HAZARDOUS LOCATION LIGHTING BASICS

Atmosphere Groups

Temperature Classification

| Substance | Hazard Class | Division Groups | Zone Groups | Max. Surface Temperatures | NEC [®] 500 CEC [®] | NEC [®] 500/IEC- Group II |
|--|----------------------------------|----------------------|-------------------|------------------------------|--|---------------------------------------|
| Acetylene | | Group A | IIC | 450(842) | T1 | T1 |
| Hydrogen | Class I | Group B | IIC | 300(572) | T2 | |
| Ethylene | Flammable Gases | Group C | IIB | 280(536) | T2A | T2 |
| Propane | | Group D | IIA | 260(500) | T2B | |
| Methane | | Group D | IIA ² | 230(446) | T2C | |
| | Class II Combustible Dusts | | IIIC ³ | 215(419) | T2D | |
| Combustible Metal Dusts | | Group E ¹ | | 200(392) | Т3 | |
| Combustible Carbonaceous Dust | | Group F | IIIB ³ | 180(256) | T3A | T3 |
| Combustible Dusts not in Group E or F (Flour, Grain, Wood, Plastics, Chemicals) | | Group G | IIIB ³ | 165(329) | T3B | 15 |
| Combustible Fibers and Flyings | Class III Fibers and Flyings | Not Applicable | IIIA ³ | 160(320) | T3C | |
| | | | | 135(275) | T4 | |
| Note 1: Group E is applicable to Class II, Division 1 only. | | | 120(248) | T4A | T4 | |
| Note 2: Methane is a Group IIA Gas for non-mining applications. | | | 100(212) | T5 | Т5 | |
| Note 3: Group IIIA, IIIB and IIIC have not been adopted by the Canadian Electrical Code. | | | 85(185) | T6 | T6 | |

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 | | Zone 1 / Zone 21 | A place in which an explosive atmosphere is likely to occur in normal operation |
| Hazard Under Abnormal Conditions | Division 2 | Zone 2 / Zone 22 | A place in which an explosive atmosphere is not likely to occur in normal operation, but may occur for short periods |

IP Codes

| 1st No. | Solid Objects |
|---------|--|
| 0 | No protection |
| 1 | Objects greater than 50mm |
| 2 | Objects greater than 12.5mm |
| 3 | Objects greater than 2.5mm |
| 4 | Objects greater than 1mm |
| 5 | Dust protected |
| 6 | Dust proof |
| 2nd No. | Liquids |
| 0 | No protection |
| 1 | Vertically dripping |
| 2 | Dripping up to 15° |
| 3 | Limited spraying |
| 4 | Splashing from all directions |
| 5 | Hosing jets from all directions |
| 6 | Strong hosing jets from all directions |
| 7 | Temporary immersion |
| 8 | Continuous immersion |
| 9 | Steam-jet cleaning |

IK Ratings

| IK Code | Level of Protection Achieved |
|---------|--------------------------------------|
| IK00 | Not protected |
| IK01 | Protected against 0.14 joules impact |
| IK02 | Protected against 0.2 joules impact |
| IK03 | Protected against 0.35 joules impact |
| IK04 | Protected against 0.5 joules impact |
| IK05 | Protected against 0.7 joules impact |
| IK06 | Protected against 1 joules impact |
| IK07 | Protected against 2 joules impact |
| IK08 | Protected against 5 joules impact |
| IK09 | Protected against 10 joules impact |
| IK10 | Protected against 20 joules impact |



RED SKY SERIOUSLY SAFE LIGHTS"

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HARSH & HAZARDOUS (UL)

HIGH TEMPERATURE

BLOCK-MINI SERIES H1

For low wattage explosion proof applications Class | Division 1, Class | Division 2 Class II Division 1. Class II Division 2 Class III



Wattage: 21W 40W 50W 60W Lumens (Lm): 4,220/6,500/7,180/8,515 Warranty: LEDs: 10 Years, Driver: 7 Years

BLOCK SERIES H1

For explosion proof environments Class | Division 1, Class | Division 2 Class II Division 2. Class III





Wattage: 80W 100W 120W 150W Lumens (Lm): 12,320/14,162/17,680/21,227 Warranty: LEDs: 10 Years, Driver: 7 Years

LINEAR TUFF SERIES (Battery option available)

For explosion proof environments with low ceiling applications Class | Division 1, Class | Division 2



Wattage: 30W 40W 60W 80W Lumens (Lm): 4,608/6,192/8,670/10,810 Warranty: LEDs: 10 Years, Driver: 7 Years

LINEAR SERIES (Battery option available)

For hazardous environments with low ceiling applications Class | Division 2, Class || Division 1 Class II Division 2. Class III



Wattage: 30W 40W 60W 80W Lumens (Lm): 4,426/5,795/9,185/12,026 Warranty: LEDs: 10 Years, Driver: 7 Years

BLOCK-MINI SERIES H2

For a lower wattage, compact hazardous location light Class | Division 2. Class || Division 1 Class II Division 2. Class III





Wattage: 21W 40W 50W 60W Lumens (Lm): 4,220/6,500/7,180/8,515 Warranty: LEDs: 10 Years, Driver: 7 Years

BLOCK SERIES H2

For harsh and hazardous environments Class | Division 2. Class || Division 2. Class III





Wattage: 80W 100W 120W 150W Lumens (Lm): 12,320/14,162/17,680/21,227 Warranty: LEDs: 10 Years, Driver: 7 Years

ROUND SERIES

For corrosive & hazardous locations Class | Division 2, Class || Division 1 Class II Division 2, Class III





Wattage: 35W 40W 45W 55W 60W 65W Lumens (Lm): 5,283/6,439/7,307/8,240/8,774/9,524 Warranty: LEDs: 10 Years, Driver: 7 Years

ROUND-MAX SERIES

For indoor high/mid bay & outdoor Class I Division 2, Class II Division 1 Class II Division 2. Class III



Wattage: 80W 120W 150W 200W Lumens (Lm): 12,000/18,000/22500/30,000 Warranty: LEDs: 10 Years, Driver: 7 Years

MODULAR HOT SERIES

For indoor high/low bay and outdoor flood lighting for high temperature locations

Oprating Temperature:

-40°F to + 158°F (-40°C to + 70°C) - TG







Wattage: 200W 400W 600W 800W Lumens (Lm): 30,500/57,500/87,500/114,500 Warranty: 5 Years

HARSH & HAZARDOUS (ATEX & IECEX)

BLOCK SERIES X1

ATEX Standard Ex II 2G Ex db IIB T5 Gb Ex II 2D Ex tb IIIC (T95C° Max) Db, IP66 EN IEC 60079-0 EN 60079-1 EN 60079-31



Wattage: 20W 40W 60W 80W 100W 120W 150W Lumens (Lm): 2,400/4,400/6,000/96,00/12,000/16,000/19,500 Warranty: 5 Years

LINEAR LOW PROFILE SERIES

IECEX:

Ex

Ex db eb mb IIC T6 Gb(20 to 60W) Ex db eb mb IIC T5 Gb(>60 to 100W) Ex tb IIIC T80°C Db ATEX:

II 2 G Ex db eb mb IIC T6 Gb(20 to 60W) II 2 G Ex db eb mb IIC T5 Gb(>60 to 100W) II 2 D Ex tb IIIC T80°C Db





Wattage: 20W 40W 60W 80W 100W Lumens (Lm): 2,400/4,400/6,800/8,700/10,000 Warranty: Fixture: 5 Years. Battery: 1 Year

HIGH BAY HOT SERIES

For harsh, extreme heat environments **Operating Temperature:**





Wattage: 150W Lumens (Lm): 22.157 (110°). 19.970 (60°) Warranty: Standard: 3 Years; Extended: 5 Years

BLOCK SERIES C1

IECEX:

Ex db IIB T6 Gb Ex tb IIIC T85°C Db Zone 1&2 (Explosive gas) Zone 21&22 (Combustible dust)



Wattage: 80W 100W 150W Lumens (Lm): 10.400/13.000/19.500 Warranty: 5 Years



LINEAR HARSH SERIES

CE EMC / LVD EN 62321 IP66 IK10



CE

Wattage: 25W 50W 75W 100W Lumens (Lm): 3,566/6,343/10,206/12,911 Warranty: Fixture: 5 Years. Battery: 1 Year

HARSH & HAZARDOUS (CE & UKCA)

CRANE MASTER SERIES

CE EMC/LVD/UKCA EN 62321 IP67 IK08 CE



Wattage: 150W 300W 420W 560W Lumens (Lm): 19,410/39,448/54,459/73,028 Warranty: 5 Years