back, with rubber grommet

Terminal block
6 pole 6mm^2 max

Ambient temp
-30 ˚C~+50 ˚C

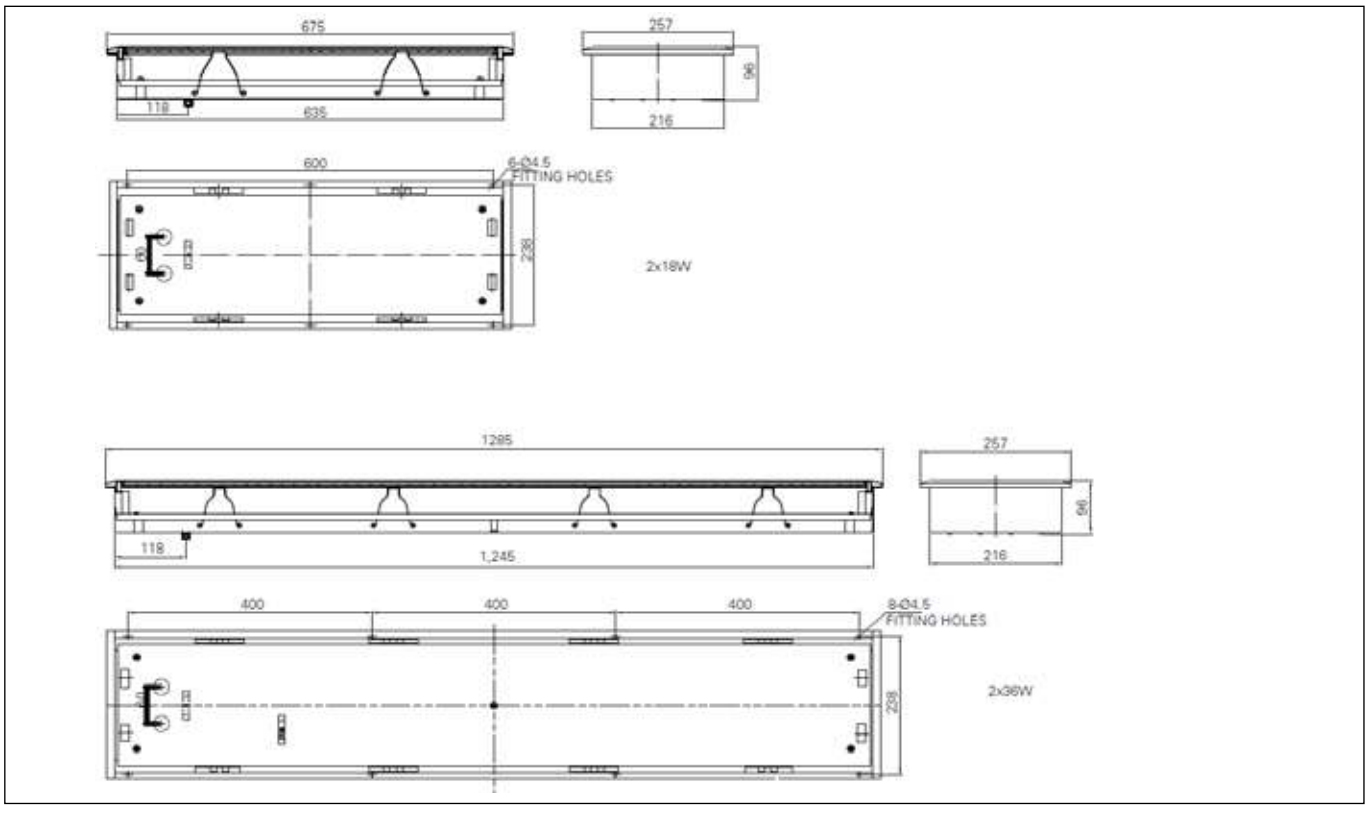
Certificate
DNV

3

Ordering logic

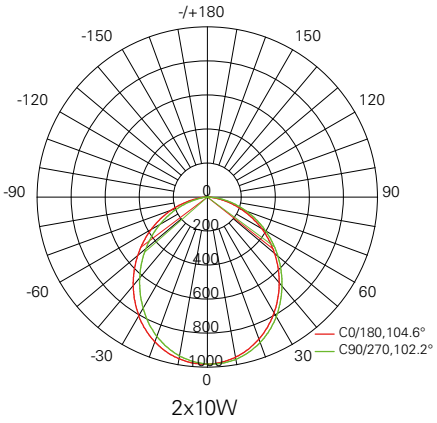
CMRL/C	-00	-210	-E	-EM	-20	-W
	Housing material	**Wattage**	**Driver type**	**Emergency duration**	**Cable Entry**	**Color temperature**
	00-Galvanized steel	**210**-2x10W **220**-2x20W	**E**-110-240V 50/60Hz	**EM**-1.5hrs Backup **EM3**-3hrs Backup **Default**—non-emergency	**20**-Ø20.5 **25**-Ø25.5 entry holes with rubber grommet	**Default**-5000K **W**-3500K

Dimension

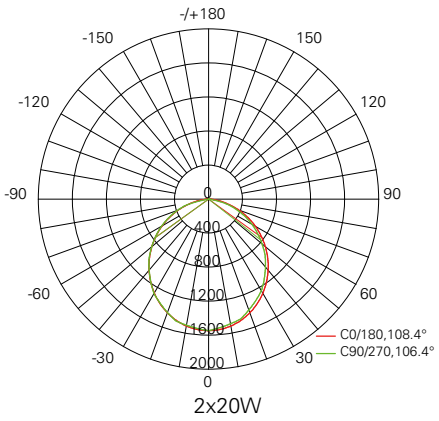


CMRL/C recessed LED luminaire

Polar curve



2x10W



2x20W

3

MSLL surface LED luminaire

Product introduction

Housing
Galvanized Steel, with RAL9016 white powder coated, optional SS316L

Diffuser
Clear PC

Electric
LED driver
110~240V, 50/60Hz
*Dimming driver is optional

Lumen output
LED 20W 2800lm
LED 40W 5550lm

Application area
IP66/67, for engine room, galley or other various applications

Mounting
Surface mounting

Entries
Two entry holes on each end.

Terminal block
6 pole 6mm² max

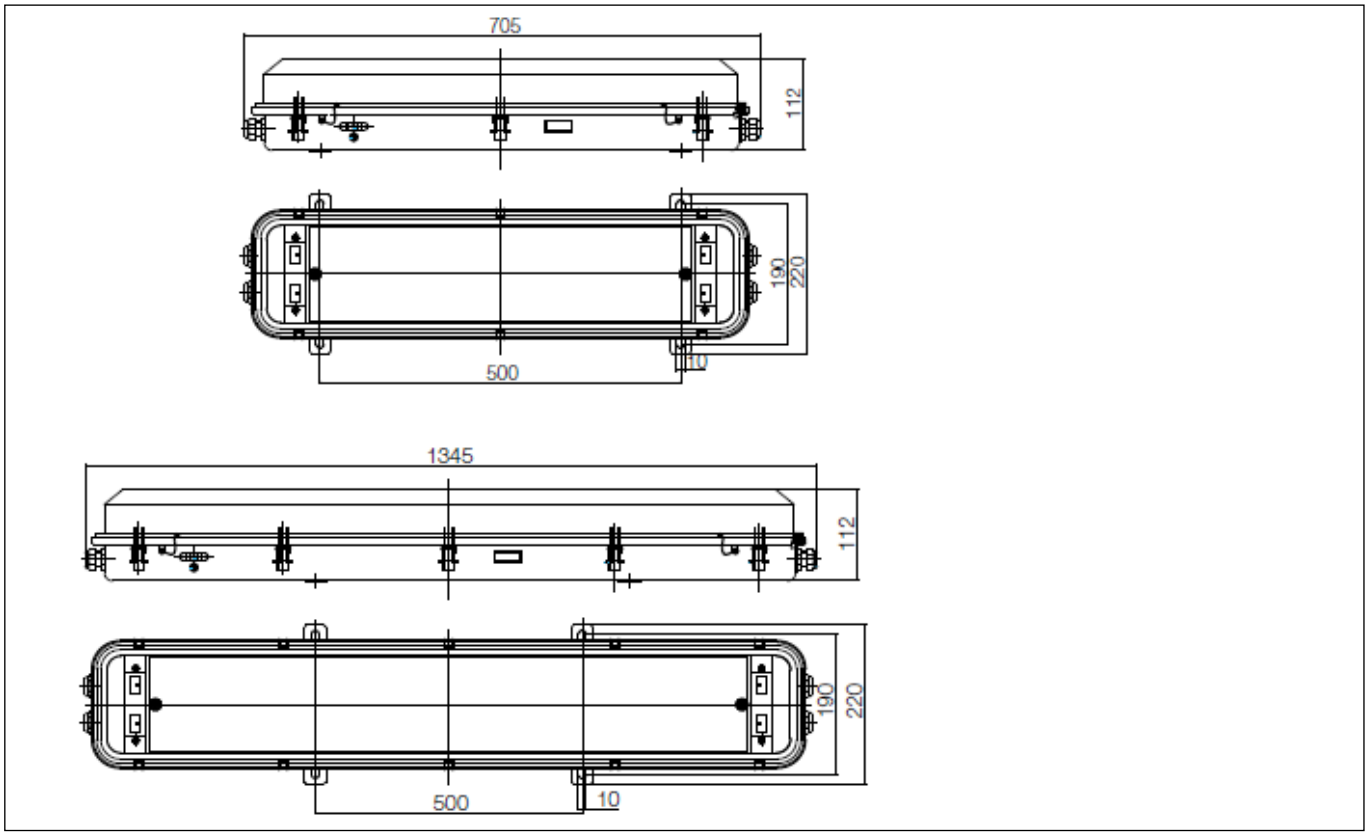
Ambient temp
-30 ˚C~+50 ˚C*

Certificate
DNV

Ordering logic

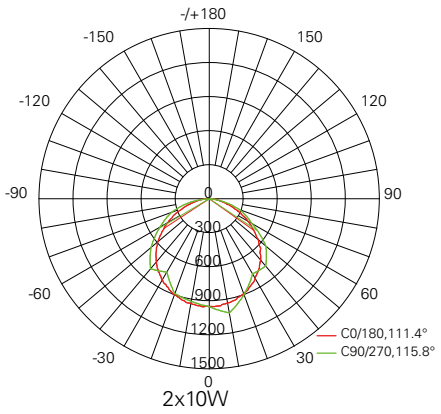
MSLL	-00	-210	-E	-EM	-20	-W
	Housing material	**Wattage**	**Driver type**	**Emergency duration**	**Cable entry**	**Color temperature**
	00-Galvanized steel	**210**-2x10W	**E**-110-240V 50/60Hz	**EM**-1.5hrs	**20**-Ø20.5	**Default**-5000K
		220-2x20W		**EM3**-3hrs	**25**-Ø25.5	**W**-3500K
				Default—non-emergency		

Dimension

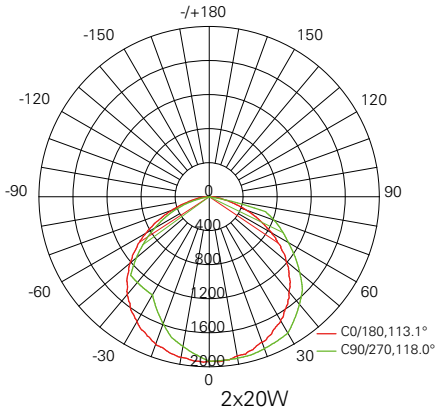


MSLL surface LED luminaire

Polar curve



2x10W



2x20W

3

HRL recessed LED linear fixtures

Rugged solutions for complex environments

Eaton's Crouse-Hinds series HRL recessed LED linear fixtures are engineered to provide maintenance-free illumination in the most demanding environments, along with a competitive payback vs. fluorescent fixtures.

Available in three common sizes, the HRL is certified for use in Zones 1, 21, 2, and 22 hazardous areas, as well as Class I, Division 2 locations. Manufactured in galvanized steel or stainless steel for additional corrosion protection, HRL fixtures combine state-of-the-art LED technology with optimized thermal managment to extend service life in extreme environments.

Available with self-contained emergency battery backup!

Model number	Nominal lumens†	Watts	Efficacy	Equivalent fluorescent
HRL3060	2900	26W	112 Lm/w	2x18W
HRL3012	5800	52W	112 Lm/w	2x36W
HRL6060	6000	52W	115 Lm/w	4x18W

† Lumen values apply to 5700K light colour, 70 CRI fi xtures. Lumen output may vary slightly for different models.

Primary applications

- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flying's are present
- Where corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants, chemical or pharmaceutical facilities, platforms

Design features

Enhance safety and productivity

- Instant illumination and restrike
- T6 temperature rating to safely operate in the most hazardous environments

Reliable performance in any environment

- Outstanding water and dust proof performance (IP66)
- B0 & B15 fire rate

Reliable operation and low quality risks

- T6 rating @ 55ºC ambient for standard 100-240VAC fixtures
- 108-250VDC input provision for emergency systems, cranes, etc.
- 25% lumen output in emergency operation for the whole lighting

Easy installation

- Quick & easy maintenance- Easy access to drivers and wiring
- Easy installation – Recessed mounting with T-Bar.

Certifications and compliances

IECEx / ATEX Standards:

- Ex e mb IIC T6 Gb, Ex tb IIIC T80˚C Db
- Ex d e mb IIC T6 Gb, Ex tb IIIC T80˚C Db(for switch version)

Permissible ambient temperature

- -40˚C to 55˚C (standard fixture), -25˚C to 55˚C (emergency model)

Degree of protection accd. to EN 60529

- IP66
- Rated life of 5 years at 55 ˚C provides long term, low-maintenance operation

Standard materials

- Enclosure - steel with white paint finish; Stainless steel as optional
- Lens - Translucent PC
- External hardware - Stainless steel

LED system

- Light colour: Standard version is 5700K, 3000K, 4000K and 5000K for optional
- Cool white>70, warm white>80

Electrical ratings

Model	HRL3060	HRL3012	HRL6060	HRL3060 EM	HRL3012 EM	HRL6060 EM
Voltage, VAC	110~240 VAC, 50/60HZ					
Voltage, VDC	108V~250VDC					
Power consumption	26W	52W	52W	30W	60W	60W
Inrush current peak	15A	15A	15A	15A	15A	15A
Inrush current time	0.2ms	0.2ms	0.2ms	0.2ms	0.2ms	0.2ms
Power factor cos ψ @ 230 V	0.95	0.95	0.95	0.95	0.95	0.95
Protection class	IP66					
ISurge voltages	4Kv					
THD @230V	< 10%					

* Tolerance +/- 10%

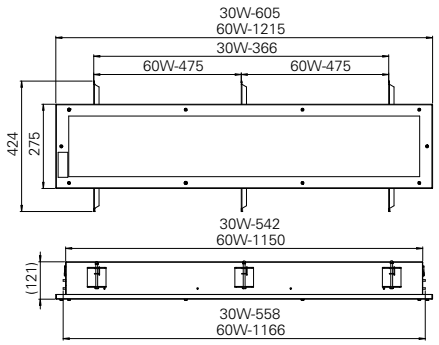
HRL recessed LED linear fixtures

Ordering Information

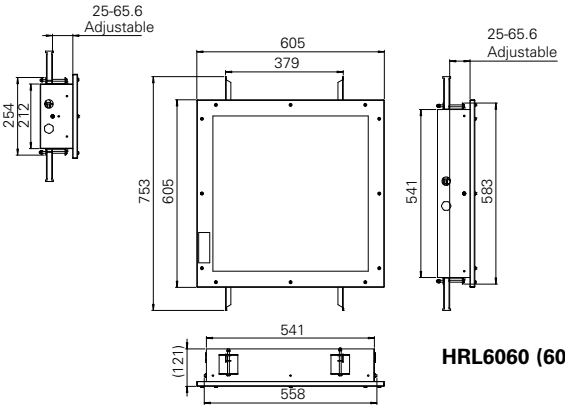
HRL Model	Part Number	Power	Lumen	CCT	Gland	Through Wiring	Battery	Duration	Light Output in Emergency
600 x 600 fixture									
HRL/6060/00/60W/57/2-220	CCL1714885	52W	6000m	5700K	M20	Yes	No	--	--
HRL/6060/00/60W/57/1-220	CCL1714877	52W	6000lm	5700K	M20	No	No	--	--
HRL/6060/00/60W/57/EM2/2-220	CCL1714949	60W	6000lm	5700K	M20	Yes	Yes	1,5h	25%
HRL/6060/00/60W/57/EM2/1-220	CCL1714941	60W	6000lm	5700K	M20	No	Yes	1,5h	25%
300 x 600 fixture									
HRL/3060/00/30W/57/2-220	CCL1714055	26W	2900lm	5700K	M20	Yes	No	--	--
HRL/3060/00/30W/57/1-220	CCL1714559	26W	2900lm	5700K	M20	No	No	--	--
HRL/3060/00/30W/57/EM2/2-220	CCL1714119	30W	2900lm	5700K	M20	Yes	Yes	1,5h	25%
HRL/3060/00/30W/57/EM2/1-220	CCL1714111	30W	2900lm	5700K	M20	No	Yes	1,5h	25%
300 x 1200 fixture									
HRL/3012/00/60W/57/2-220	CCL1714439	52W	5800lm	5700K	M20	Yes	No	--	--
HRL/3012/00/60W/57/1-220	CCL1714431	52W	5800lm	5700K	M20	No	No	--	--
HRL/3012/00/60W/57/EM2/2-220	CCL1714503	60W	5800lm	5700K	M20	Yes	Yes	1,5h	25%
HRL/3012/00/60W/57/EM2/1-220	CCL1714495	60W	5800lm	5700K	M20	No	Yes	1,5h	25%

* Tolerance +/- 10%
* Additional configurations are available upon request, please contact your local sales representative.

Dimensions & weights



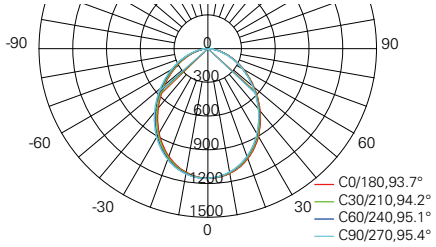
HRL3060 (30W) and HRL3012 (60W)



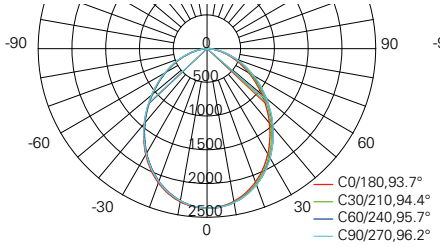
HRL6060 (60W)

Model number	Weight (kg)
HRL3060	8.4 kg
HRL3012	15.0 kg
HRL6060	15.5 kg

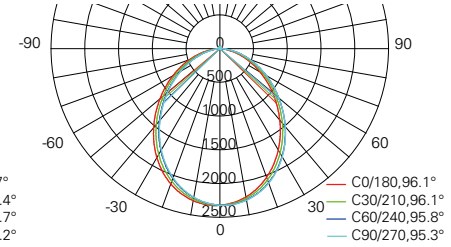
Polar curves



HRL3060



HRL3012



HRL6060

Notes

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