CLASSES

Class I: Gases

Areas in which flammable gases or vapors in the air in sufficient quantities to ignite or explode.

Class II: Dust

Areas in which combustible dust may be suspended in the air or accumulates on electrical equipment in quantities sufficient to ignite or explode.

Class III: Fibers

Areas in which easily ignitable fibers or flyings are present. Typically fibers and flyings are not suspended in the air, but can collect around machinery or on lighting fixtures.

DIVISIONS

Division 1: Always Present

Areas in which ignitable concentrations of hazards exist under normal operation conditions and/or where hazard is caused by frequent maintenance or repair work or frequent equipment failure.

Division 2: Not Normally Present

Areas in which ignitable concentrations of hazards are normally in closed containers or closed systems. Hazards may be present due to accidental rupture or breakdown of such containers or systems.

GROUPS

Class I: Gases
Group A - Acetylene
Group B - Hydrogen
Group C - Ethylene
Group D - Propane
Class II: Dusts
Group E - Electrically conductive dust
Group F - Carbonaceous dust
Group G - Agricultural and polymer dust

For complete Information, refer to the National Electric Code (NEC)

IEC ZONE CLASSIFICATIONS

IEC publication 60079-10 uses Zones to define the guidelines for classifying hazardous areas.

Zone 0 - Areas where explosive gas atmosphere is continuously present or present for long periods of time.

Zone 1 -Areas where explosive gas atmosphere is likely to occur in normaloperation or can be expected to be present frequently.

Zone 2 - Areas where explosive gas atmosphere is not likely to occur and if it does, it will only be present for a short period of time.

Zone 20 - Areas in which a combustible dust, as a cloud, is present continuously or frequently during normal operations in sufficient quantities to produce an explosive mixture.

Zone 21 - Areas in which a combustible dust, as a cloud, is likely to occur during normal operations in sufficient quantities to produce an explosive mixture.

Zone 22 - Areas in which combustible dust, as a cloud, is not likely to occur, but may occur infrequently and persist for only short periods of time.

COMPARISON

Hazardous Material	NEC U.S. Standards	IEC Standards
Gas or Vapor	Class I, Division 1	Zone 0, 1
	Class I, Division 2	Zone 2
Dust	Class II, Division 1	Zone 20
	Class II, Division 2	Zone 22
Fibers or Flyings	Class III, Division 1	No Equivalent
	Class III, Division 2	No Equivalent

UL STANDARDS

Number	Certified Usage
844	Lighting fixtures for use in hazardous classified areas
924	Emergency lighting and power equipment
1598	Lighting fixtures approved for wet locations
1598A	Lighting approved for use on marine vessels. Salt water corrosive rated.
8750	LED safety

IP CODES

1st Number: 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 Number: 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
9K – 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

T-CODES

Maximum Operating Temperatures °C	°F	Temperature Class (T-Code)
450	842	T1
300	572	T2
280	536	T2A
260	500	T2B
230	446	T2C
215	419	T2D
200	392	T3
180	356	T3A
165	329	T3B
160	320	T3C
135	275	T4
120	248	T4A
100	212	T5
85	185	T6

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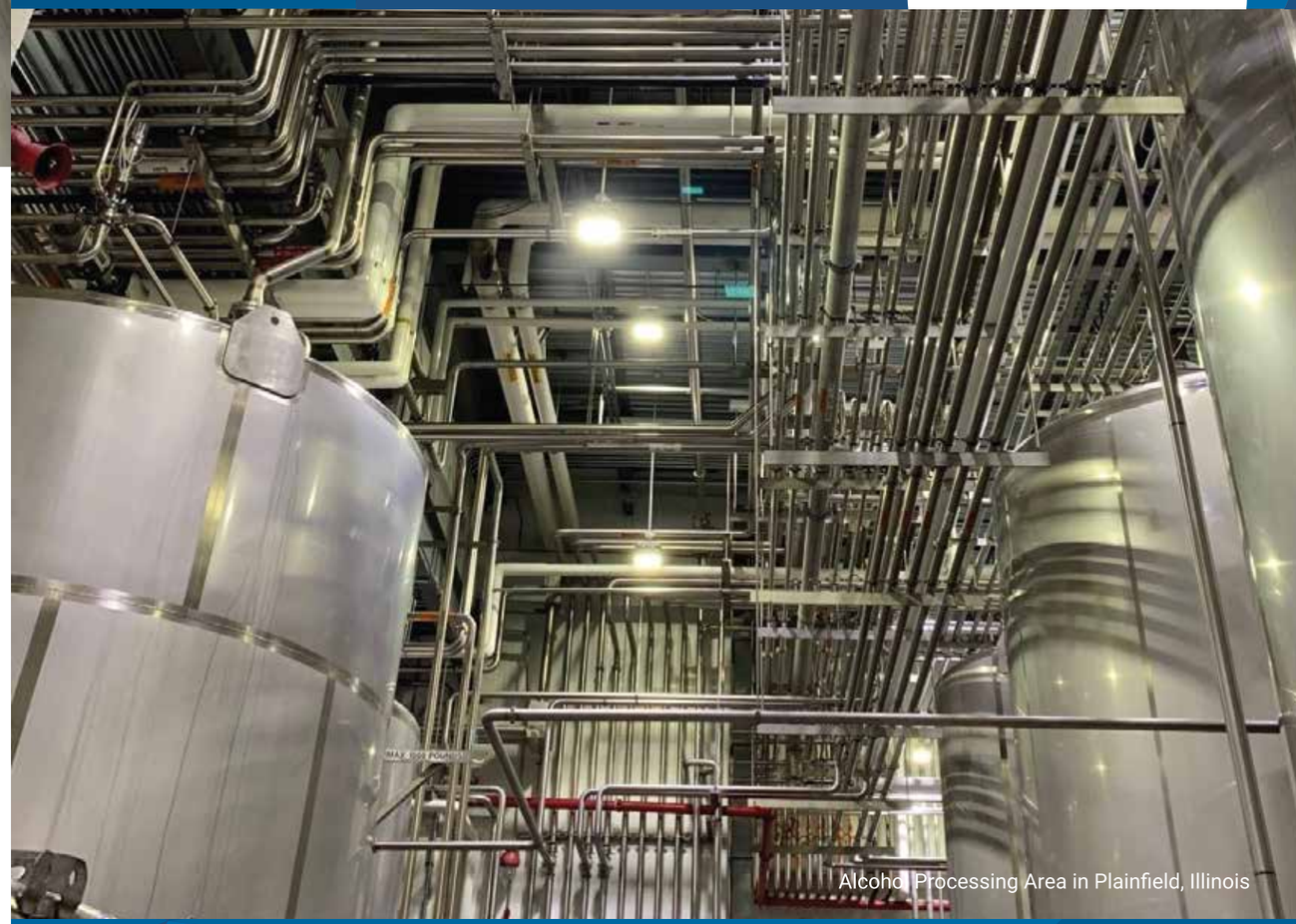

HAZARDOUS LOCATION LIGHTING BASICS

RED SKY
SERIOUSLY SAFE LIGHTS™

HARSH & HAZARDOUS (UL)

BLOCK-MINI SERIES H1

For low wattage explosion proof applications
Class I Division 1, Class I Division 2
Class II Division 1, Class III
IP66, IP67

Wattage: 21W 40W 50W 60W
Lumens (Lm): 4200/6500/7180/8515
Warranty: LEDs: 10 Years, Driver: 7 Years

BLOCK SERIES H1

For explosion proof environments
Class I Division 1, Class I Division 2
Class II Division 2, Class III
IP66

Wattage: 80W, 100W, 150W
Lumens (Lm): 10400/13000/19500
Warranty: LEDs: 10 Years, Driver: 7 Years

LINEAR TUFF SERIES (Battery option available)

For explosion proof environments with low ceiling applications
Class I Division 1, Class I Division 2
IP66

Wattage: 40W 80W
Lumens (Lm): 4425/9160
Warranty: LEDs: 10 Years, Driver: 7 Years

LINEAR SERIES (Battery option available)

For hazardous environments with low ceiling applications
Class I Division 2, Class II Division 1
Class III, IP66

Wattage: 40W 80W
Lumens (Lm): 5533/11548
Warranty: LEDs: 10 Years, Driver: 7 Years

HARSH & HAZARDOUS (UL)

BLOCK-MINI SERIES H2

For a lower wattage, compact hazardous location light
Class I Division 2, Class II Division 1
Class III, IP66
IP67

Wattage: 21W 40W 50W 60W
Lumens (Lm): 4220/6500/7180/8515
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, IP66

Wattage: 80W 100W 150W
Lumens (Lm): 10400/13000/19500
Warranty: LEDs: 10 Years, Driver: 7 Years

ROUND SERIES

For corrosive & hazardous locations
Class I Division 2, Class II Division 1
Class II Division 2, Class III
IP66

Wattage: 40W 45W 60W* 65W
Lumens (Lm): 6,150/6,750/10,050/10150
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, IP66

Wattage: 80W 120W 150W 200W
Lumens (Lm): 12000/18000/22500/30000
Warranty: LEDs: 10 Years, Driver: 7 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 IP 66
EN IEC 60079-0, EN 60079-1, EN 60079-31
Zone 1,21 / Zone 2,22

Wattage: 20W 40W 60W 80W 100W 120W 150W
Lumens (Lm): 2400/4400/6000/9600/12000/16000/19500
Warranty: 5 Years

LINEAR LOW PROFILE SERIES

IECEX:
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

Zone 1,21

Wattage: 20W 40W 60W 80W 100W
Lumens (Lm): 2400/4400/6800/8700/10000
Warranty: Fixture: 5 Years. Battery: 1 Year

HIGH TEMPERATURE

HIGH BAY HOT SERIES

For harsh, extreme heat environments
Operating Temperature:
-40°F to + 176°F (-40°C to + 80°C)

Wattage: 150W 300W
Lumens (Lm): 19,600 (110°), 17,223 (60°)
Warranty: Standard: 3 Years; Extended: 5 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
-40°F to + 149°F (-40°C to + 65°C) - PC

Wattage: 200W 400W 600W 800W
Lumens (Lm): 30500/57500/87500/114500
Warranty: 5 Years

INDUSTRIAL

TUFF TUBE SERIES

For harsh conditions in polluted environments where a high level of quality lighting is needed. Handles water, dust, humidity, corrosion, vibration, and sudden impact with ease

Wattage: 20W 36W 45W
Lumens (Lm): 2700/4860/6075
Warranty: 5 Years

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