



RECTANGLE H1™ SERIES

LED Explosion Proof & Emergency Lighting

The Rectangle H1 series is a lightweight, high-performance LED explosion-proof lighting that is specifically engineered for installation in environments where flammable gases, vapors, or dust are present in quantities that pose a potential risk of explosion or fire.

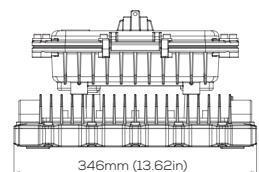
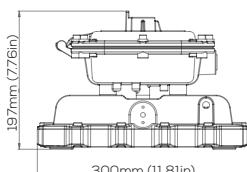
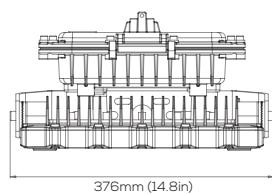
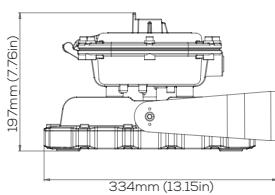
Compliance

NEC/CEC Standard

UL 844 Hazardous Locations
 Class I Division 1, Groups C, D
 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 1, Group IIB
 Class I, Zone 2, Group IIC
UL 924
 CSA C22.2 No.137
 CSA C22.2 No. 250.0:21
 UL 1598 Wet Locations
 UL 1598A Marine Outside Type (Salt Water)
 UL 8750 LED Safety
 Paint Spray Booth
 FCC
 IP66/67 | IK09 | 5G | NEMA 4X

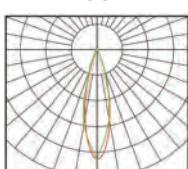
Dimensions

unit: mm(in)

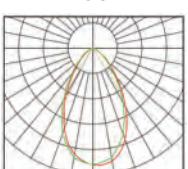


Beam Distribution

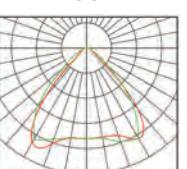
30°



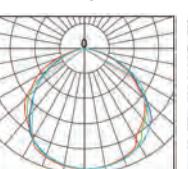
60°



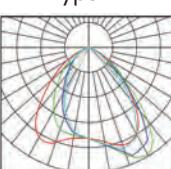
90°



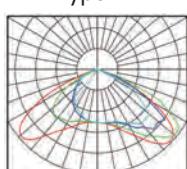
110°



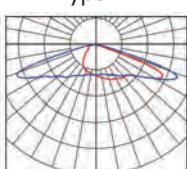
Type II



Type III



Type IV



Technical Data

Electrical

| | |
|--------------------------|--------------------------|
| Rated Power | 80W / 100W / 150W / 200W |
| Input Voltage | 120-277, 347-480V/AC |
| Input Frequency | 50/60Hz |
| Power Factor | > 0.95 |
| Driver Efficiency | ~ 90% |
| DC output Ripple & Noise | <200mVP-P |

Optical

| | |
|---------------------------------------|---------------------------------------|
| Lumen Output | 12800lm ~ 32000lm |
| Luminous Efficiency (Lumens per Watt) | 160 - 170 lm/W |
| Beam Angle | 30° / 60° / 90° / 110° / T2 / T3 / T4 |
| Correlated Color Temperature (CCT) | 3000K 4000K 5000K |
| CRI | Ra>70 |

Environmental

| | |
|-------------------------------|--|
| Ambient Operating Temperature | Non-Emergency -40°C ~ +65°C (80W,100W,150W) -40°C ~ +60°C (200W) |
| Emergency | 0°C ~ +50°C -20°C ~ +50° (cold weather) |
| Ambient Operating Humidity | 10%~90% RH |
| Atmospheric pressure | 86~106KPa |

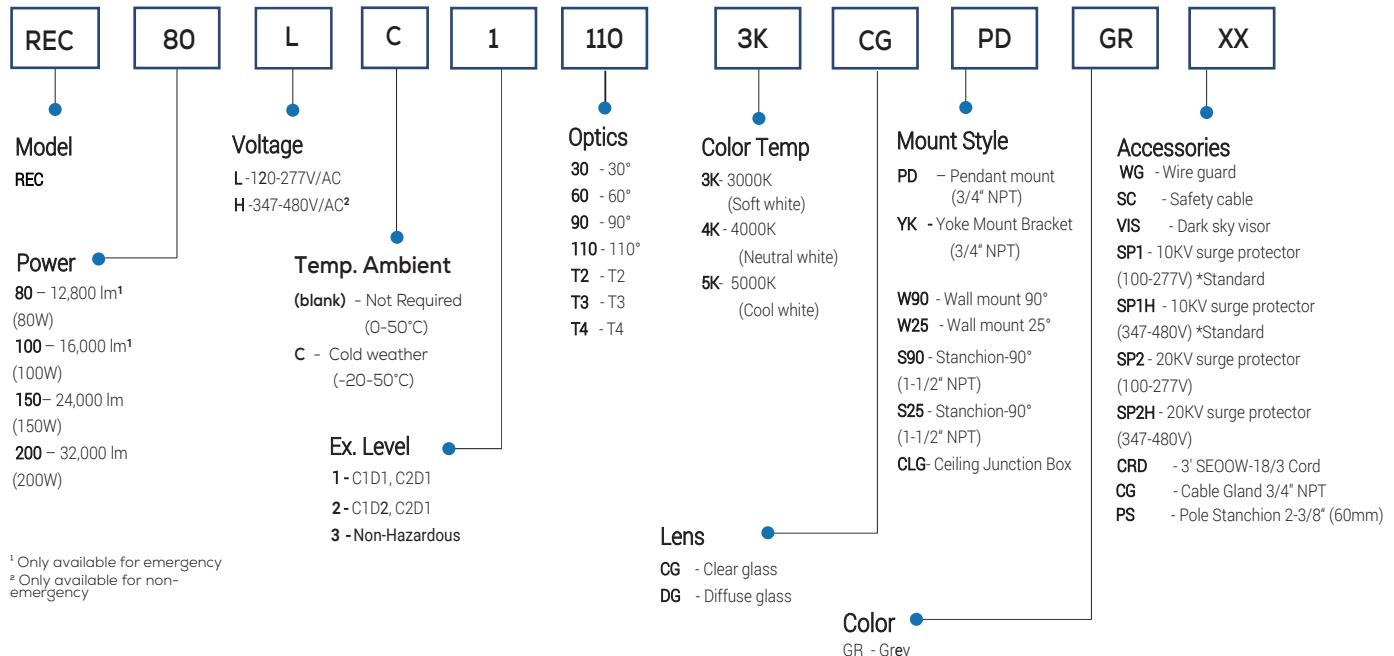
Technical

| | |
|------------------|---|
| Lens Material | Tempered glass |
| Mounting Options | Pendant / Ceiling / Wall mount /Stanchion |
| Cable Entries | 3/4" NPT,1-1/2" NPT |
| Net Weight | 11.5kg (25.4lbs) |

Warranty

10-year limited system warranty
 Lumen Maintenance: L70 > 150,000 hours @ 25°C

Ordering Information and Mounting Accessories



Mounting Options



Accessories



Classification of Divisions and Zones

| Hazard Level | Division Scheme | Zone Scheme | Definitions |
|----------------------------------|-----------------|------------------|--|
| Continuous Hazard | Division 1 | Zone 0 / Zone 20 | A place in which an explosive atmosphere is continually present |
| Intermittent Hazard | | Zone1 / Zone 21 | A place in which an explosive atmosphere is likely to occur in normal operation |
| Hazard Under Abnormal Conditions | Division 2 | Zone2 / Zone 22 | A place in which an explosive atmosphere is not likely to occur in normal operation, but may occur for short periods |

Hazardous Atmosphere Category

| Explosive atmosphere | Typical Hazard Material | Hazard Class | Division Group | NEC 505 / CEC 18 |
|----------------------------|---|--------------|----------------|------------------|
| Gases, vapors, and liquids | A: Acetylene B: Hydrogen, etc. C: Ether, etc. D: Hydrocarbons, fuels, solvents, etc. | Class I | Group A | IIC |
| Dusts | E: Metal dusts (conductive and explosive) | | Group B | IIC or IIB+H2 |
| | F: Carbon dusts (some are conductive, and all are explosive) | | Group C | IIB |
| | G: Flour, starch, grain, combustible plastic or chemical dust (explosive) | | Group D | IIA |
| Fibers and flyings | Textiles, wood-working, etc. (easily ignitable, but not likely to be explosive) | Class III | Not Applicable | IIIA |

IP Codes

| Solid Objects | Liquids |
|-------------------------------|--|
| 0 - No protection | 0 - No special protection |
| 1 - Objects > 50mm diameter | 1 - Vertically dripping water |
| 2 - Objects > 12.5mm diameter | 2 - Vertically dripping water when enclosure tilted by 15° |
| 3 - Objects > 2.5mm diameter | 3 - Sprayed water up to 60° |
| 4 - Objects > 1.0mm diameter | 4 - Sprayed water from all directions |
| 5 - Dust protected | 5 - Water jets |
| 6 - Dust tight | 6 - Powerful water jets |
| | 7 - Temporary submersion to a depth of 1m |
| | 8 - Extended submersion to a depth of >1m |

IK Codes

| IK Code | Impact energy, J |
|---------|------------------|
| IK01 | 0.14 |
| IK02 | 0.2 |
| IK03 | 0.35 |
| IK04 | 0.5 |
| IK05 | 0.7 |
| IK06 | 1 |
| IK07 | 2 |
| IK08 | 5 |
| IK09 | 10 |
| IK10 | 20 |
| IK11 | 50 |

Temperature Classification

| Marking | NEC500 CEC | NEC 505 IEC-GROUP II |
|---------|------------|----------------------|
| 450°C | T1 | T1 |
| 300°C | T2 | |
| 280°C | T2A | |
| 260°C | T2B | T2 |
| 230°C | T2C | |
| 215°C | T2D | |
| 200°C | T3 | |
| 180°C | T3A | |
| 165°C | T3B | T3 |
| 160°C | T3C | |
| 135°C | T4 | |
| 120°C | T4A | T4 |
| 100°C | T5 | T5 |
| 85°C | T6 | T6 |

Zone classification and Equipment protection level (EPL)

| Gas Zones | Definition | ATEX Category | EPL | Required Protection |
|-----------|--|---------------|-----|-------------------------|
| Methane | Mines with methane and dust. Equipment remains energised in explosive atmosphere | M1 | Ma | Two Faults |
| Methane | Mines with methane and dust. Equipment is de-energised in explosive atmosphere | M2 | Mb | Severe Normal Operation |
| Zone 0 | Explosive atmosphere present continuously or for long periods, frequently | 1G | Ga | Two Faults |
| Zone 1 | Explosive atmosphere is likely to occur under normal conditions, occasionally | 2G | Gb | One Fault |
| Zone 2 | Explosive atmosphere is unlikely to occur under normal conditions, short periods | 3G | Gc | Normal Operation |

| Dust Zones | Definition | ATEX Category | EPL | Required Protection |
|------------|--|---------------|-----|---------------------|
| Zone 20 | Explosive atmosphere present continuously or for long periods, frequently | 1D | Da | Two Faults |
| Zone 21 | Explosive atmosphere is likely to occur under normal conditions, occasionally | 2D | Db | One Fault |
| Zone 22 | Explosive atmosphere is unlikely to occur under normal conditions, short periods | 3D | Dc | Normal Operation |