

EX-R Series

Explosion Proof LED Light



WARNING
BECAUSE OF THE DANGERS
OF ELECTRICAL SHOCK



EX-R

Hazardous Location LED Luminaire

The EX-R series LED explosion proof light is designed for use in hazardous locations where flammable gases, vapors, or liquids may be present during normal facility operations. The combination of the style and design of new LED technology with the ruggedness and durability of a hazardous location fixture makes it ideal for retrofit of existing HPS/MH, offering higher efficacy for energy savings, lower maintenance costs and shorter payback.

Compliance

UL844 Hazardous Locations
 Class I, Division 2, Groups A, B, C, D
 Class II, Division 1, Groups E, F, G
 Class II, Division 2, Groups F, G
 Class III
 Class I, Zone 2 Group IIC
 UL 1598 Luminaires
 UL 1598A Marine Outside Type
 UL 8750 LED Safety
 UL924 Emergency Lighting
 DLC 5.1
 ETL
 ABS

ATEX Marking (Certificate Number:
 CSANe 23ATEX1213X):

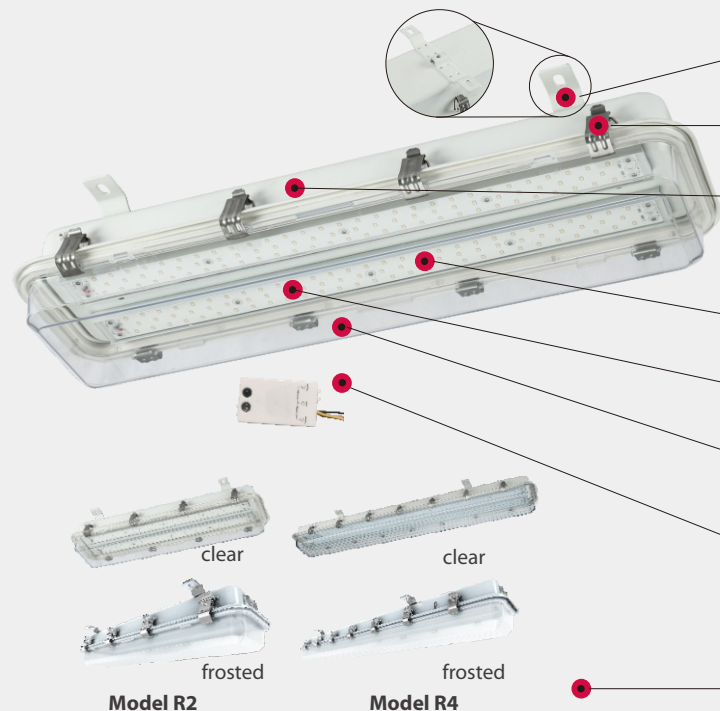
Ex II 3GD
 Ex db ec IIC T6/T5 GC
 Ex tC IIIC T80°C/T95°C DC

IP66
 IK10
 3G Vibration
 1200 Hours Salt spray



Applications

- ✓ Locations requiring continuous and consistent light levels
- ✓ Marine applications, like engine rooms, decks and walkways
- ✓ Pulp and paper production facilities
- ✓ Water/wastewater treatment facilities
- ✓ Petrochemical facilities
- ✓ Offshore environments



Built tough.

- Fixed mounting bracket for flexible installations - surface mount and rope mount.
- Equipped Latches not only for waterproof, but for quick release and easy to maintain.
- SUS304 stainless steel standard housing (SUS316 optional), great corrosion and heat resistance, outstanding durability, suitable for harsh environments.
- Excellent quality optics, longer installation distance between luminaires for lower costs.
- LED light strip replaceable, customer can buy new one to replace if it fails to work.
- UV stabilized, impact-resistant fiberglass reinforced polycarbonate lens (clear for standard, frosted for optional).
- Built-in low voltage Microwave Sensor (optional)
- Available in two lengths: 2 feet, 4 feet

Technical Parameter

• Electrical

Model	R2	R4
Rated Power -Normal	20W/30W/36W	30W/40W/50W/60W
Rated Power -Emergency	10W/20W/30W/40W	for CID2: 30W/40W/50W/60W for Zone 2: 30W/40W/50W
Interconnection	Maximum total wattage for interconnection is 150W	
Input Voltage	120-277Vac	
Frequency	50/60Hz	
Power Factor	> 0.9	
Driver Efficiency	≥ 90%	
Surge Protection	4kV	
Dimming	Dimming function optional. Driver includes dimming control wiring for 0-10V dimming systems. Separate 0-10V DC dimming circuit is required.	

• Optical

Model	R2	R4
Lumen Output -Normal	3,000/4,500/5,400Lm	4,500/6,000/7,500/9,000Lm
Efficacy	150Lm/W	
CCT (for CID2)	2700K/4000K/5000K	
CCT (for Zone 2)	2700K/3000K/3500K/4000K/5000K/6000K/6500K	
CRI	> 80	
Beam Angle	120°	
Lifespan	50,000-hour LED lifespan based on IES LM-80 results and TM-21 calculations	

• Environmental

Model	R2	R4
Ambient Temp.	Normal: -40°C to +60°C for T6/T80°C Emergency: -10°C to +60°C for T6/T80°C	

• Mechanical

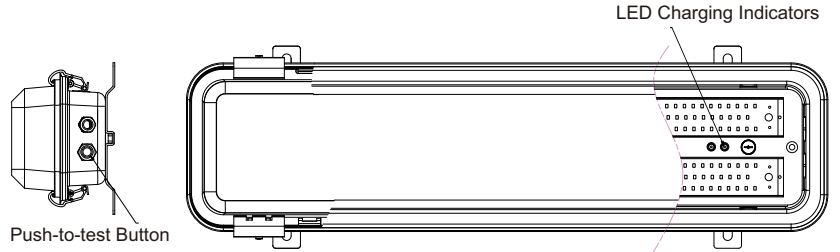
Model	R2	R4
Fixture Length	2 feet	4 feet
Housing Material	Standard: SUS304 stainless steel Optional: SUS316 stainless steel	
Lens Material	Standard: Clear fiberglass-reinforced polycarbonate Optional: Diffuse fiberglass-reinforced polycarbonate	
Gasket	Silicone rubber	
Latches/Clips	Stainless steel	
Fixture Color	Milky white	
Finish	Epoxy powder coating	
Mounting	Ceiling, rope, pole	
Protection	IP66/IK10/3G vibration/1200 hours salt spray	
Cable Entries	Standard: 4 x M20 (Side x1 with cable gland, Side x3 with stopping plugs) Emergency: 4 x M20 (Side x1 with cable gland, Side x3 with stopping plugs)	
Wiring	Suitable for dead end, through feed or single-ended "T" wiring	
Warranty	3-year standard warranty for battery backup 5-year standard warranty for fixture	

Product Dimensions (unit: mm [inch])

Model: R2	Model: R4

Emergency Specifications (for Class I, Division 2)

Emergency Driver Model	EM-15W-HL
Input Rating	120-277Vac, 50/60Hz, Max.100mA, Max.7W
Output Rating	25-55Vdc, Constant wattage 15W
Charge Time	24 hours
Emergency Run Time	3 hours
Response Time	< 550mS
Rated Ambient Temperature	0°C to 60°C
Battery Life Expectancy	3 years



CAUTION: Sealed unit. Battery not replaceable. Replace entire unit when necessary.

Indicator Information

Operate Mode		LED Features	YELLOW LED (State LED)	Green LED (Indicate LED)
Charge Mode	Charging			Flash 0.2HZ (5S/time)
	Fully charged			ON
Discharge Mode	Discharge			Flash 1HZ (1S/time)
	Discharge cut-off			OFF
Battery disconnect			Flash 2HZ (0.5S/time)	
LED Lamp disconnect			Flash 2HZ (0.5S/time)	
Battery under voltage			Flash 1HZ (1S/time)	
Battery over voltage			Flash 1HZ (1S/time)	
Function test beginning (once a month)				Flash 2HZ (0.5S/time), flash 5 times
Under function test				Flash 1HZ (1S/time)
Function test failed			Flash 0.5HZ (2S/time)	
Discharge duration test beginning (once a year)				Flash 2HZ (0.5S/time), flash 7 times
Under discharge duration test				Flash 1HZ (1S/time)
Discharge duration test failed			Flash 0.5HZ (2S/time)	

Emergency Specifications (for Zone 2)

Input Rating	120-270Vac, 50/60Hz, THD ≤ 20%, PF ≥ 0.9, Input Current Max.0.6A
Input Power	10-50W
Output Rating	28-50Vdc
Emergency Power	8W
Battery	Lithium
Emergency Run Time	3 hours
Response Time	≤ 1 second
Charge Time	≥ 24 hours
Battery Life Expectancy	5 years
Ambient Temperature	-10°C to +60°C

CAUTION: Sealed unit. Battery not replaceable. Replace entire unit when necessary.

Ordering Guide (for Class I, Division 2, based on UL844 certificate)

Ex - XXW RX N XX D120 X

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1. Basic Model Series	2. Rated Input Wattage	3. Luminaire Housing Length	4. Dimming Function	5. Color Temperature	6. Beam Angle	7. Mounting Means
Ex	for R2 normal: 20/30/36W for R4 normal: 30/40/50W/60W for R2 emergency: 10/20/30/40W for R4 emergency: 30/40/50W/60W	R2 = 2 feet R4 = 4 feet	Y = dimmable N = non-dimmable	27 = 2700K 40 = 4000K 50 = 5000K	D120 = 120 degrees	C = Ceiling or Wall mount R = Rope mount P = Pole mount

Example: Ex-20WR2 N40D120R

Ex	20W	R2	N	40	D120	R
Basic model series	Rated input wattage: 20W	Luminaire housing length: 2 feet	Non-dimmable	CCT 4000K	Beam angle 120°	Rope mount

Ordering Guide (for Zone 2)

EX - **W R* Y Z D * A

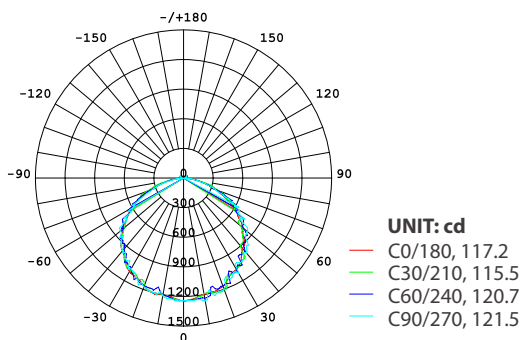
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1. Explosive-proof Series	2. Rated Power	3. Design Number	4. Sensor	5. Color Temperature	6. Beam Angle	7. Type of Glass
EX	for R2 normal: 20/30/36W for R4 normal: 30/40/50W for R2 emergency: 10/20/30/40W for R4 emergency: 30/40/50W	R2 = 2 feet R4 = 4 feet	Y = No sensor	27 = 2700K 30 = 3000K 35 = 3500K 40 = 4000K 50 = 5000K 60 = 6000K 65 = 6500K	D120 = 120 degrees	Blank = Transparent PC F = Diffuse PC

Example: EX-20W R2Y40D120*

EX	20W	R2	Y	40	D120	
Explosive-proof series	Rated power: 20W	Design number	No sensor	CCT 4000K	Beam angle 120°	Blank = Transparent PC

Photometry



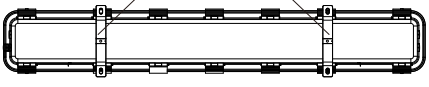
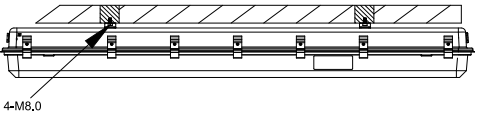
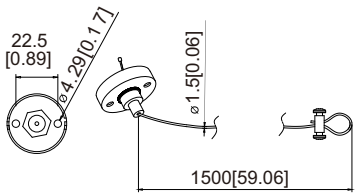
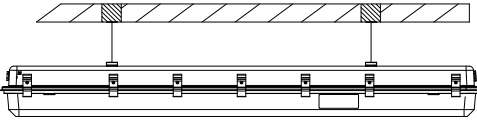
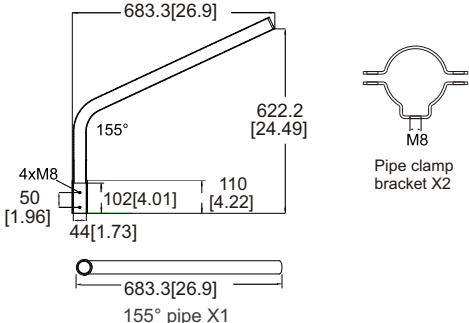
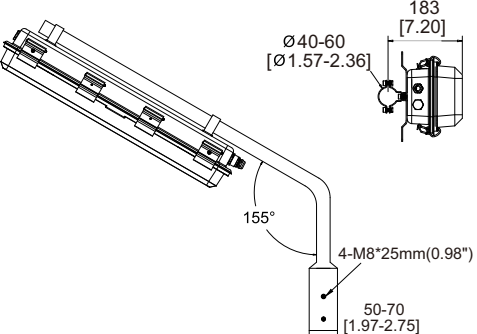
AVERAGE BEAM ANGLE(50%):
118.7 DEG

Packing Information

Model	Net Weight	Gross Weight *	Quantity / Carton	Package Dimension (LxWxH)
R2 (Normal)	5.27 kg / 11.6 lb	6.55 kg / 14.44 lb	1 piece	800x250x175mm / 31.49x9.84x6.89inch
R2 (Emergency)	6.5 kg / 14.33 lb	7.43 kg / 16.38 lb	1 piece	800x250x175mm / 31.49x9.84x6.89inch
R4 (Normal)	8.92 kg / 19.67 lb	11.2 kg / 24.69 lb	1 piece	1400x250x175mm / 55.12x9.84x6.89inch
R4 (Emergency)	10.2 kg / 22.49 lb	11.54 kg / 25.44 lb	1 piece	1400x250x175mm / 55.12x9.84x6.89inch

* The gross weights are estimated values.

Mounting Methods

Options	Description	Kit (mm[inch])	Installed
Ceiling Mount	Provided with two stainless steel mounting kits welded at the back of housing	<p>Standard Mounting Kit (Included)</p> 	 <p>4-M8.0</p>
Rope Mount	Provided with two stainless steel wire. Measured 1mm diameter	 <p>22.5 [0.89] 14.29 [0.56] 1500 [59.06] ø 1.5 [0.06]</p>	
Pole Mount	(1) 155° pipe (2) Pipe clamp bracket	 <p>683.3 [26.9] 155° 622.2 [24.49] 4xM8 50 [1.96] 102 [4.01] 44 [1.73] 110 [4.22] 683.3 [26.9] 155° pipe X1 M8 Pipe clamp bracket X2</p>	 <p>183 [7.20] Ø 40-60 [Ø 1.57-2.36] 155° 4-M8*25mm (0.98") 50-70 [1.97-2.75]</p>

Note:

- (1) Mounting screws not provided.
- (2) Ordered separately, field installed.