# **HAZARDOUS LOCATION LIGHTING BASICS**

# **N** Atmosphere Groups

# **№** Temperature Classification

Substance	Hazard Class	Division Groups	Zone Groups	Max. Surface Temperatures	NEC®500 CEC®	NEC®500/IEC- Group II
Acetylene	Class I Flammable Gases	Group A	IIC	450(842)	T1	T1
Hydrogen		Group B	IIC	300(572)	T2	
Ethylene		Group C	IIB	280(536)	T2A	T2
Propane		Group D	IIA	260(500)	T2B	
Methane		Group D	IIA <sup>2</sup>	230(446)	T2C	12
	Class II Combustible Dusts		IIIC <sup>3</sup>	215(419)	T2D	
Combustible Metal Dusts		Group E <sup>1</sup>		200(392)	T3	
Combustible Carbonaceous Dust		Group F	IIIB <sup>3</sup>	180(256)	T3A	Т3
Combustible Dusts not in Group E or F (Flour, Grain, Wood, Plastics, Chemicals)		Group G	IIIB <sup>3</sup>	165(329)	ТЗВ	13
Combustible Fibers and Flyings	Class III Fibers and Flyings	Not Applicable	IIIA <sup>3</sup>	160(320)	T3C	
				135(275)	T4	T.4
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	T5	
Note 3: Group IIIA, IIIB and IIIC have not been adopted by the Canadian Electrical Code.				85(185)	T6	T6

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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

# **N** 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
IK11	Protected against 40 joules impact







#### **BLOCK-MINI SERIES H1**

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

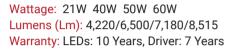
Class II Division 1. Class II Division 2

Class III









#### **BLOCK SERIES H1**

For explosion proof environments Class I Division 1, Class I 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

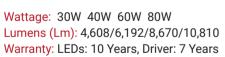
For explosion proof environments with low ceiling applications

Class I Division 1, Class I Division 2









#### **LINEAR SERIES**

For hazardous environments with low ceiling applications Class I Division 2, Class II 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 I 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 H2**

For harsh and hazardous environments Class I 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 EMERGENCY SERIES

For explosion proof environments with low ceiling applications

Class I Division 1



Wattage: 80W









Lumens (Lm): 10,057 Warranty: LEDs: 10 Years, Driver: 7 Years, Battery: 5 Years

#### **LINEAR EMERGENCY SERIES**

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









Wattage: 40W 80W Lumens (Lm): 6,183/11,486

Warranty: LEDs: 10 Years, Driver: 7 Years, Battery: 3 Years

#### **MODULAR HOT SERIES**

For indoor high bay for high temperature locations

Oprating Temperature:

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







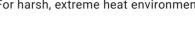
Wattage: 200W 400W 600W 800W Lumens (Lm): 30,500/57,500/87,500/114,500

Warranty: 5 Years

#### HIGH BAY HOT SERIES

Operating Temperature:

For harsh, extreme heat environments



-40°F to + 176°F (-40°C to + 80°C)





Wattage: 150W

Lumens (Lm): 22,157 (110°), 19,970 (60°) Warranty: Standard: 3 Years; Extended: 5 Years

# HARSH & HAZARDOUS (UL)

HIGH TEMPERATURE

#### **ROUND SERIES**

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





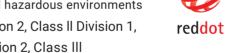




Wattage: 35W 40W 45W 55W 60W 65W Lumens (Lm): 5,283/6,439/7,307/8,240/8,774/9,524 Warranty: LEDs: 10 Years, Driver: 7 Years

#### **MODULAR MAX SERIES**

For harsh and hazardous environments Class I Division 2, Class II Division 1, Class II Division 2, Class III













Wattage: 90W 120W 190W 260W 310W 390W 440W Lumens 15,965/20,460/31,305/39,864

49,486/60,933/69,987 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









# HARSH (UL)

#### CRANE MASTER SERIES UL

Fixed lighting for larger vibrational areas. UL1598

UL1598A 5G













