



# Hazlux<sup>®</sup>

Hazardous location lighting  
products and accessories

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**You can rely on Hazlux® to safely provide light where you need it, even under the harshest indoor and outdoor conditions. If safety, labor reduction, quality and reliability are your priorities, consider Hazlux® lighting products to reduce maintenance and prevent downtime.**

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## Classifications






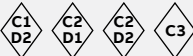


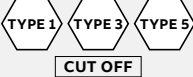

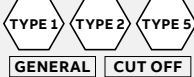








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# Product matrix



	Area lighting		Area/Flood lighting
	Hazlux® H3 LED p. 12	Hazlux® H5 HID p. 24	FMR LED p. 32
	SMR LED p. 36		
			
Classification			
Optics - IESNA			
Optics - NEMA	-	-	
IP/NEMA		-	
DLC		-	
Certification			
Wattage	37-138W	50-400W	107-310W
Lumen	5,600-20,000lm	-	12,000-32,000lm
Voltage	120-277VAC, 50/60Hz 347-480VAC, 50/60Hz	120-277VAC, 50/60Hz 347-480VAC, 50/60Hz	120-277VAC, 50/60Hz 347-480VAC, 50/60Hz
Dimming	0-10V dimming	-	0-10V dimming
			SMR LED p. 36



Flood lighting		Linear lighting		
Hazlux® 8 FDL p. 42	Hazlux® 7 XFM LED p. 46	Hazlux® 6 DFP LED p. 50	WNL LED p. 54	LGS LED p. 58
				
				
-	<b>GENERAL</b>	<b>GENERAL</b>	<b>GENERAL</b>	<b>WIDE</b> <b>NARROW</b> <b>CUT OFF</b>
<b>NEMA2X2</b> <b>NEMA6X6</b>	-	-	-	-
	Wet/Damp location			
-	-	-	-	-
				
50-105W	29-58W	29-87W	36-109W	12-41W
6,400-11,00lm	2,800-9,880lm	2,800-14,250lm	4,000-10,000lm	580-2,300lm
120-277VAC, 50/60Hz 347-480VAC, 60Hz	120-277VAC, 50/60Hz 347VAC, 60Hz	120-277VAC, 50/60Hz 347VAC, 60Hz	120-277VAC, 50/60Hz 347-480VAC, 50/60Hz	120VAC, 50/60Hz 12V or 24V DC
0-10V dimming	-	-	0-10V dimming	-

# Choosing the right partner

## For your hazardous location lighting project

When you're looking for hazardous location lighting, you need an experienced partner you can trust. Someone who will accompany you every step of the way and provide expert advice and exceptional service. The ABB sales team has been doing just that for close to a century.

—  
01 Since 2001, the ABB Hazlux® manufacturing facility has been ISO 9001, 1400 and OHSAS 18001 compliant.

**Engineering expertise at your fingertips**  
Our product engineers are readily available to answer all your technical questions, and partner with you in selecting the best lighting solution to reach your goals.

**High standards of quality control**  
Quality is built into every product at every step of the process, from design to final assembly. Each product is inspected and tested to ensure that it meets our strict quality standards, and then professionally packed so that your order will arrive intact at your installation site.

**Product customization**  
We design and manufacture all units, giving us unparalleled capabilities to customize lighting fixtures to meet your specific needs.

**Reduced lead time**  
We produce what you need when you need it in our state-of-the-art North American Center of Excellence. We can easily accommodate both large and small production runs with a fast turnaround – no waiting for shipments from overseas.

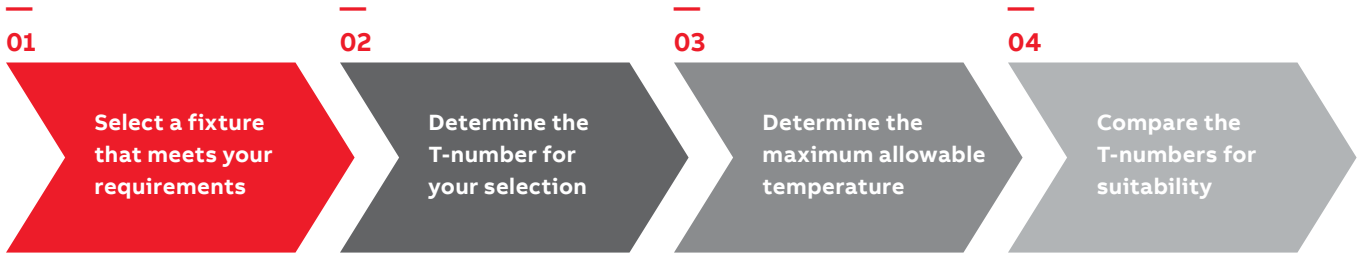
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A sustainable development policy is in effect at the ABB production facility to reduce our carbon footprint and minimize the environmental impact of our operations. Through a series of initiatives, reductions in water usage, water bottles, electricity and natural gas, packaging and pallets have already been realized.

# Environment selection method

## The right fixture in the right place



**01**  
**Select a fixture that meets your Class, Division and Group requirements.**  
 For example : Class I, Division 2, Group D

**02**  
**Determine the T-number for your selected fixture.**  
 Be sure it is for the specific wattage, ballast housing, optical assembly and ambient temperature.  
 Use the published information in this catalog or contact your Hazlux sales representative.

**03**  
**Determine the maximum allowable temperature for the hazardous materials.**

Class I Gas	Ignition temperature for the specific gas (from NFPA497M)
Class II Dust	Group E: 392°F (200°C)
	Group F: 392°F (200°C)
	Group G: 329°F (165°C)
	Or ignition temperature of dust if lower
	Above from NEC table 500-3(F)

**04**  
**Compare T-number (from step 2) to maximum allowable temperature (from step 3).**

- If T-number is cooler than the maximum allowable temperature, the selected fixture is suitable.
- If T-number is hotter than the maximum allowable temperature, the selected fixture is not suitable.

**T-number table**

Class I, II, Div. 1, 2 T-number	Max. temperature
T1	842°F (450°C)
T2	572°F (300°C)
T2A	536°F (280°C)
T2B	500°F (260°C)
T2C	446°F (230°C)
T2D	419°F (215°C)
T3	392°F (200°C)
T3A	356°F (180°C)
T3B	329°F (165°C)
T3C	320°F (160°C)
T4	275°F (135°C)
T4A	248°F (120°C)
T5	212°F (100°C)
T6	185°F (85°C)

# Hazardous locations applications

## We have a fixture for virtually any condition

Hazlux lighting fixtures are built to withstand any hazardous application.

### Examples of hazardous locations

Chemical manufacturing and processing plants
Oil refineries
Oil drilling rigs
Offshore platforms
Pipeline pumping stations
Pulp and paper plants
Aluminum and copper smelting
Steel mills and foundries
Mining operations
Grain handling facilities
Flour, sugar and starch processing
Food processing plants
Paint and rubber manufacturing facilities
Power generation plants
Waste treatment facilities
Paint, chemical and plastic mixing/storage areas
Bulk truck terminals
Solvent/cleaning areas



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01

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01

### Hose-down and wet locations

- Certified for wet locations – NEMA 4X, IP65, IP66, IP67/68 (indoor and outdoor); CSA and cULus Listed
- Superior gasketing system – both tank and globe gasketing systems withstand hose-down pressures
- Uninterrupted globe thread – assures positive seal
- Baked-on, dry epoxy coating – not paint but 100% dry solids
- Globes, refractors and finish designed to withstand thermal shock during hose down



—  
02

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02

### High-ambient temperature areas

- All standard fixtures are tested and listed for at least 104°F (40°C) ambient – even under heavy dust blanket and no air flow
- Exclusive heat sink design results in a cool operating fixture, extended ballast/lamp life and lower maintenance costs
- Selection of high-ambient temperature rated fixtures – contact your ABB representative for fixtures certified for 131°F (55°C) and 149°F (65°C) applications
- Steam spray and thermal shock resistant



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03

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03

### Corrosion and abrasion

- Baked-on, dry epoxy coating – not paint but 100% dry solids
- Stainless steel external hardware
- Sand-blast resistant finish
- Superior silicone gasketing system on both tank and globe (other gasketing systems available for special corrosive applications such as phosphates)
- Aluminum components contain less than 0.4% copper for maximum corrosion resistance
- Special HazCote® corrosion fighter finish available for extremely corrosive areas; consult your ABB representative for details



## Hazlux® fixture applications



04

### 04

#### Ice and arctic conditions

- Gasketing system and finish allow for expansion and contraction through wide temperature variations
- High-strength mechanical mountings withstand extra ice loading
- Tempered glassware available for extra thermal shock safety margin



05

### 05

#### Vibration and vandalism

- Vibration tested by UL and CSA
- Vibration-resistant hardware throughout fixture
- Screw retainers on guard ensure retention even if screws are not completely tightened
- Vibration-resistant globe thread and sealing system
- Optional refractors, high-strength tempered glass and Teflon®-coated globes for protection from vandalism



06

### 06

#### Dust blanket

- Tested and listed by UL and CSA
- Cone pendant mount available (45° sloped sides) for areas where dust or other residue buildup is a problem
- Exclusive heat sink design – results in a cool operating fixture, extended ballast/lamp life and lower maintenance costs



07

### 07

#### Wind

- Wind-tunnel tested at McDonnell Douglas Corporation at air flow speeds in excess of 320 km/h (198 mph)
- Guard specially designed to secure reflector during high wind loading
- All fasteners are stainless steel
- High-strength mechanical mountings withstand strong wind loads

Teflon is a registered trademark of The Chemours Company FC, LLC.

# Product application

A wide range of products and features are available to suit the needs of specific hazardous locations. Consider the requirements of each space to select the best lighting fixtures:

- Average footcandles
- Average mounting height
- Lumen output required for the space
- Optics
- Type and number of units

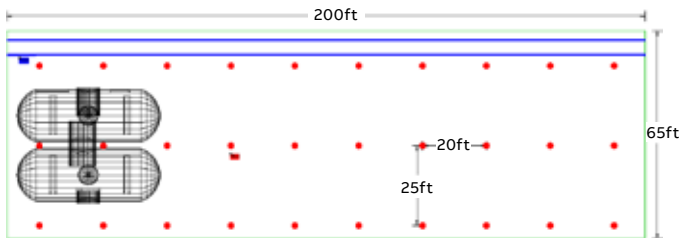
The following examples provide guidance for selecting the right fixtures according to different environments:

## H3 LED



Machinery room

H3 LED		
<b>Site</b>	Room dimensions	200ft x 65ft
	Mounting height	25'
<b>Photometric</b>	AVG. Footcandle	30fc
	Reflectances	40-50-20
<b>Product</b>	Lumen output	<b>20,000 lumens</b>
	Wattage	138W
	Optics	TG – Thermal shock-resistant globe
	Part number	DL020EUNOTG
<b>Quantity</b>	Number of fixtures	<b>30</b>

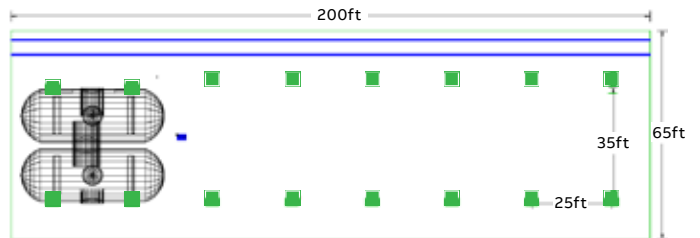


## FMR LED



Machinery room

FMR LED		
<b>Site</b>	Room dimensions	200ft x 65ft
	Mounting height	25'
<b>Photometric</b>	AVG. Footcandle	30fc
	Reflectances	40-50-20
<b>Product</b>	Lumen output	<b>32,000 lumens</b>
	Wattage	312W
	Optics	CUT – Wide beam (no optics)
	Part number	FMR30-CUT-W-50-AC
<b>Quantity</b>	Number of fixtures	<b>16</b>



# Product application

## H3 LED



Inspection area

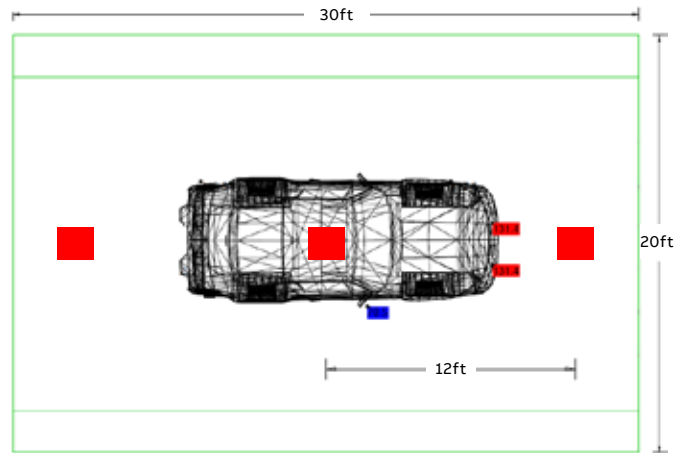
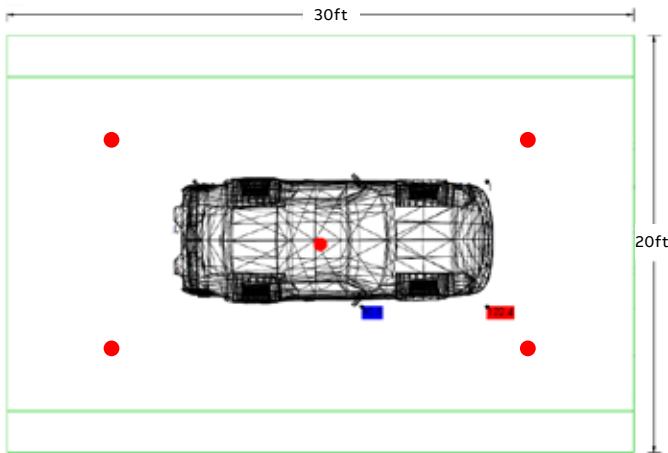
H3 LED		
<b>Site</b>	Room dimensions	30ft x 20ft
	Mounting height	16'
<b>Photometric</b>	AVG. Footcandle	108fc
	Reflectances	80-80-20
<b>Product</b>	Lumen output	<b>20,000 lumens</b>
	Wattage	138W
	Optics	TG – Thermal shock-resistant globe
	Part number	DL020EUNOTG
<b>Quantity</b>	Number of fixtures	<b>5</b>

## FMR LED



Inspection area

FMR LED		
<b>Site</b>	Room dimensions	30ft x 20ft
	Mounting height	16'
<b>Photometric</b>	AVG. Footcandle	108fc
	Reflectances	80-80-20
<b>Product</b>	Lumen output	<b>32,000 lumens</b>
	Wattage	312W
	Optics	CUT – Wide beam (no optics)
	Part number	FMR30-CUT-W-50-AC
<b>Quantity</b>	Number of fixtures	<b>3</b>



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# Section A

## Hazardous Location Lighting



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## High and low bay products

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**Hazlux® 5 HID**  
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**FMR LED**  
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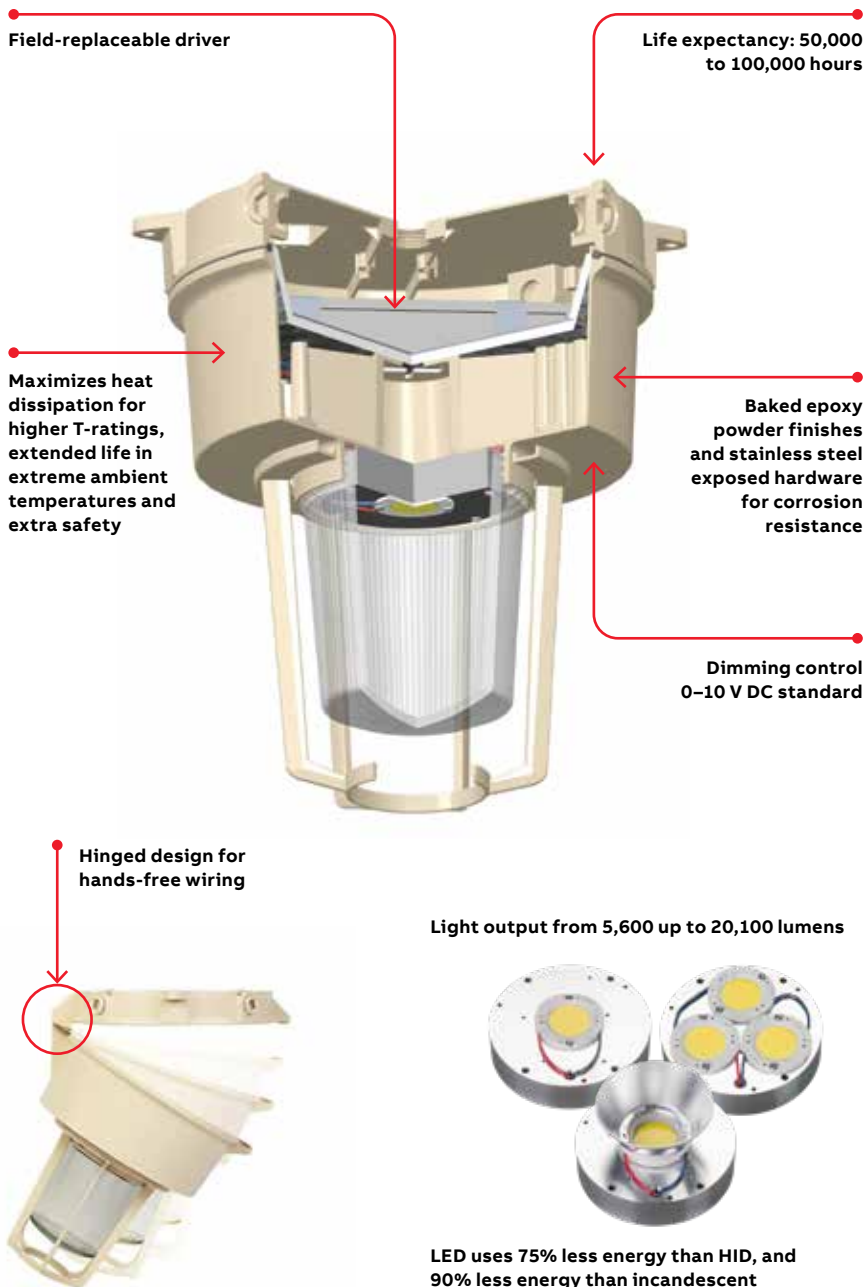


**SMR LED**  
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# Hazlux® H3 LED

A safe, dependable and rugged luminaire with an exclusive design that maximizes heat dissipation, offers excellent performance and energy efficiency.



## CLASSIFICATION

CLASS I	
Division 2	Groups A, B, C, D
Zone 2	Groups IIC, IIB, IIA
CLASS II	
Division 1*	Groups E, F, G*
Division 2	Groups F, G
CLASS III	

\*Contact your ABB sales representative to verify classification

## CERTIFICATIONS AND RATINGS



Not all DL series are DLC qualified. For all qualified products, please visit: [www.designlights.org/qpl](http://www.designlights.org/qpl)



UL844  
UL1598  
UL8750

## Applications

High mast  
Parking lots  
Tunnels  
Swimming pools  
High bay  
Coolers and freezers  
Inspection  
Quality control areas  
Packaging areas  
Hangars  
Storage facilities  
Oil and gas processing  
Agricultural  
Chemical/industrial facilities

## Hazlux® H3 LED

### Temperature codes

	Class I Zone 2 Groups IIC, IIB, IIA	Class I Division 2 Groups A, B, C, D	Class II Groups E, F, G	Simultaneous Class I Division 2 and Class II
<b>Glass globe DL005, DL007, DL010</b>				
Ambient temp. -40 to 104°F (-40 to 40°C)	T5	T5	T6	T5
Ambient temp. -40 to 131°F (-40 to 55°C)	T4	T4A	T6	T4A
<b>Glass globe DL005, DL007, DL010 with internal reflector I3, I4, I6</b>				
Ambient temp. -40 to 104°F (-40 to 40°C)	T4	T4A	T6	T4A
<b>Glass globe DL015, DL017, DL020</b>				
Ambient temp. -40 to 104°F (-40 to 40°C)	T4	T4A	T4A	T4A
<b>Optic type cut DL005, DL007, DL010</b>				
Ambient temp. -40 to 104°F (-40 to 40°C)	T5	T5	T5*	T5*
Ambient temp. -40 to 131°F (-40 to 55°C)	T4	T4A	T4A*	T4A*
<b>Optic type cut DL015, DL017, DL020</b>				
Ambient temp. -40 to 104°F (-40 to 40°C)	T4	T4A	T4A*	T4A*

\*Cut reflector: Class II, Division 2, Groups F, G

### Color temperature

Standard color temperature is 5000 K.  
Other color temperatures: 2700 K, 3000 K, 3500 K, 4000 K

### Color rendering index

Superior CRI: 70

### Warranty

5 years

### Surge suppression rating

ANSI C82.77-5 CAT C low compliant – no external surge suppression device required.

ANSI surge type	Differential mode (L-N)	Common mode (L-G, N-G, L and N-G)
1.2/50 μs combination wave (w/t 2 Ω)	6 kV	6 kV



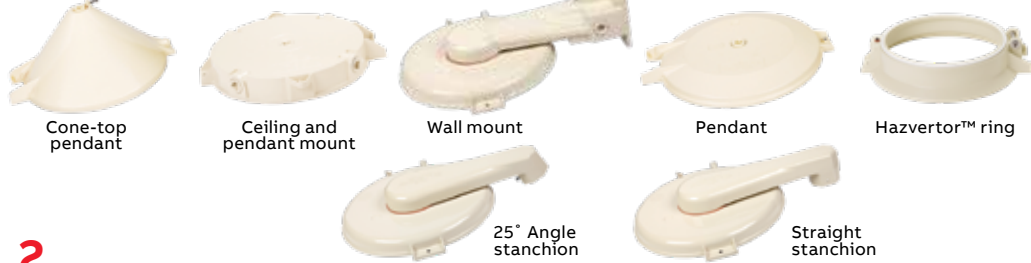
# Hazlux® H3 LED

## Fixture assembly guide



### 1

#### Mounting options



### 2

#### LED driver tank



### 3

#### Globe or reflector



### 4

#### Guard (n/a for CUT)



### Mounting accessories<sup>1</sup>

Part number	Description	Conduit hub size
VA2	Cone-Top Pendant	3/4"
VA3		1"
VC2	Ceiling & Pendant Mount	3/4"
VC3		1"
VB2-VIB	Wall mount	3/4"
VB3-VIB		1"
P2	3/4" Rigid Pendant	3/4"
P3	1" Rigid Pendant	1"
VS4-VIB	25° Angle Stanchion	1-1/4"
VS5-VIB		1-1/2"
VL4-VIB	Straight Stanchion	1-1/4"
VL5-VIB		1-1/2"
HV3*	Hazvertor™ Adaptor Ring Crouse-Hinds Ceiling, Pendant <sup>2</sup> & Straight stanchion top hats <sup>3</sup>	
HV4*	Hazvertor™ Adaptor Ring Stanchion Angle Mount <sup>3</sup>	
HV5*	Hazvertor™ Adaptor Ring Wall Mount <sup>3</sup>	

\*HV3, HV4 and HV5 Hazvertors are CSA/CSAus certified

### Globes or refractors<sup>4</sup>

Part number	Description
VGT15 TG	Heat-Resistant Prismatic Glass Globe
VGL15R1	IES Type I Refractor Globe
VGL15R3	IES Type III Refractor Globe
VGL15R5	IES Type V Refractor Globe
CUT	Dark Sky Cut-Off reflector with Polycarbonate Flat Lens

### Guards

Part number	Description
VGU22	Cast Guard
VGU22P	Polymeric Guard

<sup>1</sup> For stainless steel inserts, please add "SI" to part no. (ex:VA2SI)

<sup>2</sup> Not compatible with HPM2 crouse-hinds top hats

<sup>3</sup> Some installations may not be compatible

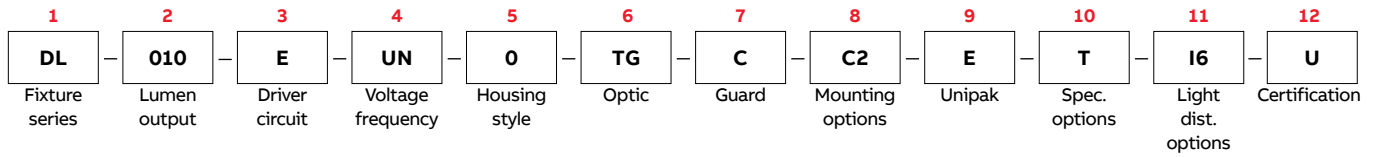
<sup>4</sup> Must be replaced by the same refractor.



# Hazlux® H3 LED

## Numbering system

Unipak™ = LED driver tank + optics and mountings + options (if necessary)



### LED driver tank

Part	Part number	Description
<b>1</b> Fixture series	<b>DL</b>	Hazlux H3 gen 2
<b>2</b> Lumen output	<b>005</b>	5,600 lumens, 37 W
	<b>007</b>	7,500 lumens, 48 W
	<b>010</b>	10,500 lumens, 74 W
	<b>015</b>	15,800 lumens, 103 W
	<b>017</b>	17,300 lumens, 115 W
	<b>020</b>	20,100 lumens, 138 W
<b>3</b> Driver circuit	<b>E</b>	Electronic LED driver with dimming 0–10 VDC
<b>4</b> Voltage / Frequency	<b>UN</b>	Universal 120–277 V AC 50/60 Hz (voltage range includes 208 V, 220 V, 240 V etc.)
	<b>UN2</b>	Universal 347/480 V AC 50/60 Hz
<b>5</b> LED driver housing style	<b>O</b>	Standard housing
	<b>S</b>	Standard housing with stainless-steel insert

### Optics

Part	Part number	Description
<b>6</b> Optic <sup>1</sup>	<b>BLANK</b>	No teflon coating
	<b>S<sup>1</sup></b>	Anti-shatter teflon coating <sup>1</sup>
	<b>TG</b>	Thermal shock-resistant glass globe
	<b>R1</b>	Type I glass refractor globe
	<b>R3</b>	Type III glass refractor globe
	<b>R5</b>	Type V glass refractor globe
	<b>CUT<sup>2</sup></b>	Dark sky cut-off polycarbonate flat lens
<b>7</b> Guard option	<b>Blank</b>	No guard
	<b>C</b>	Cast aluminum guard
	<b>L</b>	Polymeric guard

<sup>1</sup> For Teflon coating, add prefix "S" before the first digit (Ex: SR1)

Not applicable to CUT.

CUT optics: 3000K < CCT. Cannot be used with 25° stanchion mount for dark sky.

<sup>2</sup> Not suitable for Class II, Division 1

### Mounting

Part	Part number	Description
<b>8</b> Mounting style	<b>A2</b>	¾" Cone-top pendant
	<b>A3</b>	1" Cone-top pendant
	<b>B2</b>	¾" Wall mount
	<b>B3</b>	1" Wall mount
	<b>C2</b>	¾" Ceiling mount / pendant
	<b>C3</b>	1" Ceiling mount / pendant
	<b>HV3</b>	Hazvertor™ adaptor ring Crouse-Hinds® ceiling, pendant <sup>2</sup> and straight stanchion top hats <sup>1</sup>
	<b>HV4</b>	Hazvertor adaptor ring stanchion angle mount <sup>1</sup>
	<b>HV5</b>	Hazvertor adaptor ring wall mount <sup>1</sup>
	<b>L4</b>	1¼" Straight stanchion
	<b>L5</b>	1½" Straight stanchion
	<b>P2</b>	¾" Rigid pendant
	<b>P3</b>	1" Rigid pendant
	<b>S4</b>	1¼" 25° Angle stanchion
	<b>S5</b>	1½" 25° Angle stanchion
	<b>Blank</b>	No mounting (to replace existing fixt.)
<b>9</b> Unipak	<b>E</b>	(Standard, Unipak with LED lamp)

<sup>1</sup> HV3, HV4 and HV5 hazvertors are CSA/CSAus certified

### Options

Part	Part number	Description
<b>10</b> Special options	<b>T</b>	Hazcote® black custom anti-corrosion coating (consult ABB rep) <sup>1</sup>
	<b>G</b>	Gray color option
<b>11</b> Light distribution options	<b>I3</b>	Internal reflector 35° beam angle <sup>2</sup>
	<b>I4</b>	Internal reflector 45° beam angle <sup>2</sup>
	<b>I6</b>	Internal reflector 65° beam angle <sup>2</sup>
	<b>Blank</b>	5000K
	<b>K30<sup>3</sup></b>	3000K
	<b>K35<sup>3</sup></b>	3500K
	<b>K40<sup>3</sup></b>	4000K
<b>12</b> Certification	<b>U</b>	U.S market
	<b>Blank</b>	Canadian market

<sup>1</sup> Hazcote® has to be combined with option S (Stainless-steel Insert).

<sup>2</sup> DL005, DL007 and DL010 only, maximum 40 °C (104 °F) ambient temperature, cannot be combined with refractors. Cannot be added in the field.

<sup>3</sup> Option subject to extended lead time.

## Hazvertor™ compatibility



01



02



03

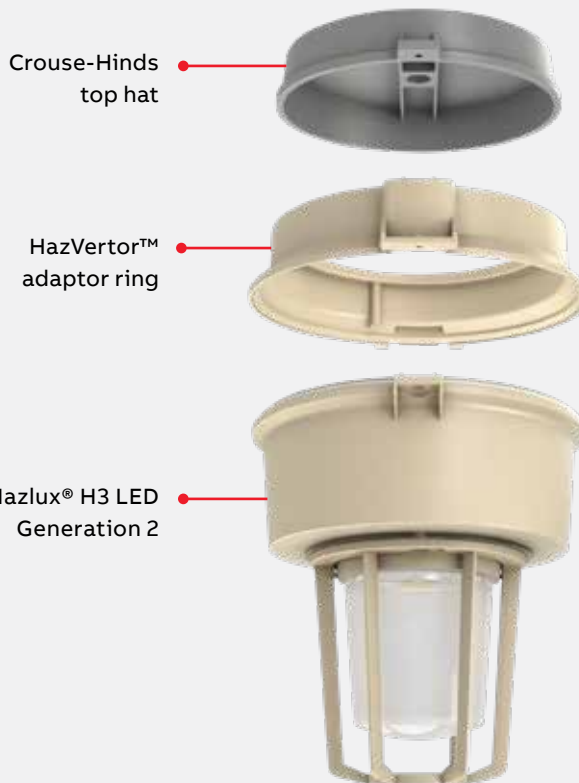
01 Hazvertor™ adaptor ring, model HV3

02 Hazvertor™ adaptor ring, angle machining, model HV4

03 Hazvertor™ adaptor ring, wall mount machining, model HV5

The Hazvertor™ adaptor ring is designed to let you quickly convert most Crouse-Hinds fixtures to Hazlux® H3 LED Generation 2 fixtures. It is available as an accessory or as an integral component to the Hazlux® H3 LED Generation 2 fixture.

Mounting	Crouse-Hinds model	Crouse-Hinds part number	Hazvertor™ model
Pendant	APM2 3/4 in.	APM2	HV3
	APM3 1 in.		HV3
Ceiling	CM2 3/4 in.	CM2	HV3
	CM3 1 in.		HV3
Wall	TWM2 3/4 in.	TWM2	HV5
	TWM3 1 in.		HV5
Stanchion	JM5 1-1/2 in.	JM5	HV4
	PM5 1-1/2 in.		HV3
Quad mount	QM25 3/4 in.	QM25	HV3



## Hazlux® H3 LED

### DLC summary of test results

#### Design Lights Consortium (DLC): summary of test results

Electrical, 120-277 VAC			
Model	Power (W)	Power factor	THD
DL005	37.7	0.91	13.5%
DL007	49.4	0.94	13.3%
DL010	71.9	0.97	10.1%
DL015	103.0	0.97	11.0%
DL017	115	0.97	11.8%
DL020	137	0.97	12.3%

Electrical, 347 VAC			
Model	Power (W)	Power factor	THD
DL005	36.7	0.98	10.2%
DL007	47.9	0.99	8.3%
DL010	70.2	0.99	7.1%
DL015	104.9	0.99	7.6%
DL017	116.7	0.99	7.1%
DL020	141.2	0.99	7.8%

Photometry, 120-277 VAC	
TG globe	
Lumens	Lm/W
5,747	155.3
7,607	156.6
10,706	147.8
16,063	155
17,549	151.7
20,468	147.2

Photometry, 347 VAC	
TG globe	
Lumens	Lm/W
-	-
-	-
10,582	147.7
-	-
-	-
21,284	149.6

Photometry, 120-277 VAC	
CUT reflector	
Lumens	Lm/W
5,237	141.5
6,832	140.8
9,814	135.4
14,564	140.7
16,140	139.7
18,782	135.3

Photometry, 347 VAC	
CUT reflector	
Lumens	Lm/W
-	-
-	-
9,659	134.9
-	-
-	-
19,065	134.1

Summary of test results: Certified for optics TG globe and CUT reflector, and for AC input 120 V, 277 V and 347 V

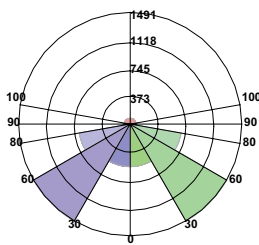


# Hazlux® H3 LED

## Optic selections

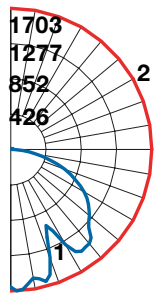
Standard globe	
Catalog number	DL005EUN0-TGC2
Luminaire lumens	5,764
Luminaire efficacy rating (LER)	156
Input watts	37.01
Spacing criterion	0.88
Spacing criterion (90–270)	0.88
Spacing criterion (diagonal)	1.52

Luminaire classification system



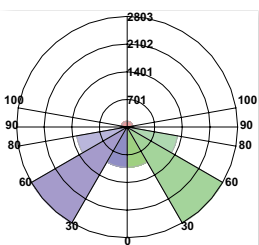
BUG rating : B2-U3-G1

Candlepower curve



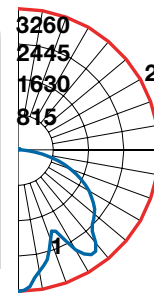
Standard globe	
Catalog number	DL010EUN0-TGC2
Luminaire lumens	10,739
Luminaire efficacy rating (LER)	148
Input watts	72.44
Spacing criterion	0.82
Spacing criterion (90–270)	0.82
Spacing criterion (diagonal)	1.46

Luminaire classification system



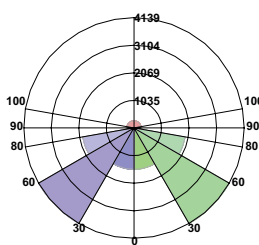
BUG rating : B3-U3-G2

Candlepower curve



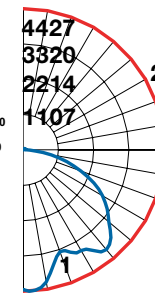
Standard globe	
Catalog number	DL015EUN0-TGC2
Luminaire lumens	16,110
Luminaire efficacy rating (LER)	155
Input watts	103.66
Spacing criterion	1.32
Spacing criterion (90–270)	1.32
Spacing criterion (diagonal)	1.58

Luminaire classification system



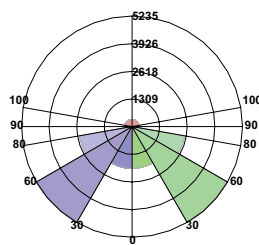
BUG rating : B3-U3-G3

Candlepower curve



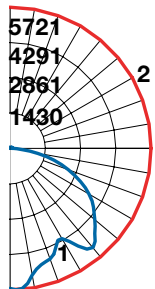
Standard globe	
Catalog number	DL020EUN0-TGC2
Luminaire lumens	20,530
Luminaire efficacy rating (LER)	148
Input watts	139.02
Spacing criterion	1.10
Spacing criterion (90–270)	1.10
Spacing criterion (diagonal)	1.56

Luminaire classification system



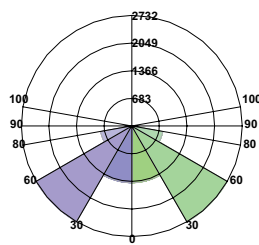
BUG rating : B4-U3-G3

Candlepower curve



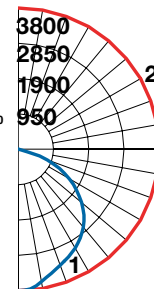
CUT reflector	
Catalog number	DL010EUN0-CUTC2
Luminaire lumens	9,846
Luminaire efficacy rating (LER)	136
Input watts	72.47
Spacing criterion	1.22
Spacing criterion (90–270)	1.22
Spacing criterion (diagonal)	1.38

Luminaire classification system



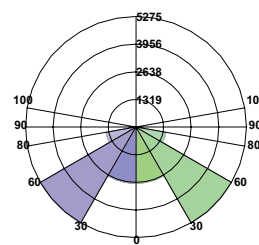
BUG rating : B3-U0-G1

Candlepower curve



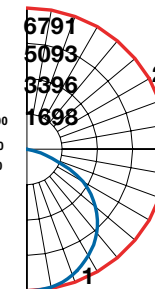
CUT reflector	
Catalog number	DL020EUN0-CUTC2
Luminaire lumens	18,841
Luminaire efficacy rating (LER)	136
Input watts	138.8
Spacing criterion	1.30
Spacing criterion (90–270)	1.30
Spacing criterion (diagonal)	1.42

Luminaire classification system



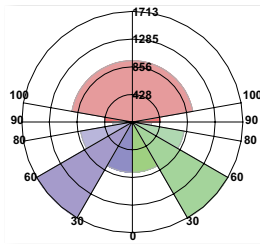
BUG rating : B4-U0-G1

Candlepower curve



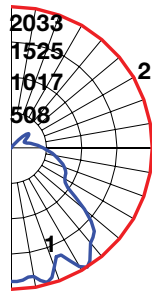
R5 globe	
Catalog number	DL010-R5
Luminaire lumens	9763
Luminaire efficacy rating (LER)	132
Input watts	75
Spacing criterion	1.42
Spacing criterion (90–270)	1.42
Spacing criterion (diagonal)	1.54

Luminaire classification system



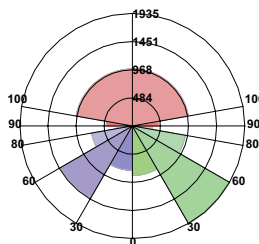
BUG rating : B2-U4-G3

Candlepower curve



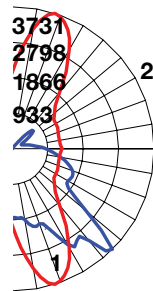
R3 globe	
Catalog number	DL010-R3
Luminaire lumens	9851
Luminaire efficacy rating (LER)	133
Input watts	75
Spacing criterion	1.40
Spacing criterion (90–270)	1.82
Spacing criterion (diagonal)	1.46

Luminaire classification system



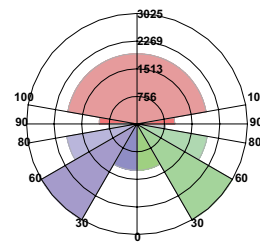
BUG rating : B2-U4-G3

Candlepower curve



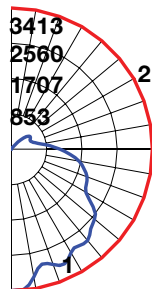
R5 globe	
Catalog number	DL020-R5
Luminaire lumens	18767
Luminaire efficacy rating (LER)	137
Input watts	137
Spacing criterion	1.44
Spacing criterion (90–270)	1.44
Spacing criterion (diagonal)	1.62

Luminaire classification system



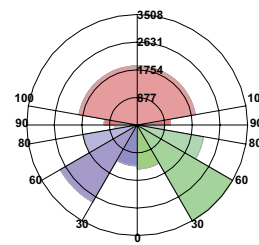
BUG rating : B2-U5-G5

Candlepower curve



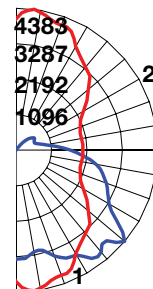
R3 globe	
Catalog number	DL020-R3
Luminaire lumens	18764
Luminaire efficacy rating (LER)	137
Input watts	137
Spacing criterion	1.40
Spacing criterion (90–270)	1.90
Spacing criterion (diagonal)	1.58

Luminaire classification system



BUG rating : B3-U5-G5

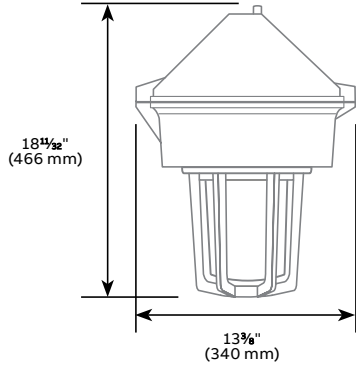
Candlepower curve



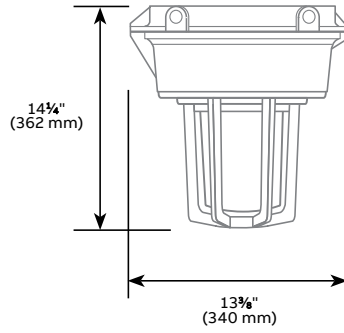
# Hazlux® H3 LED

## Mounting options

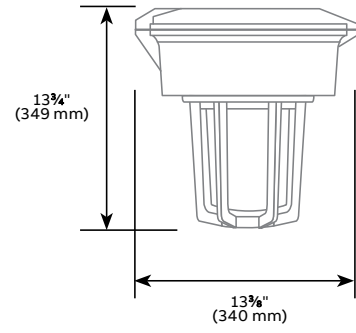
**Cone-top pendant** 7.3 kg | 16 lbs



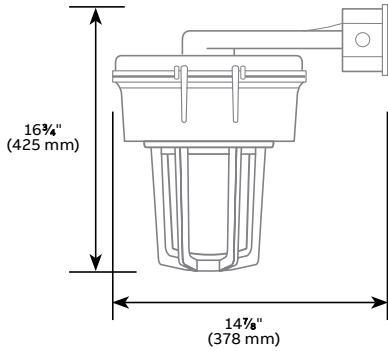
**Ceiling and pendant mount** 7.3 kg | 16 lbs



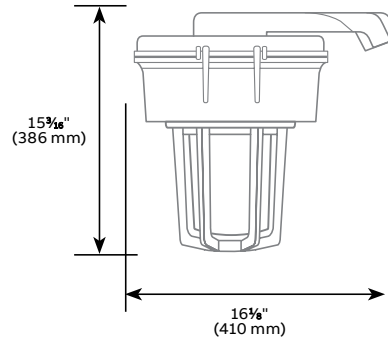
**Pendant mount** 6.8 kg | 15 lbs



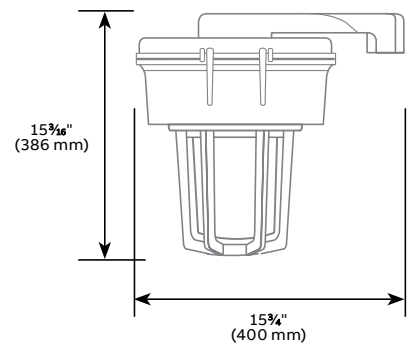
**Wall mount** 9.1 kg | 20 lbs



**25° Angle stanchion** 7.3 kg | 16 lbs



**Straight stanchion** 7.3 kg | 16 lbs



# Quick pole assembly

## Key features and benefits

### Features and benefits

- Sphere-shaped, quick knuckle features round edges, preventing injuries and contaminant build-up on components
- The quick-release mechanism is activated using one hand and one pull pin
- The quick pole assembly blocks at a 90° angle when the pull pin reaches the stopper
- All quick knuckle hardware is made of stainless steel
- Supplied standard with unique fixture hanging hook

### Quick pole assembly

- Operates in any kind of weather
- Overall length is 10' (3 m)
- Pole trade size is 1½" threaded NPT
- Aluminum pole trade size is 2" threaded NPT
- Top pole section is 70" (1.78 m) long
- Lower pole section is 50" (1.27 m) long
- Set screws secure top and bottom section into the quick knuckle

### Quick knuckle assembly

- Rotates 180° (90° left and right) around knuckle's center axis, allowing freedom of installation and easy adjustment
- Easy one-man operation – after center bolt is loosened, use the pull pin to lock and unlock the assembly
- Pre-fished with tape to ease wiring

### Brackets

- Universal mounting for 2" to 3" angle iron railings
- Contact your sales representative.



—  
01  
The quick pole assembly blocks at a 90° angle.



### Safety first

One-person operation

No ladders or lifts required

Simplified maintenance

Hot dipped galvanized steel and aluminum finishes

Frees up catwalks and walkways during maintenance

Suitable for 113 mph winds as per AASHTO LTS-4 2001

Maximum fixture weight capacity of 50 lbs.

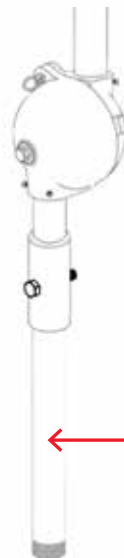
Steel pole threads are treated and protected to prevent galvanic reaction as per AASHTO LTS-4 2001



### Standard kit

- Overall height of 10' (3 m)
- 1½" NPT threads at both ends (1⅞" O.D. pipe)
- Rotating quick knuckle assembly
- Installed with two rail angle iron mounting brackets, allowing the pole section to rotate before final positioning

**Q-P-5-10-N** (Galvanized steel 1⅞" O.D. pipe)  
**Q-P-A-5-10-N** (Aluminum 2⅞" O.D. pipe)  
**Standard Kit**



### Retrofit kit

- Overall maximum and predetermined height of 10' (3 m) once assembled
- Can be adapted to existing pole
- Upgrades existing assembly with quick and easy maintenance features
- See instruction sheets provided with product for installation details
- Rotating quick knuckle assembly
- Steel and aluminum adaptor sleeve (2" ID) fits over standard 1¼" NPT (1.66" OD) or 1½" NPT (1.90" OD) pipe

**RQ-P-5-10-N** (Galvanized steel 1⅞" O.D. pipe)  
**RQ-P-A-5-10-N** (Aluminum 2⅞" O.D. pipe)  
**Retrofit Kit**

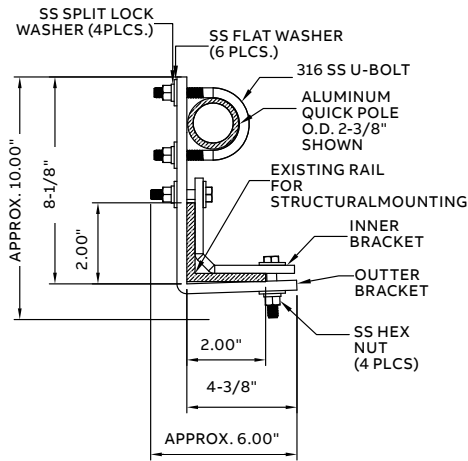
Customer existing pipe (not supplied)

# Quick pole assembly

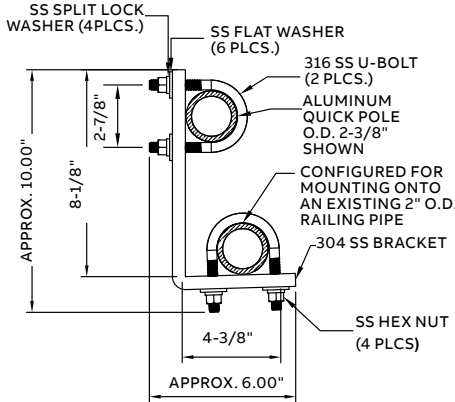
## Universal bracket kit

### STAINLESS STEEL (ALUMINIUM POLE)

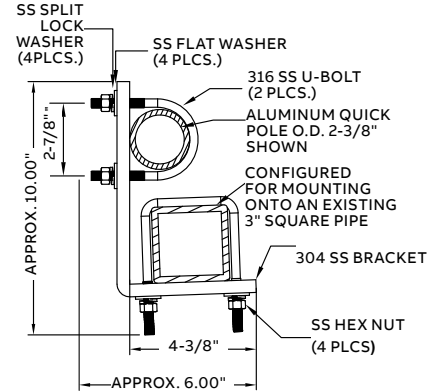
**AMB-QP-A-BKT-N**  
Bracket for structural angle mounting



**RMB-QP-A-BKT-N**  
Bracket for structural pole mounting

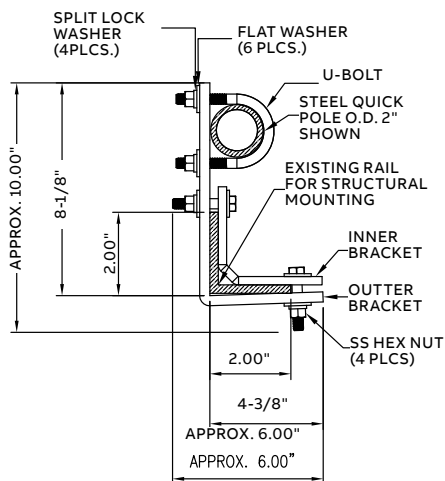


**RMB-QP-A-BKT-3**  
Bracket for structural square mounting

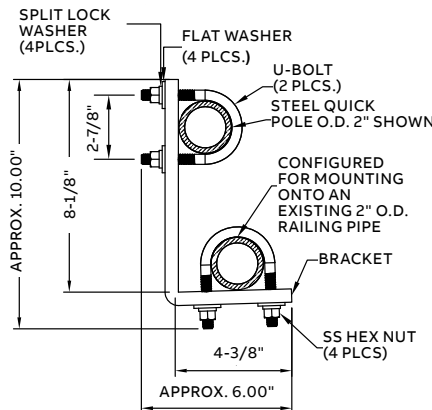


### GALVANISED STEEL (GALVANIZED POLE)

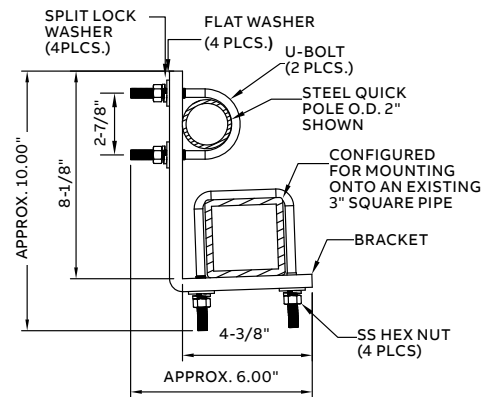
**AMB-QP-BKT-N**  
Bracket for structural angle mounting



**RMB-QP-BKT-N**  
Bracket for structural pole mounting

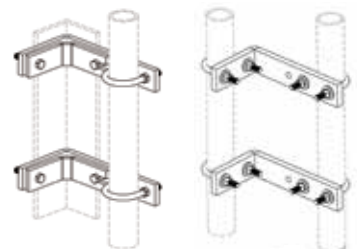


**RMB-QP-BKT-3**  
Bracket for structural square mounting



**Universal bracket kit**

- Quick bolt-on installation, no welding or drilling
- Can be attached to angle iron guardrails up to 3"
- Supplied to be installed on tubular structures 2" O.D. or less but designed for up to 2-3/8" U-Bolt in both positions
- Allows the pole sections to rotate before final positioning



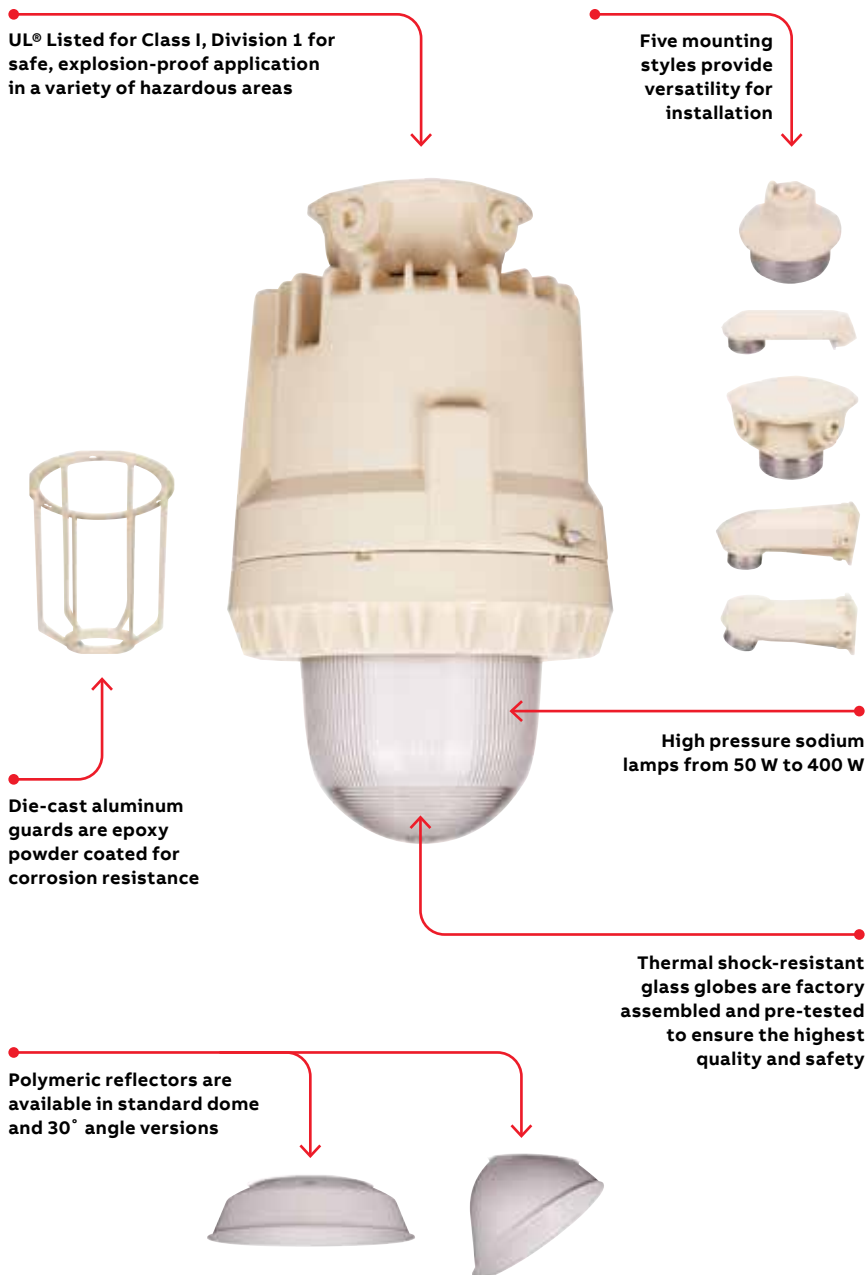




# Hazlux® 5

## HID

Your go-to versatile explosion-proof lighting fixture, ideal for use in marine and wet locations, and a variety of hazardous areas.



### CLASSIFICATION

CLASS I	
Division 1	Groups C, D
Division 2	Groups A, B, C, D
Zone 1	Groups IIC, IIB, IIA
CLASS II	
Division 1	Groups E, F, G
Division 2	Groups E, F, G

Classification may vary upon light source and wattage. For details, see thermal performance chart on p. 30-31.

### CERTIFICATIONS



Outdoor wet locations  
Temperature range: -22°F to 104°F (-30°C to 40°C)

### Applications

Chemical plants  
Oil refineries  
Waste treatment facilities  
Automotive manufacturing plants  
Paint manufacturing facilities  
Paint spray locations  
Chemical & plastic mixing and storage areas  
Pipeline pumping stations  
Oil and gas terminals  
Defense and government facilities

## Hazlux® 5 HID

### Key features and benefits

#### Features

- UL® Listed for Class I, Division 1 for safe, explosion-proof application in a variety of hazardous areas
- Factory-sealed assembly meets code requirements without the need for external sealing fittings
- Dual-pitch Acme threads make assembly easy and faster than designs with standard V-cut threads, greatly reducing the risk of cross threading
- Factory-wired connection block means ballast is pre-wired to lower half of electrical connection block, allowing wireless connection of ballast housing to mounting module
- Five mounting styles – pendant, ceiling, wall, angle stanchion and bulkhead – provide versatility for installation
- Thermal shock-resistant glass globes are factory assembled and pre-tested to ensure the highest quality and safety
- Die-cast aluminum guards are epoxy powder coated for corrosion resistance and have keyhole slots for easy attachment to stainless steel screws
- High-pressure sodium in wattages from 50 to 400 watts
- Polymeric reflectors are available in standard dome and 30° angle versions
- UL paint spray listed in wattages up to 100 watts

#### Wattages and voltages

- High-pressure sodium: 50–400 watts
- All luminaires: multi-tap standard (120, 208, 240, 277 V), wired 120 V (other voltages, 50/60 Hz available)

#### Materials and finishes

- Ballast housing: copper-free aluminum, powder finish
- Mounting modules: copper-free aluminum, powder finish
- Hardware: stainless steel
- Globes: tempered glass
- Guard: copper-free aluminum, powder finish
- Reflectors: fiberglass-reinforced

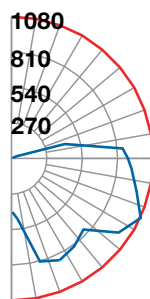
#### Warranty

- 1 year

### Ceiling mount photometry

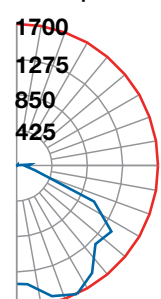
Reference data	
<b>Catalog number</b>	<b>XSO10H090G-C2-E</b>
Lamp	100W HPS ED23 1/2
Lamp lumens	9500
Input watts	130
Luminaire lumens	7162
Efficiency	75%
Efficacy rating (LER)	55.1
Spacing criterion (0–180)	2.66
Spacing criterion (90–270)	2.66
Spacing criterion (diagonal)	2.74

Candlepower curve



Reference data	
<b>Catalog number</b>	<b>XSO10H090G-C2-E &amp; VR31P</b>
Lamp	100W HPS ED23 1/2
Lamp lumens	9500
Input watts	130
Luminaire lumens	6254
Efficiency	66%
Efficacy rating (LER)	48.1
Spacing criterion (0–180)	1.60
Spacing criterion (90–270)	1.60
Spacing criterion (diagonal)	1.70

Candlepower curve



## Hazlux® 5 HID

### Fixture assembly guide

# 1

#### Mounting style



Pendant mount



Stanchion mount



Ceiling mount



Wall mount



Bulkhead mount

# 2

#### Globe assemblies



Up to 150 HPS



250 HPS and 400 HPS

# 3

#### Guards

Cast guard  
up to 150 HPSCast guard  
for 250 HPS  
and 400 HPS

# 4

#### Optional reflectors (sold separately)



Standard dome



30° Angle reflector

## Individual components

#### Mounting options

Part number	Description	Conduit hub size
XP2	Pendant mount	¾"
XP3	Pendant mount	1"
XS4	Stanchion mount	1¼"
XS5	Stanchion mount	1½"
XC2	Ceiling mount	¾"
XC3	Ceiling mount	1"
XB2	Wall mount	¾"
XB3	Wall mount	1"
XJ2	Bulkhead mount	¾"
XJ3	Bulkhead mount	1"

#### Replacement globe assemblies<sup>1</sup>

Part number	Description
XGSA44	Hazlux 5 replacement globe assembly – up to 150 HPS
XGSA44A	Hazlux 5 replacement globe assembly – 250 HPS & 400 HPS

<sup>1</sup> For stainless steel inserts, please add "SI" to part no. (ex: XGSA44SI)

#### Guards

Part number	Description
XGU44	Cast aluminum guard
VGU31 <sup>2</sup>	Cast aluminum guard

<sup>2</sup> Used on all 400-watt fixtures and 250-watt HPS fixtures

#### Reflectors

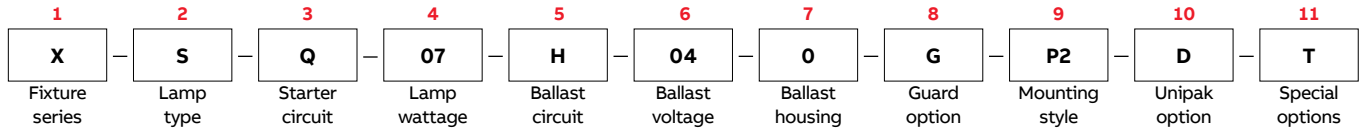
Part number	Description
VR31P	Standard dome, fiberglass-reinforced polyester
VRA31P	30° Angle reflector, fiberglass-reinforced polyester

Reflectors are shipped bulk unless specified.

## Hazlux® 5 HID

### Numbering system

Unipak™ = Ballast tank + optics and mountings + options (if necessary)



#### Ballast tank

Part	Part number	Description
<b>1</b> Fixture series	<b>X</b>	Hazlux 5 fixture
<b>2</b> Lamp type	<b>S</b>	High-pressure sodium
<b>3</b> Starter circuit/ quartz option	<b>Ø</b>	Standard fixture (without options)
	<b>Q</b>	Quartz auxiliary option (not rated for Class 1 Div.1)
	<b>R</b>	Fixture with instant restart option (70, 100 and 150 HPS only)
<b>4</b> Lamp wattage (high pressure sodium lamp)	<b>05</b>	50 W ED23 1/2
	<b>07</b>	70 W ED23 1/2
	<b>10</b>	100 W ED23 1/2
	<b>15</b>	150 W ED23 1/2
	<b>25</b>	250 W ED18
<b>5</b> Ballast circuit	<b>40</b>	400 W ED18
	<b>C</b>	Constant wattage autotransformer (CWA)
	<b>I</b>	Constant wattage insulated transformer (CWI)
	<b>H</b>	High reactance
<b>6</b> Ballast voltage	<b>P</b>	Reactor
	<b>04</b>	Multi-tap 120/208/240/277 volt
	<b>09</b>	120/277/347V Volt (CSA)
	<b>12</b>	120 Volt
	<b>20</b>	208 Volt
	<b>24</b>	240 Volt
	<b>27</b>	277 Volt, 60 Hz
<b>7</b> Ballast housing style	<b>34</b>	347 Volt
	<b>48</b>	480 Volt
	<b>Ø</b>	Standard housing
	<b>S</b>	Standard housing with stainless steel inserts

#### Optics and mountings

Part	Part number	Description
<b>8</b> Guard option	<b>G</b>	Cast guard (omit "G" if guard not required)
<b>9</b> Mounting style	<b>P2</b>	¾" Pendant
	<b>P3</b>	1" Pendant
	<b>C2</b>	¾" Ceiling
	<b>C3</b>	1" Ceiling
	<b>B2</b>	¾" Wall
	<b>B3</b>	1" Wall
	<b>J2</b>	¾" Bulkhead
	<b>J3</b>	1" Bulkhead
<b>10</b> Unipak options	<b>S4</b>	1¼" 25° Stanchion
	<b>S5</b>	1½" 25° Stanchion
	<b>D</b>	Unipak with dual arc lamp
	<b>E</b>	Unipak with clear lamp
	<b>U</b>	Unipak no lamp

#### Options

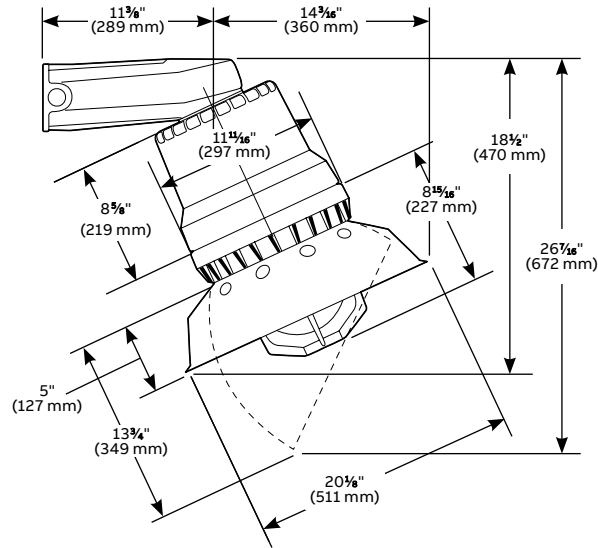
Part	Part number	Description
<b>11</b> Special options	<b>T</b>	Hazcote® black custom anti-corrosion coating (consult ABB rep)
	<b>PS</b>	Paint spray label (100 W max.)
	<b>F</b>	Fuse block with fuse
	<b>C</b>	Canadian market
	<b>Blank</b>	U.S. market



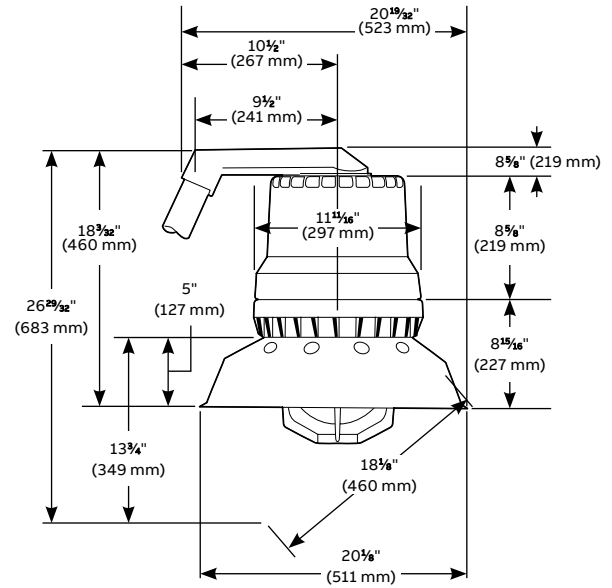
# Hazlux® 5 HID

## Dimensions

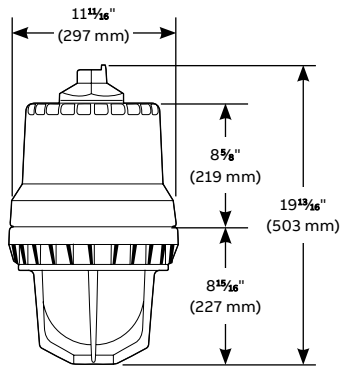
**Bulkhead mount with globe, guard and reflector**



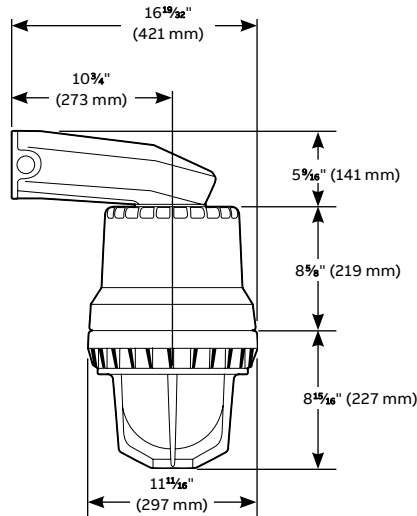
**Stanchion mount with globe, guard and reflector**



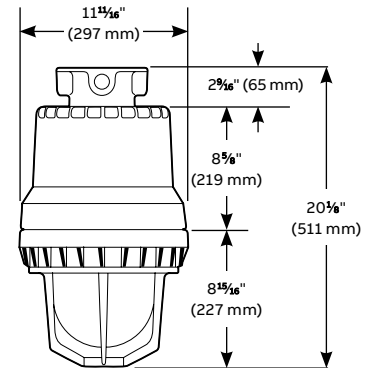
**Pendant mount with globe and guard**



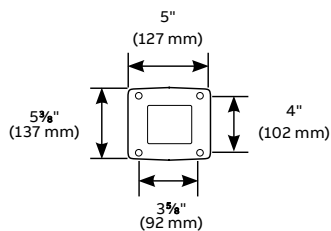
**Wall mount with globe and guard**



**Ceiling mount with globe and guard**



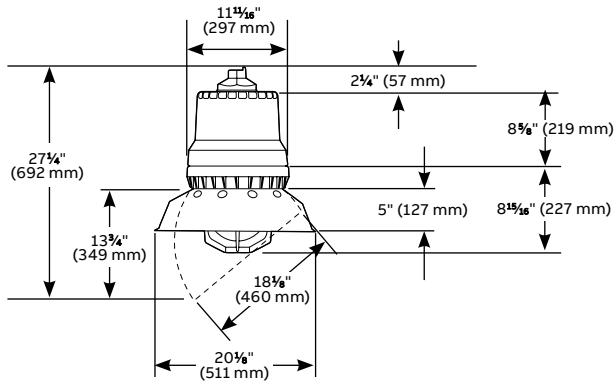
**Template for bulkhead for wall mount**



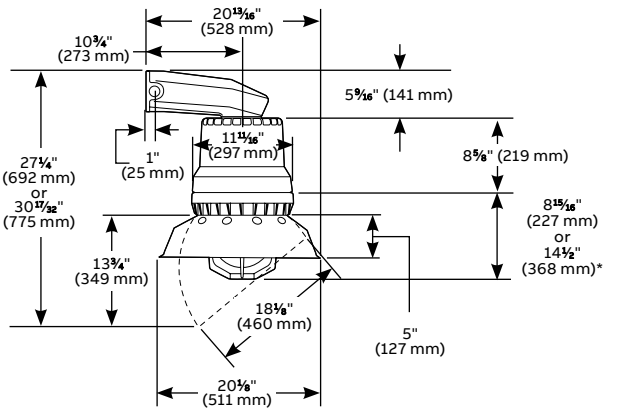
# Hazlux® 5 HID

## Dimensions

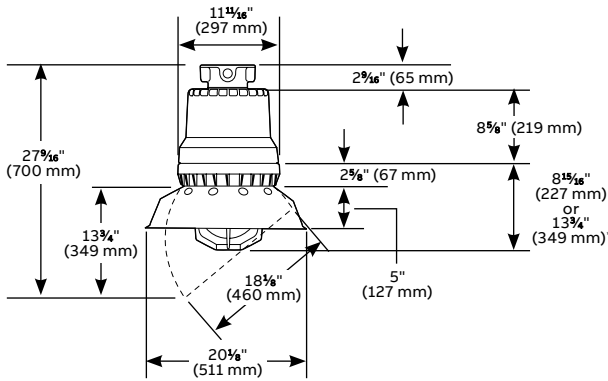
**Pendant mount with globe, guard and reflector**



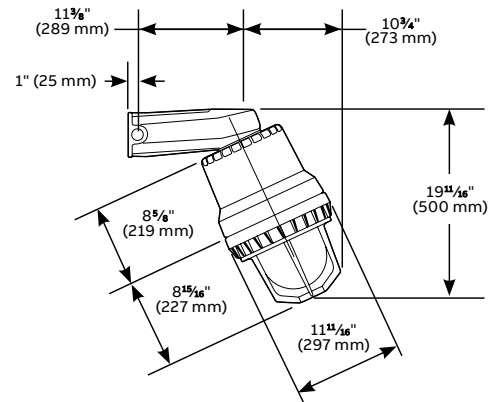
**Wall mount with globe, guard and reflector**



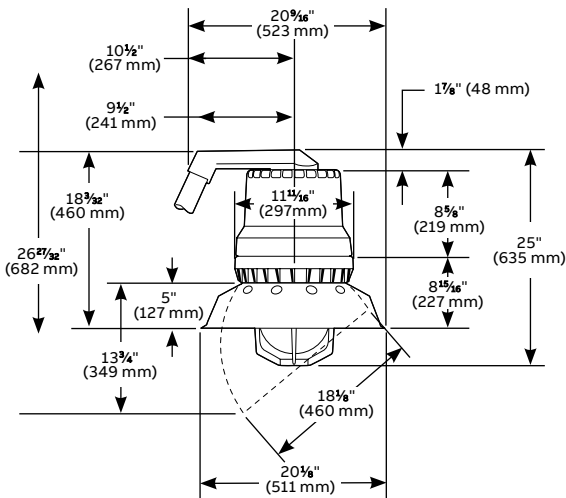
**Ceiling mount with globe, guard and reflector**



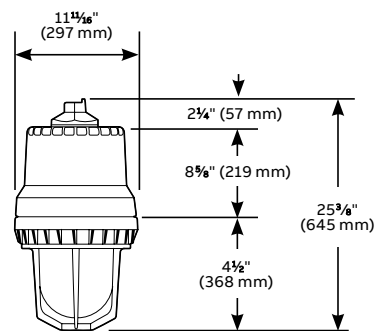
**Bulkhead mount with globe and guard**



**Stanchion mount with globe, guard and reflector**



**Pendant mount with globe and guard**



## Hazlux® 5 HID

### Thermal performance data

Class I, Division 1, Group C & D – Maximum external fixture temperature in 104°F (40°C) | ambient in free air

High pressure sodium / nameplate marked with rating based on hottest fixture congestion									
Configuration		50 W (S68 lamp)		70 W (S62 lamp)		100 W (S54 lamp)		150 W (S55 or S56 lamp)	
		Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.	lamp	Lamp w/ auxiliary qtz.
			T no.		T no.		T no.		T no.
Globe and guard	A	T6	T4A	T6	T4A	T5	T4	T4	T4A
Globe, guard and dome reflector	B	T6	T4A	T6	T4A	T5	T4	T4	T3C
Globe, guard and angle reflector	C	T6	T4A	T6	T4A	T5	T3C	T4	T3C

Class II & III\*, Division 1 & 2 – Maximum external fixture temperature in 104°F (40°C) | ambient in free air

High pressure sodium / nameplate marked with rating based on hottest fixture congestion									
Configuration		50 W (S68 lamp)		70 W (S62 lamp)		100 W (S54 lamp)		150 W (S55 or S56 lamp)	
		Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.
			Class II groups		Class II groups		Class II groups		Class II groups
Globe and guard	A	EFG	EFG	EFG	EFG	EFG	EF	EFG	EF
Globe, guard and dome reflector	B	EFG	EFG	EFG	EFG	EFG	EF	EFG	EF
Globe, guard and angle reflector	C	EFG	EFG	EFG	EFG	EFG	EF	EFG	EF

Class I, Division 1, Group C & D – Maximum external fixture temperature in 131°F (40°C) | ambient in free air

High pressure sodium / nameplate marked with rating based on hottest fixture congestion									
Configuration		50 W (S68 lamp)		70 W (S62 lamp)		100 W (S54 lamp)		150 W (S55 or S56 lamp)	
		Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.
			T no.		T no.		T no.		T no.
Globe and guard	A	T6	T4	T5	T4	T5	T4A	–	T4A
Globe, guard and dome reflector	B	T6	T4	T5	T4	T5	T4A	–	T4A
Globe, guard and angle reflector	C	T6	T4	T5	T4	T5	T4A	–	T4A

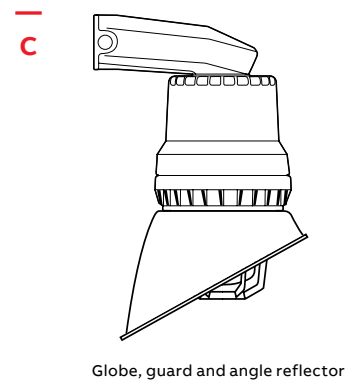
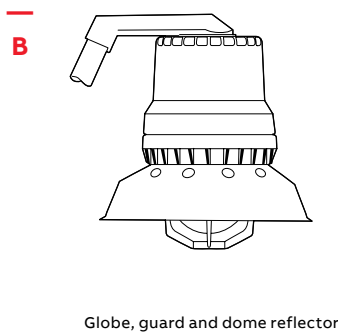
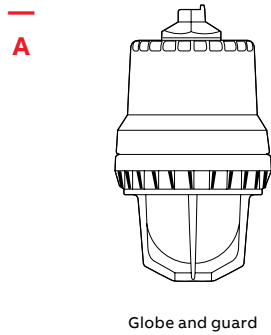


# Hazlux® 5 HID

## Thermal performance data

Class I, Division 1, Group C & D – Maximum external fixture temperature in 149°F (65°C) | ambient in free air

High pressure sodium / nameplate marked with rating based on hottest fixture congestion							
Configuration		50 W (S68 lamp)		70 W (S62 lamp)		100 W (S54 lamp)	
		Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.	Lamp	Lamp w/ auxiliary qtz.
		T no.	T no.	T no.	T no.	T no.	T no.
Globe and guard	A	T5	-	T4A	-	T4A	-
Globe, guard and dome reflector	B	T5	-	T4A	-	T4A	-
Globe, guard and angle reflector	C	T5	-	T4A	-	T4A	-



### Hazlite™ 5 (400 series) thermal data

This data includes globe, guard and reflector				
Lamp type	Ambient temperature	Groups	Class I Temp. code	Supply wire suitable temperature
250 Watt HPS type S50	104°F (40°C)	C, D	T4A	185°F (40°C)
400 Watt HPS type S51	104°F (40°C)	C, D	T4A	185°F (40°C)



# FMR LED

These multi-functional and feature-rich fixtures are capable of both meeting and exceeding the demands of the food processing industry, industrial and commercial environments and architectural applications.



## CLASSIFICATION

CLASS I	
Division 2	Groups A, B, C, D
Zone 2	Group IIC
Zone 22	Group IIIB
CLASS II	
Division 2	Groups F, G
CLASS III	

Contact your ABB sales representative to verify classification

## CERTIFICATIONS AND RATINGS



Not all DL series are DLC qualified. For all qualified products, please visit: [www.designlights.org/qpl](http://www.designlights.org/qpl)



Splash and non-food zones



E76933



UL844  
UL1598A  
UL8750



c22.2 no. 137



IP66/67

## Applications

- High mast
- Parking lots
- Tunnels
- Loading docks
- High bay
- Food processing
- Coolers and freezers
- Inspection
- Meat processing
- Quality control areas
- Packaging areas
- Hangars
- Storage facilities
- Oil and gas processing
- Agricultural
- Marine/wet environments
- Chemical/industrial facilities

## FMR LED

### Key features and benefits

#### Features

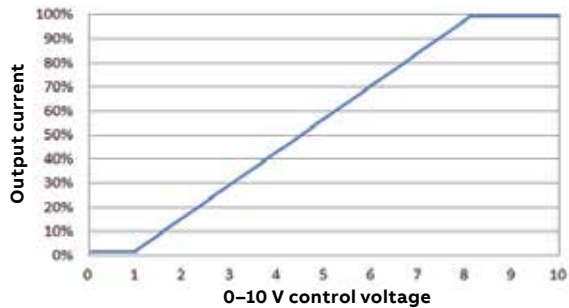
- 100% Field serviceable
- NSF Certified for use in Splash and Non-Food Zones
- Certified for use in Marine Locations (UL 1598A & ABS)
- Available with multiple distribution patterns
- Certified for Hazardous Locations, extreme water resistance, and corrosion protection for marine applications
- Thermally managed for maximum longevity
- Multiple mounting options
- Special powder coating for extreme resistance to chemical attack, aggressive cleaning agents and bio-cides used in food processing industries
- Low surface-energy coating and smooth surface texture prevent debris build-up and staining
- 90+ CRI available
- IDA Dark Sky Approved to protect the night time environment and reduce light pollution Features
- 3/4" NPT conduit entry
- Housing: Die-cast aluminum and polycarbonate lens

#### Color temperature

Available standard in 3500 K and 5000 K color temperatures, with additional color temperatures available from 2700 to 6500 K. Contact your sales representative for more information.

#### Dimming

Driver will source a maximum of 200  $\mu$ A for control needs. A controller must sink current from 0–10 V control leads.



#### Warranty

5 years

#### Temperature codes

Luminance	Input voltage	Optical models		Flood models	All models
		Ambient temp	Class I, Div 2 T-Codes	Class I, Div 2 T-Codes	Class II, Div 2 T-Codes
FMR10	AC	-40 to 131°F (-40 to 55°C)	T3C	-40 to 131°F (-40 to 55°C)	T5
FMR10	HV	-40 to 129°F (-40 to 54°C)	T3C	-40 to 123°F (-40 to 51°C)	T5
FMR15	AC	-40 to 131°F (-40 to 55°C)	T3C	-40 to 131°F (-40 to 55°C)	T5
FMR15	HV	-40 to 129°F (-40 to 54°C)	T3C	-40 to 123°F (-40 to 51°C)	T5
FMR20	AC	-40 to 131°F (-40 to 55°C)	T3C	-40 to 131°F (-40 to 55°C)	T5
FMR20	HV	-40 to 129°F (-40 to 54°C)	T3C	-40 to 123°F (-40 to 51°C)	T5
FMR25	AC	-40 to 123°F (-40 to 51°C)	T3C	-40 to 131°F (-40 to 55°C)	T5
FMR25	HV	-40 to 111°F (-40 to 44°C)	T3B	-40 to 122°F (-40 to 50°C)	T5
FMR30	AC	-40 to 109°F (-40 to 43°C)	T3	-40 to 108°F (-40 to 42°C)	T5
FMR30	HV	-40 to 109°F (-40 to 43°C)	T3	-40 to 104°F (-40 to 40°C)	T5

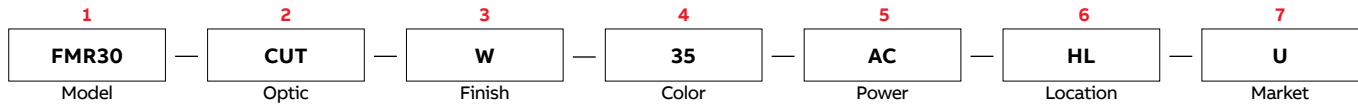
#### Power ratings

Luminance	Input voltage	Rated wattage (watts)	Rated voltage (volts)	Frequency (Hz)	Rated current (amps)
FMR10	AC	107	120–277	50/60	1.11–0.48
FMR10	HV	129	347–480	50/60	0.43–0.31
FMR15	AC	145	120–277	50/60	1.42–0.61
FMR15	HV	145	347–480	50/60	0.47–0.34
FMR20	AC	190	120–277	50/60	1.74–0.75
FMR20	HV	187	347–480	50/60	0.59–0.42
FMR25	AC	247	120–277	50/60	2.18–0.95
FMR25	HV	248	347–480	50/60	0.74–0.53
FMR30	AC	312	120–277	50/60	2.82–1.22
FMR30	HV	310	347–480	50/60	0.96–0.70

# FMR LED

## Numbering system

### Lighting fixture



### Fixture

Part	Part number	Description
1 Model	<b>FMR10</b>	12260 to 12370 lumens
	<b>FMR15</b>	16200 to 16490 lumens
	<b>FMR20</b>	20380 to 20730 lumens
	<b>FMR25</b>	25860 to 26610 lumens
	<b>FMR30</b>	31400 to 31670 lumens
2 Optic	<b>CUT</b>	Wide beam (no optics)
	<b>R2<sup>1</sup></b>	IESNA Type 2
	<b>OC<sup>1</sup></b>	Oval, 26° x 108°
	<b>SC<sup>1</sup></b>	Spot 18°
3 Finish	<b>W</b>	White
4 Color	<b>35<sup>1</sup></b>	Warm white (3500 K)
	<b>35H<sup>1</sup></b>	Warm white, high CRI (3500 K)
	<b>50</b>	Cool white (5000 K)
	<b>50H</b>	Cool white, high CRI (5000 K)
5 Power	<b>AC</b>	120 to 277 V AC
	<b>HV</b>	347 to 480 V AC
6 Location	<b>HL</b>	Hazardous location
7 Market	<b>U</b>	U.S. market
	<b>Blank</b>	Canadian market

### Mounting accessories (order separately)

Part	Part number	Description
Mounting type	<b>FMR-WM-WT</b>	Wall mount <sup>2</sup>
	<b>FMR-HK-WT</b>	Hanging pendant
	<b>FMR-PM-WT</b>	Pole mount <sup>2</sup>
	<b>FMR-YM</b>	Yoke mount <sup>2,3</sup>
	<b>FMR-YK</b>	High vibration yoke <sup>2,3,4</sup>
	<b>FMR-CM</b>	Conduit mount

#### Notes

- Option subject to extended lead time.
- IDA Fixture seal of approval only applies to fixtures with a CCT of 3000K or less, and that have fixed mounts aiming the fixture perpendicular to the ground.
- Yoke mount only available in stainless steel finish.
- Custom finishes and high vibration yoke mount are not available for NSF certified units.

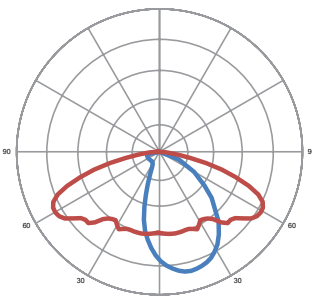
### Modular optics (20 options)

R2 – IESNA Type 2		
Model	Lumens	Lumens/watts
FMR10	12370	132
FMR15	16340	130
FMR20	20560	125
FMR25	26090	117
FMR30	31670	109

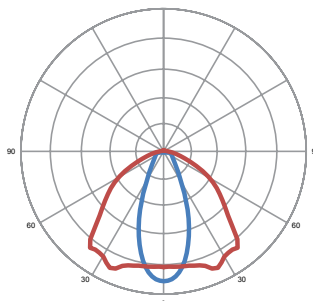
OC – Oval		
Model	Lumens	Lumens/watts
FMR10	12370	132
FMR15	16340	130
FMR20	20560	125
FMR25	26090	117
FMR30	31670	109

SC – Narrow 18°		
Model	Lumens	Lumens/watts
FMR10	12370	132
FMR15	16340	130
FMR20	20560	125
FMR25	26090	117
FMR30	31670	109

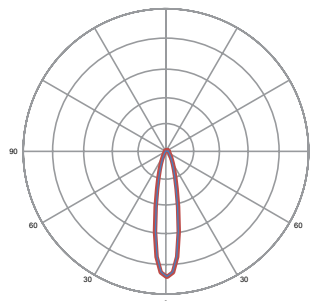
CUT – Wide beam		
Model	Lumens	Lumens/watts
FMR10	12370	132
FMR15	16340	130
FMR20	20560	125
FMR25	26090	117
FMR30	31670	109



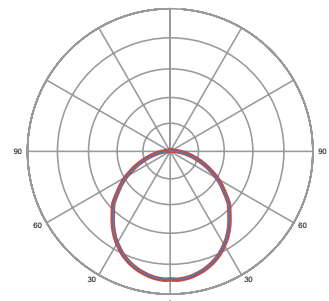
BUG rating : B4-U0-G4



BUG rating : B5-U1-G1



BUG rating : B5-U1-G1



BUG rating : B5-U0-G2

Standard offering above, 13 alternate optical profiles available upon request.

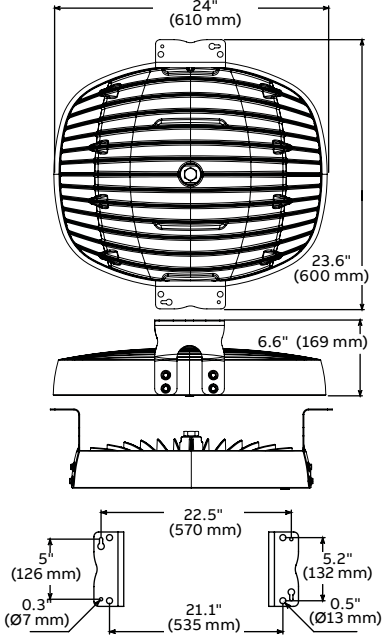
Contact sales representative for further details. Minimum order quantities, additional costs and lead times may incur.

# FMR LED

## Mounting options

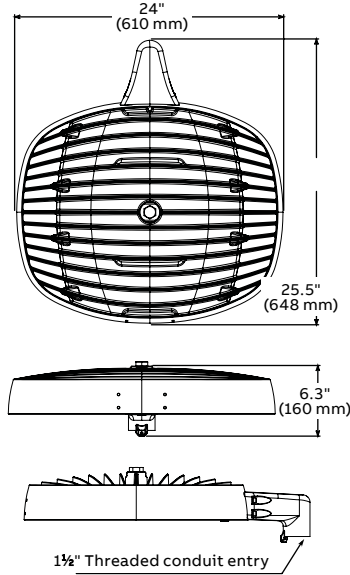
### Surface/suspended mount (included standard)

16.8 kg | 37 lbs



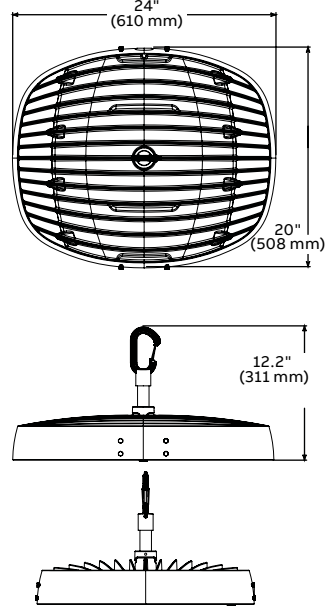
### Pole mount FMR-PM (optional accessory)

17.3 kg | 38 lbs



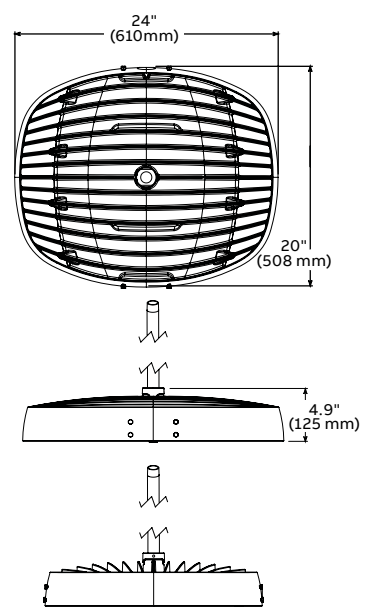
### Hanging pendant FMR-HK (optional accessory)

16.4 kg | 36 lbs



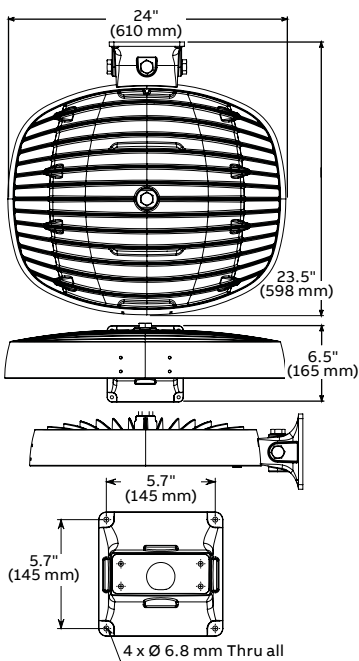
### Conduit mount FMR-CM (optional accessory)

16.4 kg | 36 lbs



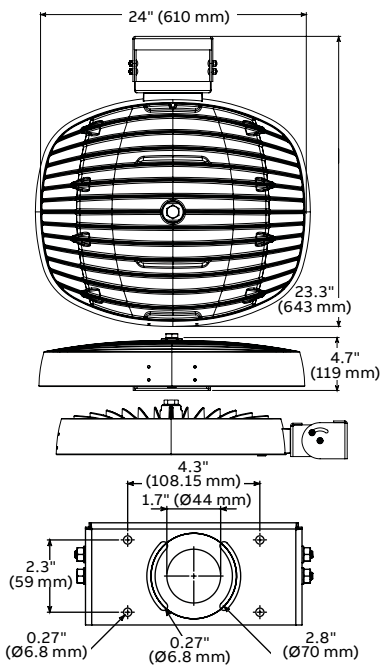
### Wall mount FMR-WM (optional accessory)

17.7 kg | 39 lbs



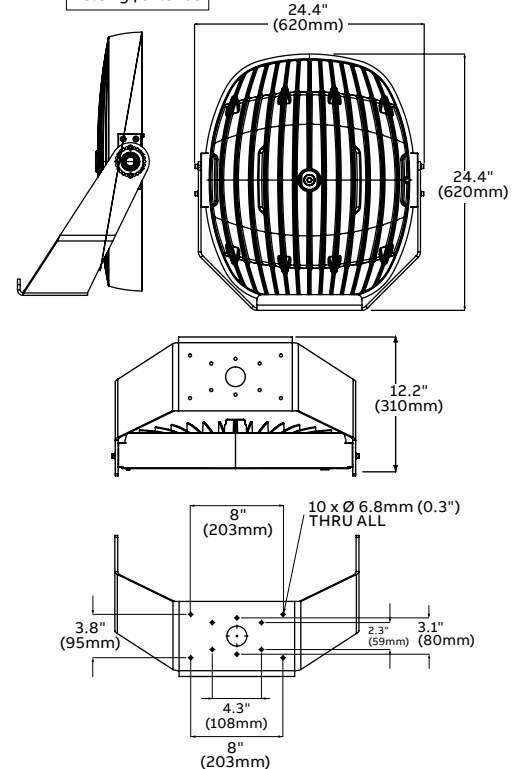
### Yoke mount FMR-YM (optional accessory)

16.8 kg | 37 lbs



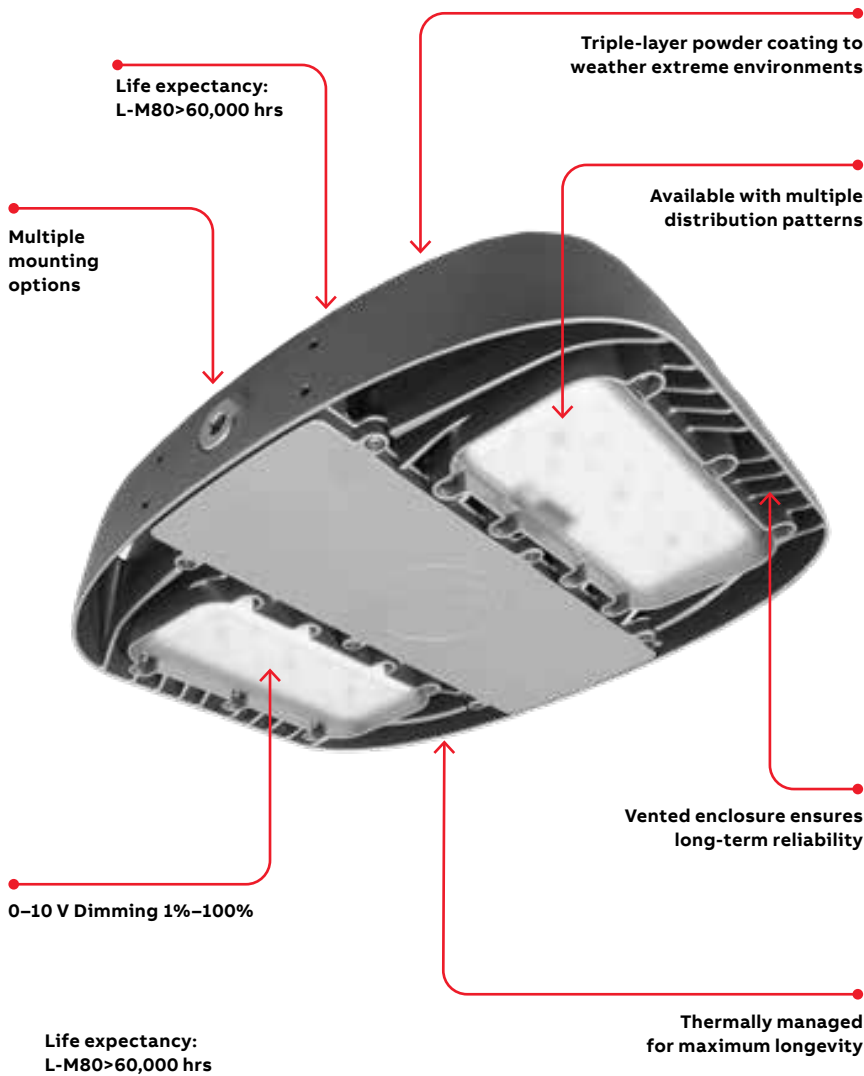
### High vibration yoke FMR-YK (optional accessory)

23.8 kg | 52.5 lbs



# SMR LED

The unique combination of flexibility and robust design allows the implementation of this light fixture in various new or existing facilities. The SMR not only exceeds the expectations of an HID replacement, but establishes a new benchmark in versatility for industrial LED lighting.



## CLASSIFICATION

CLASS I	
Division 2	Groups A, B, C, D
Zone 2	Group IIC
CLASS II	
Division 2	Groups F, G
Zone 22	
CLASS III	

Contact your ABB sales representative to verify classification

## CERTIFICATIONS AND RATINGS

**DLC** Not all DL series are DLC qualified. For all qualified products, please visit: [www.designlights.org/qpl](http://www.designlights.org/qpl)



UL844  
UL1598A  
UL8750



## Applications

- Hazardous locations
- Indoor lighting
- Tunnel lighting
- Industrial facilities
- Refinery and petrochemical facilities

## SMR LED

### Key features and benefits

#### Features

- Extremely robust
- Thermally managed for longevity
- Easy field angle adjustment
- Operating temperature -40°F to 131°F (-40°C to 55°C)
- Sealed to IP66
- Extreme vibration resistance

#### Junction box

- Direct heat transfer from power supply to external case for optimal performance
- Plenty of wiring space for optional accessories (contact your ABB representative for custom options)
- ¾" NPT entry
- IP 66/67 rated, suitable for wet locations

#### Thermal management

- Ample surface area of head ensures LEDs are kept running at maximum efficiency, even at 131°F (55°C) temperature
- Unique heat sink design creates increased airflow for optimal LED and power supply operating temperature
- Physical separation of electronics for increased system reliability
- Perimeter band adds ruggedness and channels heat through fins with laminar flow principles

#### Light engine

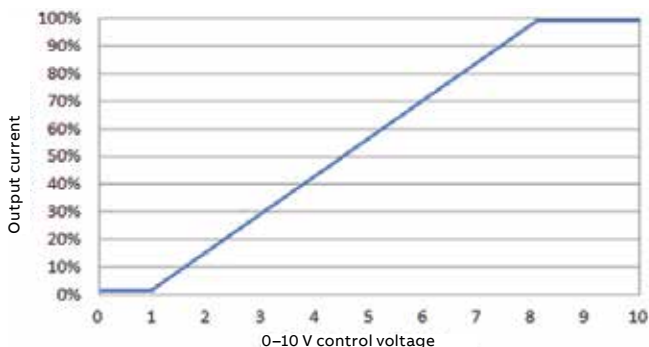
- Metal core PCB (MCPCB)
- Modular optics

#### Output

3050 to 6265 lumens

#### Dimming

Driver will source a maximum of 200 µA for control needs. A controller must sink current from 0–10 V control leads.



#### Color temperature

Available standard 5000 K, with additional color temperatures available from 2700 to 6500 K.

#### Temperature codes

<b>T4</b>	Class 1, Div 2, Groups A, B, C, D
	Class 1, Zone 2, Group IIC
<b>T4A</b>	Class II, Div. 2, Groups F, G

#### Nichia LEDs

- Proven reliability
- High efficiency
- Superior CRI (80+)

#### Housing

- Copper-free high pressure die-cast aluminum case
- Triple-layer coating suitable for marine applications
- Physical separation between power supply and LEDs
- Lens and case are designed to withstand severe impact

#### Power supplies

- Two input ranges for ultimate flexibility
- Utilizes high performance LED drivers for better efficiency and up to 100,000 hours of maintenance-free operation
- Built-in junction box with ¾" NPT entry

<b>Frequency</b>	120-277VAC 50/60 Hz 347VAC 60 Hz
<b>Power</b>	SMR3: 26 W (Cut) - 29 W (R2, OC, SF) SMR6: 51 W (Cut) - 57 W (R2, OC, SF)
<b>Current</b>	SMR3: AC - 0.25A@120 VAC    HV - 010A@347 VAC SMR6: AC - 050A@120 VAC    HV - 020A@347 VAC

#### Warranty

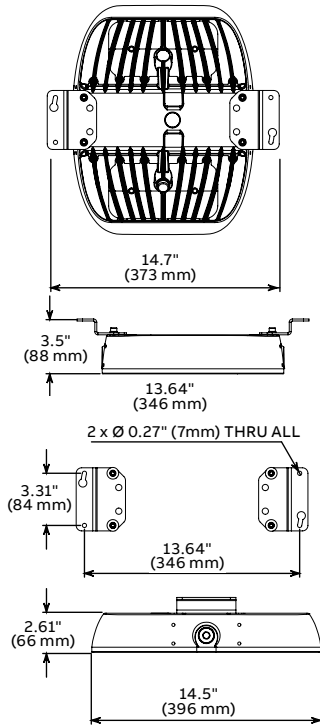
5 years

# SMR LED

## Mounting options

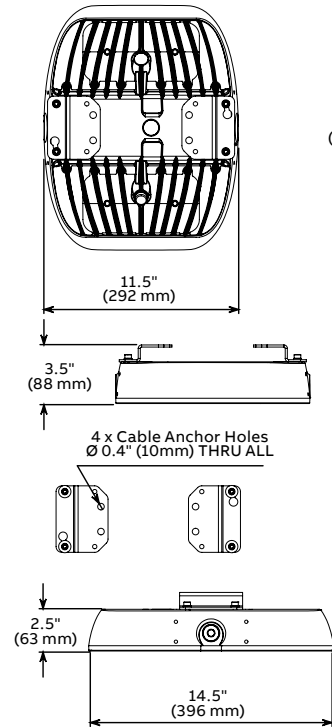
### Surface mount (included standard)

5.3 kg | 11.7 lbs



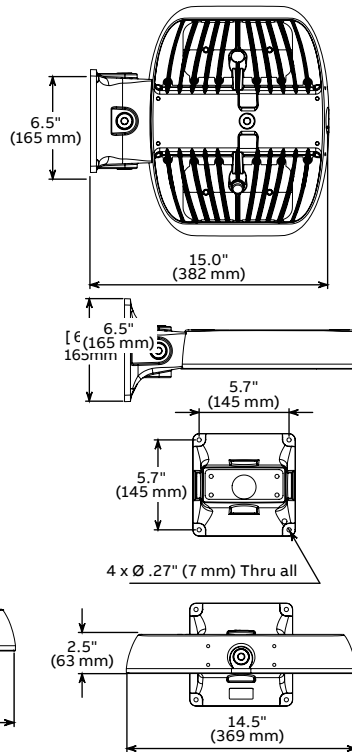
### Suspended mount (included standard)

5.3 kg | 11.7 lbs



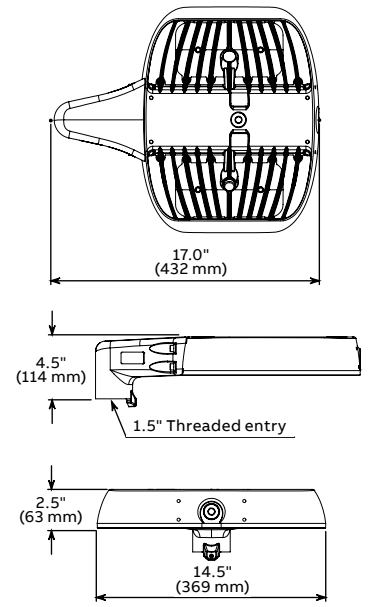
### Wall pack mount SMR-WM (optional accessory)

6.8 kg | 15 lbs



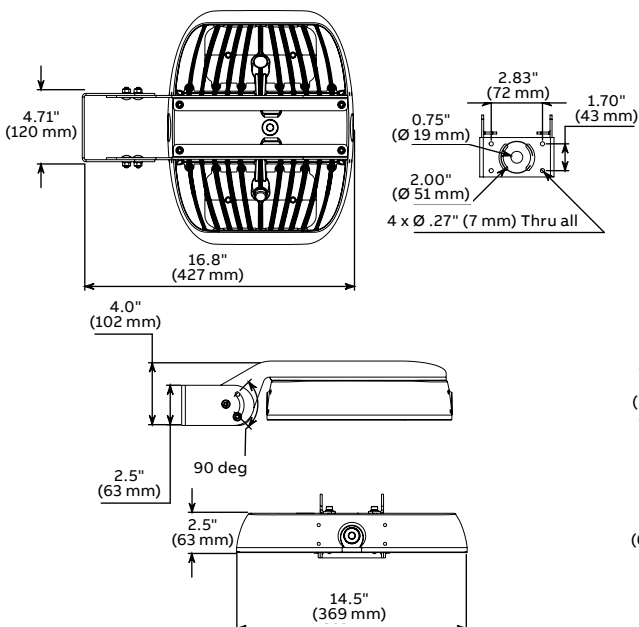
### Pole mount SMR-PM (optional accessory)

5.6 kg | 12.4 lbs



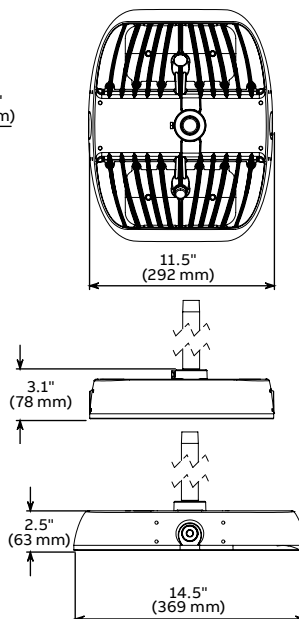
### Yoke mount SMR-YM (optional accessory)

6.3 kg | 13.9 lbs



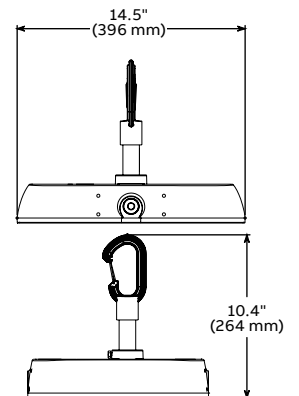
### Conduit connection SMR-CC (optional accessory)

5.3 kg | 11.7 lbs

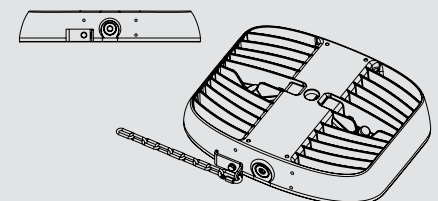


### Hook pendant mount SMR-HK (optional accessory)

4.9 kg | 10.8 lbs



### Secondary safety SMR-SS





## SMR LED

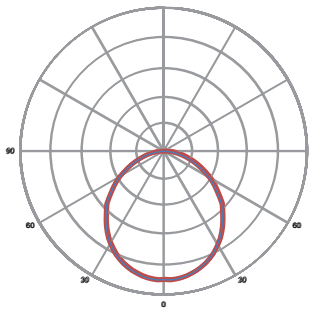
### Optic options

CUT – Wide beam (no optic)	
Model	Lumen output (CW)
SMR3	3050
SMR6	5650

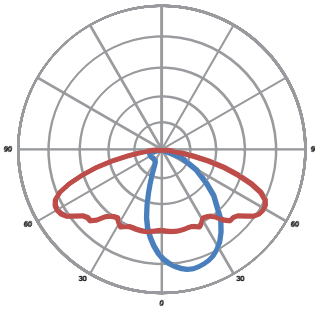
R2 – IESNA Type 2	
Model	Lumen output (CW)
SMR3	2980
SMR6	5520

OC – Oval 26° x 108°	
Model	Lumen output (CW)
SMR3	3290
SMR6	6090

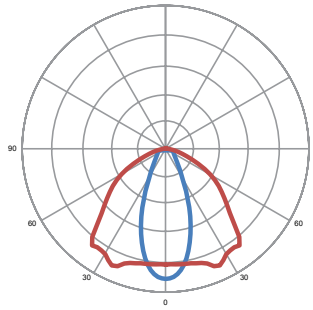
SF – Spot 18°	
Model	Lumen output (CW)
SMR3	3380
SMR6	6265



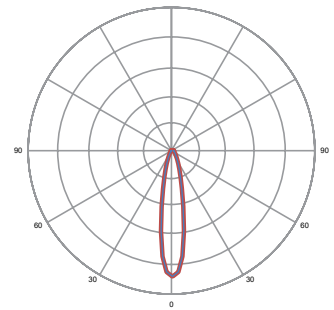
BUG rating : B2-U0-G1



BUG rating : B1-U0-G1



BUG rating : B3-U2-G1



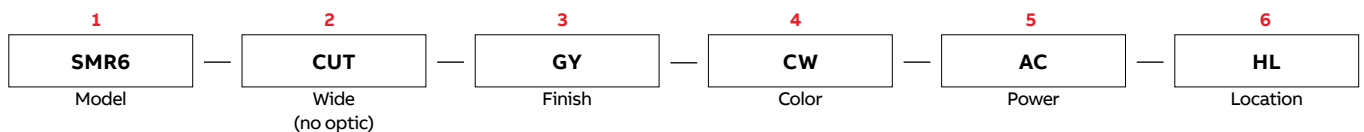
BUG rating : B4-U2-G1

Standard offering above, 13 alternate optical profiles available upon request.

Contact sales representative for further details. Minimum order quantities, additional costs and lead times may incur.

## Numbering system

### Lighting fixture



### Lighting fixture

Part	Part number	Description
1 Model	SMR3	2980 to 3380 Lumens
	SMR6	5520 to 6265 Lumens
2 Optic	R2 <sup>1</sup>	IESNA Type 2
	OC <sup>1</sup>	Oval 26° x 108°
	SF <sup>1</sup>	Spot 15°
	CUT	Wide (no optic)
3 Finish	GY	Gray
4 Color	CW	Cool white (5000 K)
5 Power	AC	120 to 277 V AC
	HV	347 V AC
6 Location	HL	Hazardous location
7 Market	U	U.S. market
	Blank	Canadian market

### Accessories (sold separately)

SMR-WM-GY	Wall pack mount
SMR-PM-GY	Pole mount
SMR-YM <sup>2</sup>	Yoke mount
SMR-CC-GY	Conduit connection
SMR-HK-GY	Hook pendant mount
SMR-SS	Secondary safety

<sup>1</sup>Option subject to extended lead time

<sup>2</sup>Only available in stainless steel

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HAZLUX® HAZARDOUS LOCATION LIGHTING

Hazlux® linear and flood lighting products are ideally suited for use in a broad range of industrial applications.



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# Table of contents

## Flood and linear lighting products

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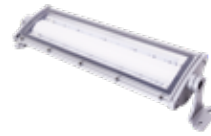
**Hazlux® 8 FDL**  
42



**Hazlux® 7 XFM LED**  
46



**Hazlux® 6 DFP LED**  
50



**WNL LED**  
54



**LGS LED**  
58

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# Hazlux® 8

## FDL

An energy-efficient, broad-beamed, high-intensity flood light designed to be used in hazardous, marine or low-bay outdoor conditions.

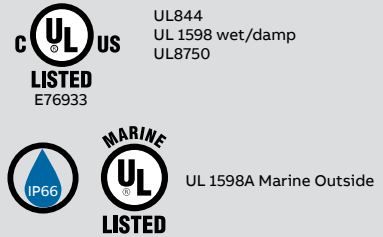


### CLASSIFICATION

CLASS I	
Division 2	Groups A, B, C, D
CLASS II	
Division 2	Groups F, G

Contact your ABB sales representative to verify classification

### CERTIFICATIONS AND RATINGS



### Applications

- Water waste and water treatment facilities
- Hazardous location
- Petrochemical
- Industrial

## Hazlux® 8 FDL

### Key features and benefits

#### Features

- Energy-efficient alternative to hazardous location metal halide and high pressure sodium
- Designed for outdoor, hazardous, marine, low-bay and flood applications
- Gray powder coat finish standard
- Multiple distribution patterns, type V
- Selection of frosted film, 16°, 70° or 120° lens
- CCT of 4000 K, 5000 K and 7000 K available
- Selection of mounting style
- Tamper-proof screws
- > 120,000 hours rated lifetime projection (L70)
- CRI (75)
- Operating temperature -31 to 122°F (-35 to 50°C)

#### Construction

- Cooper-free cast aluminum housing
- Captive stainless steel fasteners and insert
- 24 high-power LEDs

#### Electrical

- 50 W (6400 lumens), 80 W (9000 lumens), 105 W (11,000 lumens)
- 120–277 V
- 277–480 V (6400 lumens only)

#### Options

- Mounting: ceiling, pendant, yoke, wall, straight or angled stanchion
- Cord with blunt end
- Lens guard
- Black or white finish

#### Warranty

5 years

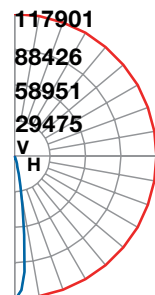
#### Thermal performance data

Model	Rated ambient temperature	Class I, Div 2 operating temperature code (320°F/160°C)	Class II, Div 2 operating temperature code (212°F/100°C)
FDL05	122°F/50°C	T3C	T5
FDL08	122°F/50°C	T3C	T5
FDL10	122°F/50°C	T3C	T5

#### Photometry

Reference data	
Catalog number	FDL10UNC1-N
Luminaire lumens	12,059
Input watt	106.6
NEMA type	2 H x 2 V
Maximum candela	117901
Maximum candela angle	0H 0V
Horizontal beam angle (50%)	15.3
Vertical beam angle (50%)	15.2
Horizontal field angle (10%)	28.6
Vertical field angle (10%)	28.3

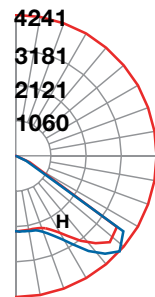
#### Axial candela display



BUG rating : B5-U0-G0

Reference data	
Catalog number	FDL10UNC1-W
Luminaire lumens	11,025
Input watt	107
NEMA type	6 H x 6 V
Maximum candela	4241
Maximum candela angle	0H -47.5V
Horizontal beam angle (50%)	87.3
Vertical beam angle (50%)	120.2
Horizontal field angle (10%)	106.4
Vertical field angle (10%)	129.6

#### Axial candela display

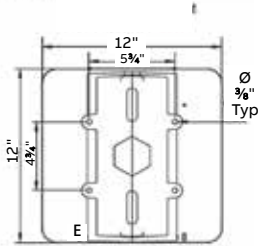


BUG rating : B3-U0-G0

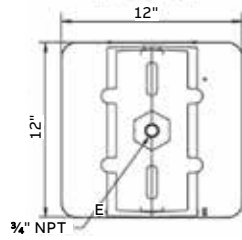
# Hazlux® 8 FDL

## Mounting options

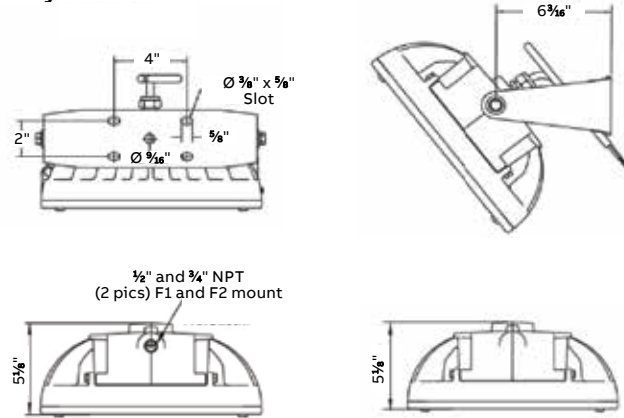
### C1 and C2 ceiling mount (ceiling spacers provided)



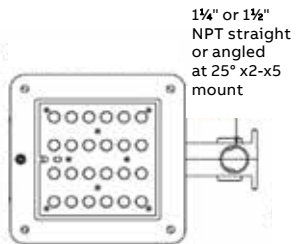
### P2 pendant mount



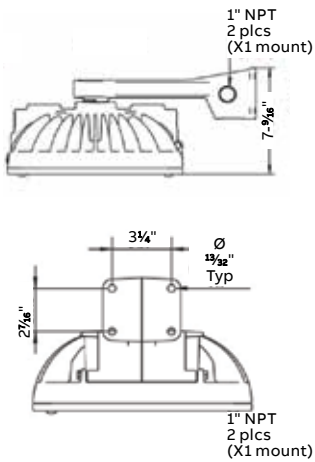
### Y1 yoke mount



### L4-S4 L5-S5 wall/stanchion mount



### B3 mount



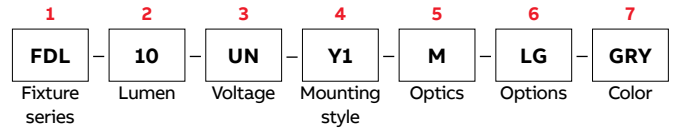
### Angled stanchion



**Hazlux® 8 FDL**  
Numbering system



**Lighting fixture**

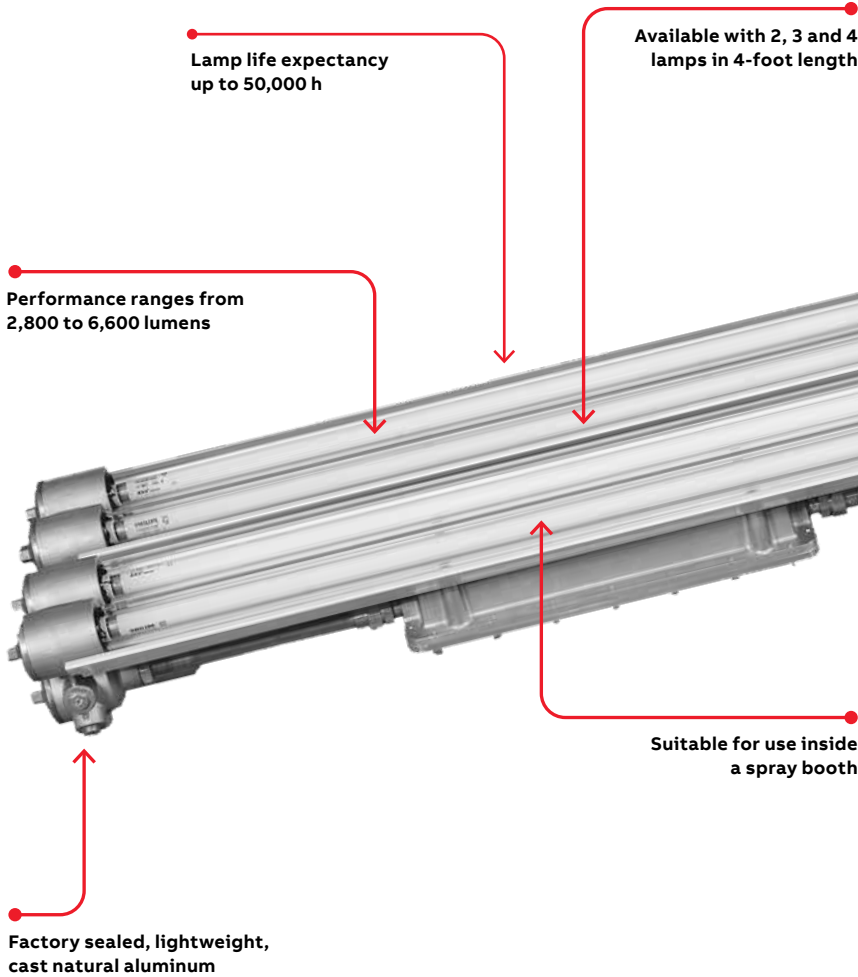


**01. Lighting fixture**

Part	Part number	Description
<b>1</b> Fixture series	<b>FDL</b>	Hazlux flood light LED Class I Div 2
<b>2</b> Lumen	<b>05</b>	6,400 Lumen (50 watts)
	<b>08</b>	9,000 Lumen (80 watts)
	<b>10</b>	11,000 Lumen (105 watts)
<b>3</b> Voltage	<b>UN</b>	120–277 V
	<b>UN2</b>	277–480 V (on 05 model only)
<b>4</b> Mounting style	<b>C1</b>	Ceiling ½"
	<b>C2</b>	Ceiling ¾"
	<b>P2</b>	Pendant ¾"
	<b>Y1</b>	Yoke mount ½"
	<b>B3</b>	Wall mount 1"
	<b>L4</b>	Stanchion 1¼"
	<b>S4</b>	Angled stanchion 1¼"
	<b>L5</b>	Stanchion 1½"
<b>S5</b>	Angled stanchion 1½"	
<b>5</b> Optics	<b>F</b>	Frosted film
	<b>N</b>	Narrow 16° FWHM
	<b>W</b>	Wide 120° FWHM
<b>6</b> Options	<b>LG</b>	Lens guard
	<b>PW</b>	Pre-wired 3' cord with blunt end (Y1 mount only)
	<b>4K</b>	4000 K CCT
	<b>7K</b>	7000 K CCT
	<b>D</b>	0-10V dimming (not with cord option)
<b>7</b> Color	<b>GRY</b>	Gray powder-coat finish (standard)
	<b>BLK</b>	Black powder-coat finish
	<b>WHT</b>	White powder-coat finish

# Hazlux® 7 XFM LED

Versatile, lightweight, explosion-proof lighting that is built to last. Can be mounted on walls, ceilings or inside a spray booth.

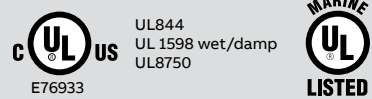


## CLASSIFICATION

<b>CLASS I</b>	
Division 1	Groups C, D
Division 2	Groups A, B, C, D
Zone 1	Groups IIB, IIA
<b>CLASS II</b>	
Division 1	Group E, F, G
Division 2	Group E, F, G
<b>CLASS III</b>	
CLASS I and II Simultaneous Presence	

Contact your ABB sales representative to verify classification

## CERTIFICATIONS AND RATINGS



## Applications

- Chemical plants
- Oil refineries
- Waste treatment facilities
- Automotive manufacturing plants
- Paint manufacturing facilities
- Paint spray locations
- Chemical & plastic mixing and storage areas
- Pipeline pumping stations
- Oil and gas terminals
- Defense and government facilities



# Hazlux® 7 XFM LED

## Key features and benefits

### Standard features

- Factory-sealed, lightweight cast natural aluminum
- 5 Different ½" NPT hubs entries at each end
- Center ballast placement for better balance and low profile
- Available with 2, 3 or 4 lamps in 4-foot length
- Operating temperature 0 to 104°F (-18 to 40°C)
- Lamp life expectancy: Up to 50,000 h
- One-piece painted aluminum reflector
- Suitable for use inside a spray booth

### Construction

- Cast natural aluminum
- 0.189" wall borosilicate glass tubes

### Electrical

- Available with standard or high ballast factor
- Wattage ranging from 29 W in the 2-lamp standard configuration, to 58 W in the 4-lamp configuration (see wattage table below)
- Voltage of 120 to 277 (50/60Hz) and 347 available
- Superior CRI (80+)
- Frequency: 120-277VAC, 50/60Hz, 347VAC, 60Hz

### Color temperature

Available 4000 K and 5000 K

### Options

- Wall and ceiling mount kit (4 lamps)
- Wire guard
- Polycarbonate shield
- 93% reflective premium specular reflector insert

### Accessories

- Wall, ceiling and drop mount kit

### Warranty

5 years

### Performance

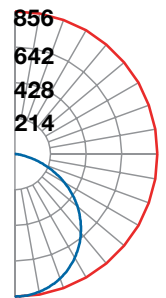
Lamp qty.	Source	Voltage (VAC) 50/60Hz	Input current (A)	Wattage (W)	Lumen output <sup>1</sup> (Lm)	
					4 000K CCT	5 000K CCT
2 Lamp	S - Standard	120/277	.29 - .13	35	3820	
	H - High output		.41 - .18	49	4940	
3 Lamp	S - Standard	120/277	.45 - .19	53	5600	
4 Lamp	S - Standard	120/277	.58 - .26	70	7640	
	H - High output		.82 - .36	98	9880	

<sup>1</sup>Nominal values

### Photometry ceiling mount

Reference data	
Catalog number	<b>XFMLEDS5K24UN</b>
Luminaire lumens	3,024 Lumens (2 lamps)
Luminaire efficacy rating (LER)	105
Input watt	28.68
Spacing criterion (0-180)	1.26
Spacing criterion (90-270)	1.40
Spacing criterion (diagonal)	1.48

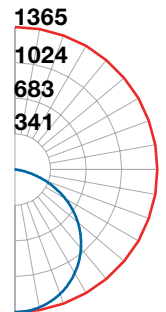
### Candlepower curve



BUG rating : B2-U2-G2

Reference data	
Catalog number	<b>XFMLEDS5K34UN</b>
Luminaire lumens	4,803 Lumens (3 lamps)
Luminaire efficacy rating (LER)	110
Input watt	43.72
Spacing criterion (0-180)	1.26
Spacing criterion (90-270)	1.40
Spacing criterion (diagonal)	1.48

### Candlepower curve



BUG rating : B2-U2-G2

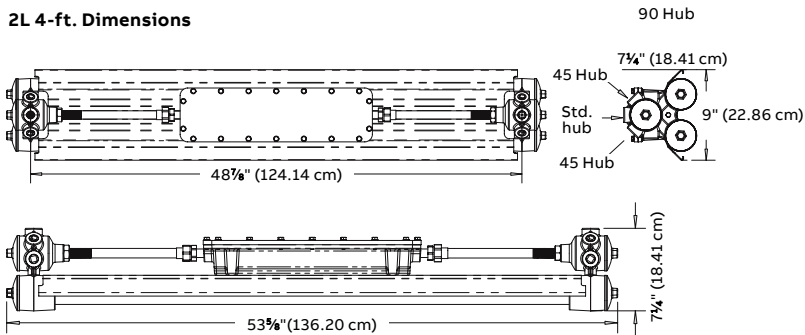
### T-Ratings

Model	Rated ambient	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 E, F, G	Class I and II simultaneous presence
XFMLED	104°F/40°C	T6 (185°F/85°C)	T6 (185°F/85°C)	T4 (275°F/135°C)	T4 (275°F/135°C)	T4 (275°F/135°C)

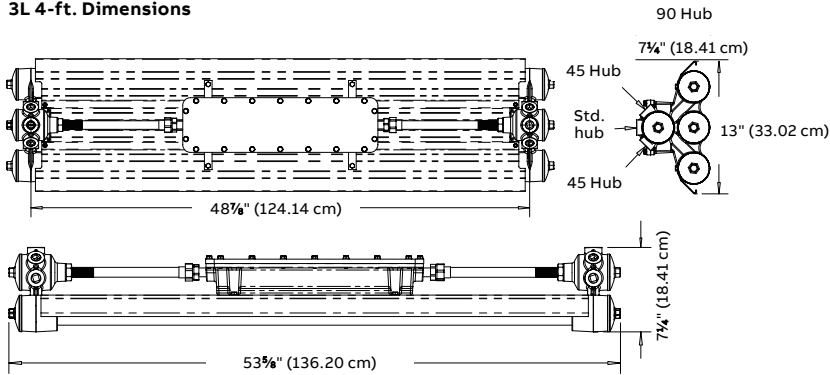
# Hazlux® 7 XFM LED

## Dimensions

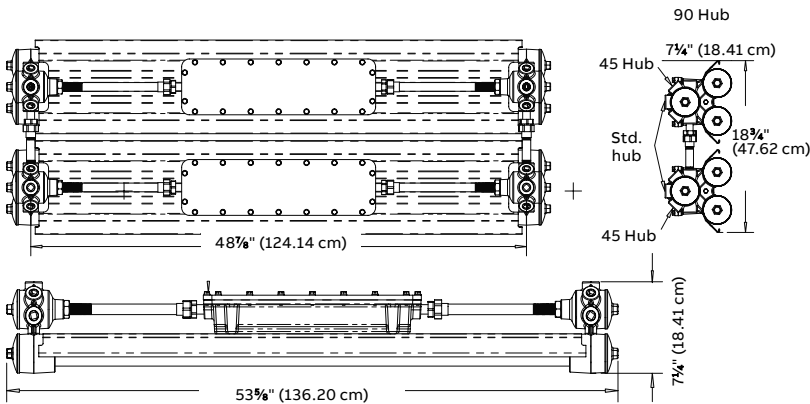
### 2L 4-ft. Dimensions



### 3L 4-ft. Dimensions

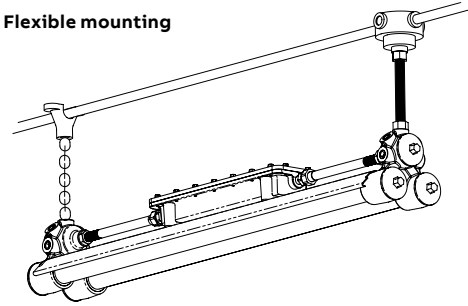


### 4L 4-ft. Dimensions

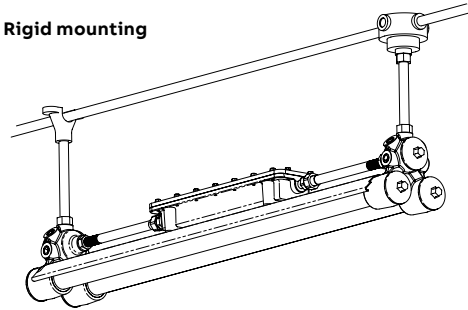


## Mounting

### Flexible mounting

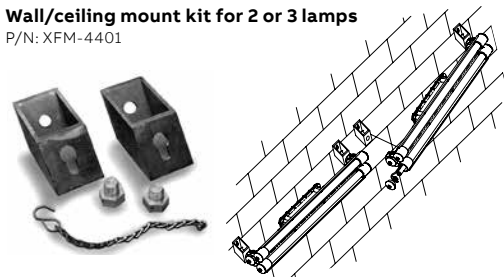


### Rigid mounting



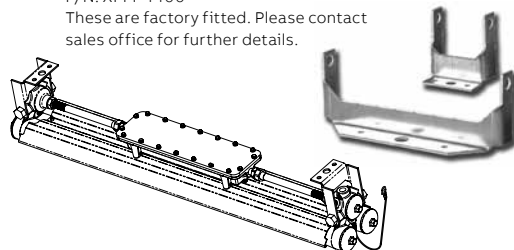
## SPECIFY WHEN ORDERING

**Wall/ceiling mount kit for 2 or 3 lamps**  
 P/N: XFM-4401



**Wall/ceiling mount kit for 4 lamps**

P/N: XFM-4400  
 These are factory fitted. Please contact sales office for further details.

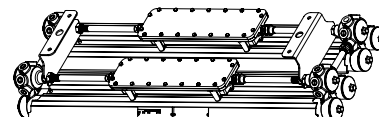


**Drop-mount kit for 2 or 3 lamps**

P/N: XFM-4405

**For 4 lamps**

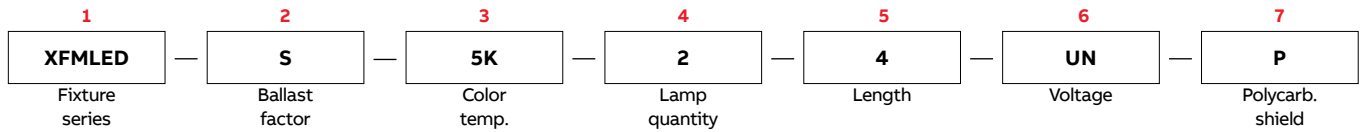
P/N: XFM-4403



# Hazlux® 7 XFM LED

## Numbering system

### Lighting fixture



### Lighting fixture

Part	Part number	Description
1 Fixture series	<b>XFMLED</b>	Hazlux vapor / dust proof lighting
2 Ballast factor	<b>S</b>	Standard ballast factor
	<b>H</b>	High output (2 lamp or 4 lamp fixtures only)
3 Color temperature	<b>4K</b>	4000K
	<b>5K</b>	5000K
4 Lamp quantity	<b>2</b>	2 lamp configuration, 4' length
	<b>3</b>	3 lamp configuration, 4' length
	<b>4</b>	4 lamp configuration, 4' length
5 Length	<b>4</b>	4' length
6 Voltage	<b>UN</b>	Universal 120–277 Volt 50/60 Hz
	<b>34</b>	347 Volt 60 Hz

### Options

Part	Part number	Description
7 Options	<b>P</b>	Polycarbonate shield
	<b>WG</b>	Stainless steel guard (not for use in paint spray applications)
	<b>MK</b>	Wall/ceiling mount kit (4 lamps)

### Accessory list (order separately)

Part	Part number	Description
	<b>XFM-4401</b>	Wall/ceiling mounting kit for 2 or 3 lamps
	<b>XFM-4211</b>	Stainless steel guard 2 Lamps 4 Ft
	<b>XFM-4457</b>	Stainless steel guard 3 Lamps 4 Ft
	<b>(2) XFM-4221</b>	Stainless steel guard 4 Lamps 4 Ft
	<b>XFM-4405</b>	Drop mount kit for 2 or 3 lamps
	<b>XFM-4403</b>	Drop mount kit for 4 lamps
	<b>XFM-4209</b>	Polycarbonate shield 2 lamps 4 Ft
	<b>XFM-4497</b>	Polycarbonate shield 3 lamps 4 Ft
	<b>(2) XFM-4209</b>	Polycarbonate shield 4 lamps 4 Ft



# Hazlux® 6 DFP LED

An energy-efficient alternative when sturdy vapor and dust proof lighting is required. A wide range of lumen output makes this your go-to fixture for a variety of applications.



## CLASSIFICATION

CLASS I	
Division 2	Groups A, B, C, D
CLASS II	
Division 2	Groups F, G
CLASS III	

Contact your ABB sales representative to verify classification

## CERTIFICATIONS AND RATINGS



UL844  
UL 1598 wet/damp  
UL8750



## Applications

- Petrochemical
- Hazardous location
- Vapor/Dust proof
- Industrial

# Hazlux® 6 DFP LED

## Key features and benefits

### Standard Features

- Front access fixture for hazardous locations
- Hinged front door frame with hinged ballast tray
- Spring-loaded lamp holders – standard
- Available in 2, 3, 4, 5 and 6 lamp configurations
- Operating temperature 0 to 104°F (-18 to 40°C)
- Lamp life expectancy: Up to 50,000 h
- Multiple hub locations can meet most wiring needs

### Construction

- Sturdy 18 gauge steel white powder-coated housing
- 3/16" tempered glass lens
- Zinc latches

### Electrical

- Available with standard or high ballast factor
- Wattage ranging from 25 W in the 2-lamp low ballast factor, to 87 W in 6-lamp standard ballast factor configuration (see wattage table below)
- Through-feed wiring
- Voltage of 120 to 277 and 347 available
- Superior CRI (80+)
- Frequency: 120-277VAC, 50/60Hz, 347VAC, 60Hz

### Color temperature

Available 4000 K and 5000 K

### Options

- Adjustable surface-mount brackets
- Cable mount
- Wire guard
- Acrylic lens
- 3-wire whip

### Accessories

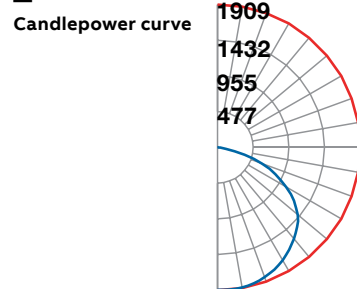
- Chain or cable mount kit
- Adjustable surface or vertical mounting bracket

### Warranty

5 years

### Photometry ceiling mount

Reference data	
<b>Catalog number</b>	<b>DFPLEDS4K434PFT</b>
Luminaire lumens	5,737 Lumens (4 Lamps)
Luminaire efficacy rating (LER)	97
Input watt	59.03
Spacing criterion (0-180)	1.26
Spacing criterion (90-270)	1.36
Spacing criterion (diagonal)	1.44



BUG rating : B2-U0-G1

### T-Ratings

Model	Rated ambient	Class I	Class II	Class III
		Division 2 Groups A, B, C, D	Division 2 Groups F, G	
		T5	T4A	T4A
DFPLED	104°F/40°C	(212°F/100°C)	(248°F/120°C)	(248°F/120°C)

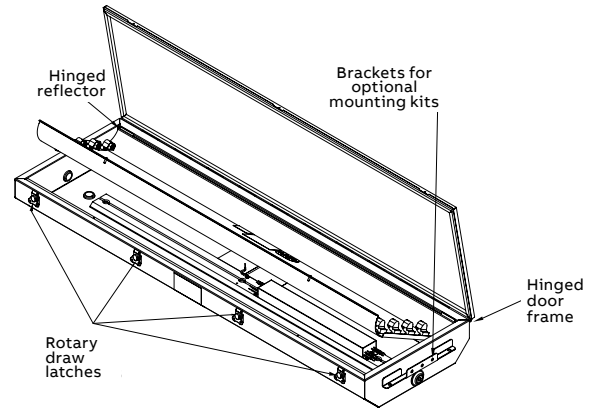
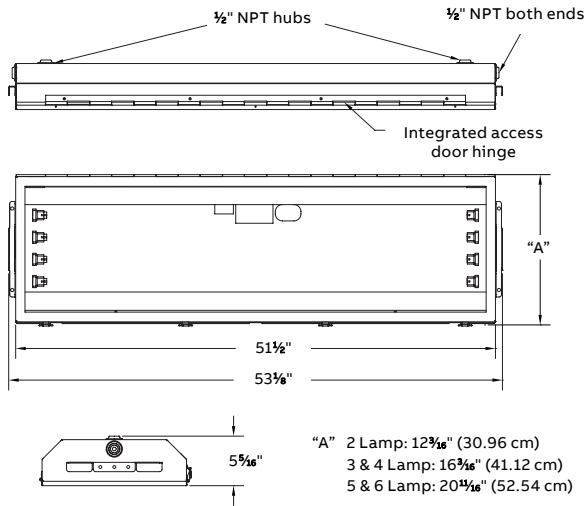
### Performance

Tube lamp qty.	Source (Output)	Voltage (VAC) 50/60Hz	Input current (A)	Wattage (W)	Lumen output <sup>1</sup> (Lm)	
					4 000K CCT	5 000K CCT
2 Lamp			.29 - .13	35	3560	
3 Lamp			.45 - .19	53	5340	
4 Lamp	S - Standard	120-277	.59 - .26	70	6810	
5 Lamp			.74 - .32	88	8550	
6 Lamp			.88 - .38	105	10260	
2 Lamp			.41 - .18	49	4630	
4 Lamp	H - High	120-277	.82 - .35	97	9460	
6 Lamp			1.22 - .53	145	14250	

<sup>1</sup>Nominal values

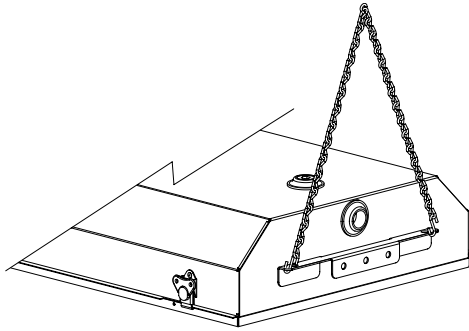
## Hazlux® 6 DFP LED

### Dimensions



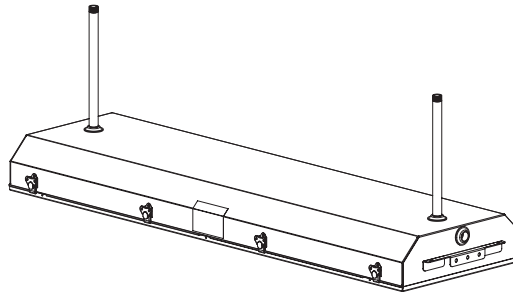
### Mounting options

#### Chain kit



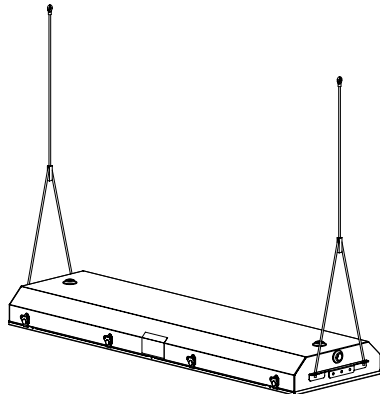
#### Pendant-style mounting (standard)

Note: Conduit supply by others  
45" between conduit



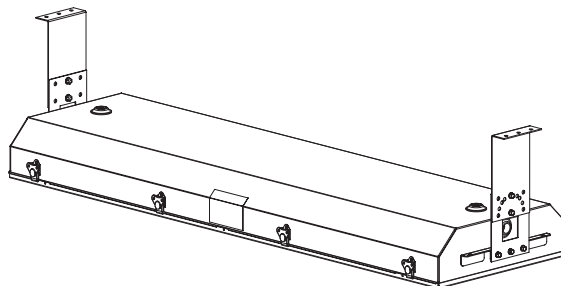
#### Cable hang kit (Zinc coated)

Qty 2 cables with toggle ends and qty 2 self-locking gripples



#### Adjustable surface-mounting bracket kit (Galvanized)

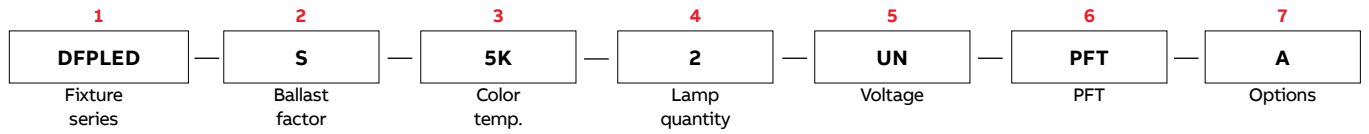
Toggle ends and qty 2 self-locking gripples



# Hazlux® 6 DFP LED

## Numbering system

### Lighting fixture



### Lighting fixture

Part	Part number	Description
1 Fixture series	DFPLED	Hazlux vapor / dust proof lighting
2 Ballast factor	S	Standard ballast factor
	H	High ballast factor
3 Color temperature	4K	4000K
	5K	5000K
4 Lamp quantity	2	2 lamp configuration, 4' length
	3	3 lamp configuration, 4' length
	4	4 lamp configuration, 4' length
	5	5 lamp configuration, 4' length
	6	6 lamp configuration, 4' length
5 Voltage	UN	Universal 120–277 volt 50/60 Hz
	34	347 Volt

### Options

Part	Part number	Description
7 Options	KH	Adjustable mounting brackets for surface mount
	CX	Cable mount (with 5' cable)
	PW	3-Wire whip
	WG	Wire guard
	F	Fusing
	A	Acrylic lens
	P	Polycarbonate lens

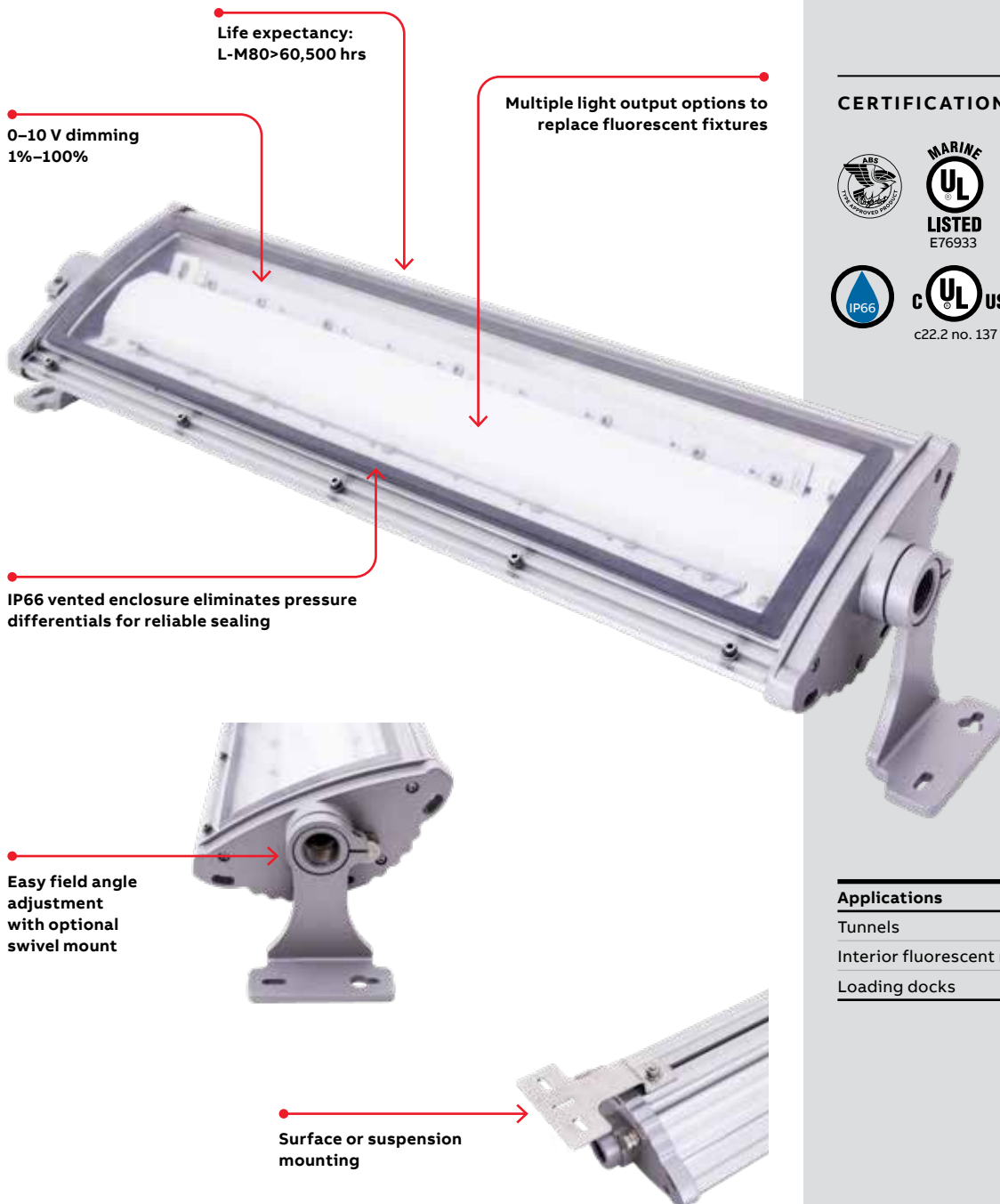
### Mounting accessories (order separately)

Part	Part number	Description
Chain hang kits & brackets	DFP-CHAIN	Chain hang kit
	DFP-Cable	Cable hang kit
	DFP-Surface	Adjustable surface mounting bracket



# WNL LED

A durable and robust linear luminaire designed to replace conventional fluorescent fixtures in industrial, commercial and tunnel applications.

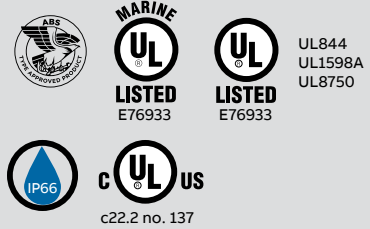


## CLASSIFICATION

CLASS I	
Division 2	Groups A, B, C, D
Zone 2	Group IIC
CLASS II	
Division 2	Groups F, G
Zone 22	Group IIB
CLASS III	

Contact your ABB sales representative to verify classification

## CERTIFICATIONS AND RATINGS



## Applications

- Tunnels
- Interior fluorescent replacement
- Loading docks



## WNL LED

### Key features and benefits

#### Features

- 100% field serviceable
- Minimum CRI of 70
- Up to 115 lumen/watt delivered
- Operating temperature: -40 to 114°F (-40 to 46°C)
- IP66 vented enclosure

#### Finish

- Powder-coated end caps
- Polycarbonate lens resistant to impact with an integral hinge part of the fixture
- Ideal for dirty, wet and corrosive environments

#### Housing

- Copper-free high-pressure die-cast aluminum end caps and extruded aluminum body
- Suitable for wet locations (IP66)
- Lens and case are designed to withstand severe impact and vibration
- Vented enclosure eliminates pressure differentials and ensures reliable sealing

#### Output

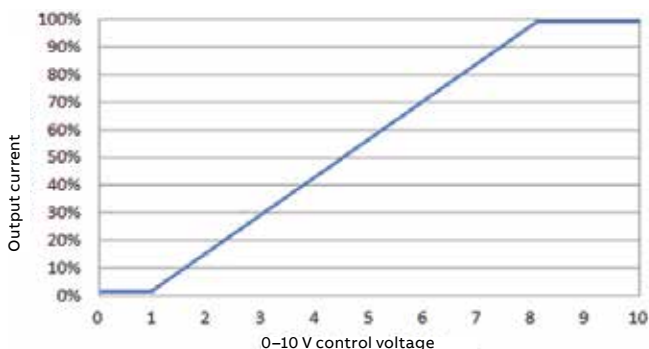
- 3,970 up to 10,000 lumens
- 0–10 V dimmable

#### Mounting

- Versatile brackets allow for several mounting styles:
  - Surface mount
  - Suspended mount
  - Angle adjustable mount

#### Dimming

Driver will source a maximum of 200  $\mu$ A for control needs. A controller must sink current from 0–10 V control leads.



#### Color temperature

Available standard in 3500 K and 5000 K color temperatures, with additional color temperatures available from 2700 to 6500 K.

#### Light engine

- Metal core PCB
- Fault tolerant and fail-over design ensures reliability and resilience to damage

#### Nichia LEDs

- Proven reliability
- High efficiency
- High CRI (70+)

#### Power supplies

- Two input power ranges for flexibility
- Over-voltage, over-temperature and short circuit protection
- Built-in junction box with  $\frac{3}{4}$ " NPT entry for electrical termination within sealed cavity
- Transient/surge protection: IEEE C62.41 4 kV/4 kV
- Frequency: 120-277VAC, 50/60Hz, 347-480VAC, 60Hz

#### Warranty

5 years

## WNL LED

### Mounting options

Surface mount (standard)



Suspended mount (standard)



Two 6.5 mm x 10 mm slots on each end for suspension hardware (not provided).

Angle adjustable mount (order separately)

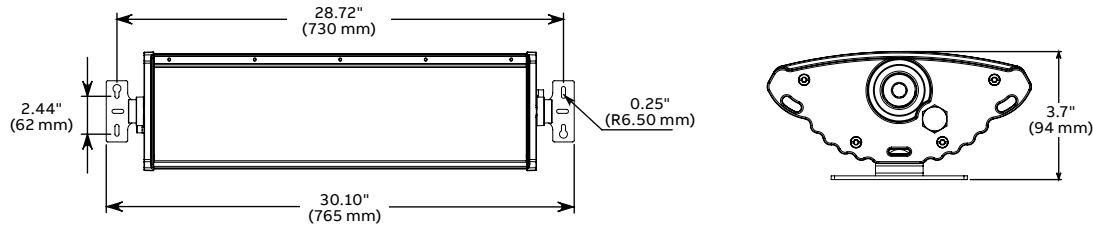


Easy field 360° angle adjustment with 3 mm hex key.

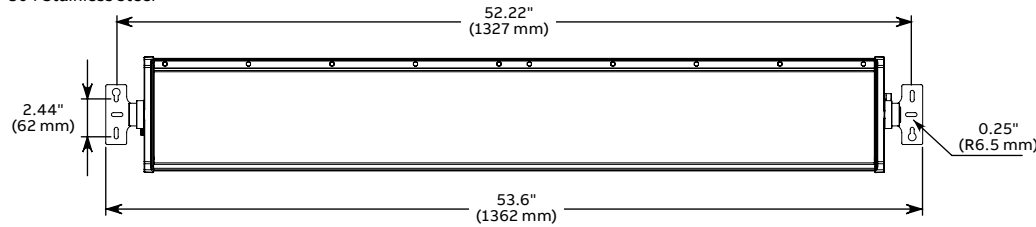
Surface/suspended mount (standard)

NL2 : 5.1 kg | 11.3 lbs    NL4 : 10 kg | 22 lbs

**WNL2 – Surface mount** 5.3 kg | 12 lbs (included standard)  
304 Stainless steel



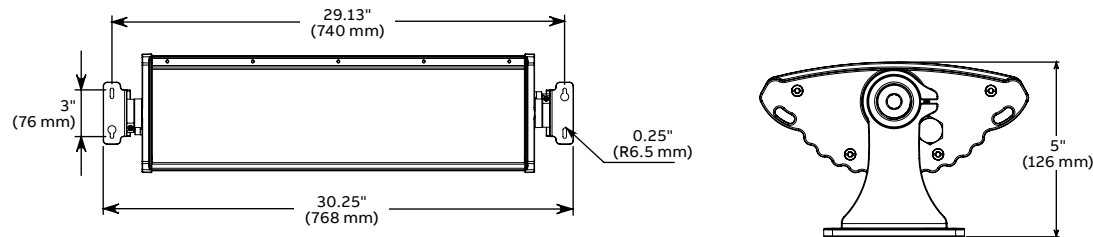
**WNL4 – Surface mount** 8.6 kg | 19 lbs (included standard)  
304 Stainless steel



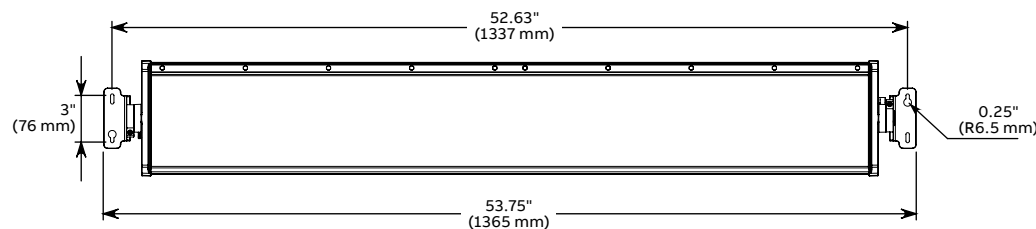
Adjustable mount (WNL-AM - optional)

NL2 : 5.1 kg | 11.3 lbs    NL4 : 10 kg | 22 lbs

**WNL2 – Angle adjustable mount (WNL-AM)** 5.3 kg | 12 lbs (optional accessory)



**WNL4 – Angle adjustable mount (WNL-AM)** 8.6 kg | 19 lbs (optional accessory)



## WNL LED

### Fixture comparison

#### Electrical ratings

Model	Input voltage	Rated wattage (Watts)	Rated voltage (Volts)	Frequency (Hz)	Ambient temp.	Total lumens (Class I Division 2)	T-codes (Class II Division 2)	T-codes (Class II Division 2)
WNL2S	AC	36	120-277	50/60	-40 to 131°F (-40 to 55°C)	3,970	T4A	T4
	HV	36	347-480	50/60	-40 to 129°F (-40 to 54°C)	3,970	T4A	T4
WNL2H	AC	52	120-277	50/60	-40 to 131°F (-40 to 55°C)	5,143	T4A	T4
	HV	52	347-480	50/60	-40 to 129°F (-40 to 54°C)	5,143	T4A	T4
WNL2X	AC	70	120-277	50/60	-40 to 126°F (-40 to 52°C)	7,965	T5	T4
	HV	82	347-480	50/60	-40 to 115°F (-40 to 46°C)	7,965	T5	T4A
WNL4S	AC	85	120-277	50/60	-40 to 131°F (-40 to 55°C)	8,697	T4A	T4A
	HV	90	347-480	50/60	-40 to 129°F (-40 to 54°C)	8,967	T4A	T4A
WNL4H	AC	105	120-277	50/60	-40 to 129°F (-40 to 54°C)	10,470	T4A	T4A
	HV	109	347-480	50/60	-40 to 126°F (-40 to 52°C)	10,470	T4A	T4A

### Numbering system

#### Lighting fixture



#### Mounting accessory

Part number	Description
WNL-AM-GY	Adjustable mount (order separately)

#### Lighting fixture

Part	Part number	Description
1 Model	WNL2	2 foot
	WNL4	4 foot
2 Output	S	Standard
	H	High output
	X	Extra high output (not available with WNL4)
3 Optic	WC	Wide (no optics)
4 Finish	GY	Gray
	50	Cool white
5 Color	35 <sup>1</sup>	Warm white
	AC	120 to 277 V AC
6 Power	HV	347 to 480 V AC
	HL	Hazardous location
7 Location	BLANK	Canadian market
8 Market	U	US market

<sup>1</sup>Option subject to extended lead time

# LGS LED

Lightweight, extremely durable and water-tight linear strip fixtures to withstand the most demanding hazardous location environments.



Available in 100° wide beam profile (AC and DC) and 30° wide beam profile (DC)

Lifespan up to 60,500 hours (AC) and 100,000 hours (DC)

Standard with 3ft. whip

Easy field angle adjustment

Compatible with most ELV dimmers (AC)

IP66 Gore® vented enclosure


Available in multiple lengths

## CLASSIFICATION


CLASS I	
Division 2	Groups A, B, C, D
Zone 2	Group IIC
CLASS II	
Division 2	Groups F, G
Zone 22	
CLASS III	

Contact your ABB sales representative to verify classification


## CERTIFICATIONS AND RATINGS




ida  
CLASS DIV APPROVED  
2017




ABE  
CLASS DIV APPROVED  
2017



IP  
IP66/67/68




MARINE  
UL  
LISTED  
E76933



UL  
LISTED  
E76933

UL844  
UL1598A  
UL8750



c22.2 no. 137  
c22.2 no. 250  
c22.2 no 250.13

## Applications

- Vehicle/equipment
- Enclosures
- Tunnel lighting

## LGS LED

### Key features and benefits

#### Mounting

- Fixture has two mount options:
  - End brackets that allow for easy field adjustable 360° rotation
  - Carriage bolts for mounting to surfaces

#### Housing

- Extruded aluminum and copper-free aluminum casting
- MIL-SPEC Hard anodizing (body) and super-durable powdercoat (end caps) suitable for rugged outdoor environments
- Custom brackets available upon request
- Polycarbonate lens designed to withstand severe impact

#### CREE LEDs

- Proven reliability
- High efficiency
- Superior CRI (80+)
- Available in standard 5000 K and 3500 K with custom color and dual color options available for special order

#### Power supplies

- Utilizes high performance LED drivers for better efficiency and up to 100,000 hours of maintenance-free operation
- 12 V or 24 V DC input options can run directly off of vehicle or facility low voltage DC
- High-efficiency internal reflector maximizes output
- Frequency 120 VAC, 50/60Hz

#### Thermal management

- Heat-sink designed for optimal heat dissipation

#### Color temperature

Available in 3500 K and 5000 K, with additional color temperatures available from 2700 to 6500 K.

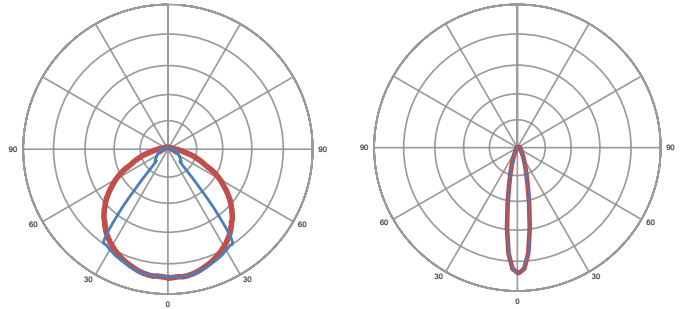
#### Temperature codes

<b>T5</b>	Class 1, Div 2, Groups A, B, C, D
<b>T4A</b>	Class II, Div. 2, Groups F, G

#### Operating temperature

- AC -40 to 149°F (-40 to 65°C)
- DC -40 to 140°F (-40 to 60°C)

#### Optic options



W – Wide 100°	
Model	Lumen output (CW)
LGS-1	586
<b>BUG rating : B1-U0-G0</b>	
LGS-2	1172
LGS-3	1758
LGS-4	2289
<b>BUG rating : B2-U0-G0</b>	

N – Narrow 30° (DC only)	
Model	Lumen output (CW)
LGS-1	559
<b>BUG rating : B2-U0-G0</b>	
LGS-2	1118
LGS-3	1677
LGS-4	2236
<b>BUG rating : B3-U0-G0</b>	

#### Reflector

- High efficiency internal reflector maximizes output

#### Electronics enclosure

- Direct transfer of heat from PCB to the casing to maximize lifetime and reliability
- Suitable for wet location
- Unique case design utilizes compression for sealing and eliminates fasteners on the front face

#### Warranty

5 years

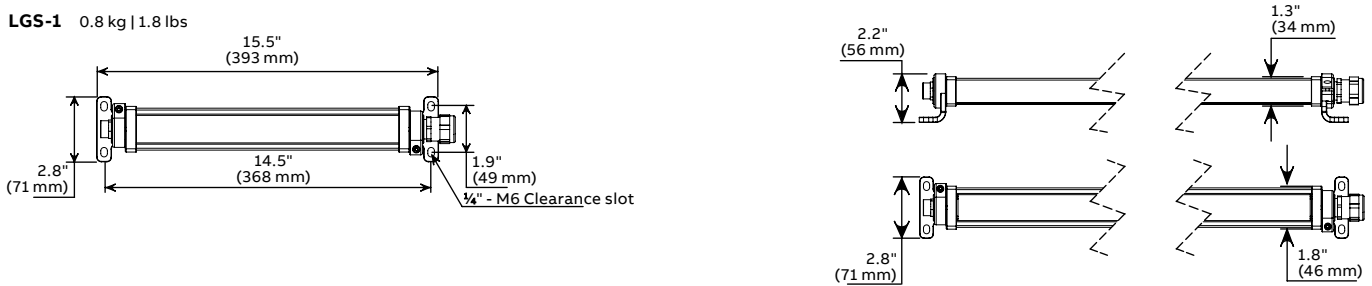
#### Power consumption

Model	LGS-1	LGS-2	LGS-3	LGS-4	
<b>Power</b>	12 VDC	12W	21W	36W	48W
	24 VDC	11W	21W	32W	42W
	120 VAC	10W	20W	31W	41W
<b>Current</b>	12 VDC	0.75A	1.5A	2.3A	3.0A
	24 VDC	0.40A	0.75A	1.1A	1.5A
	120 VAC	0.09A	0.17A	0.23A	0.34A

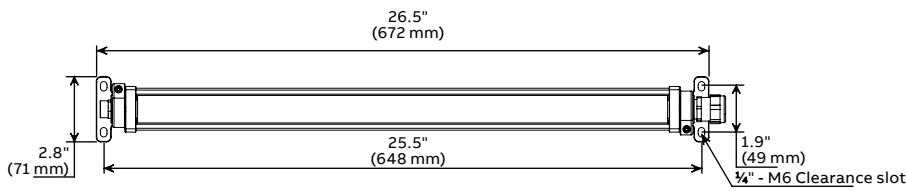
## LGS LED

### Dimensions

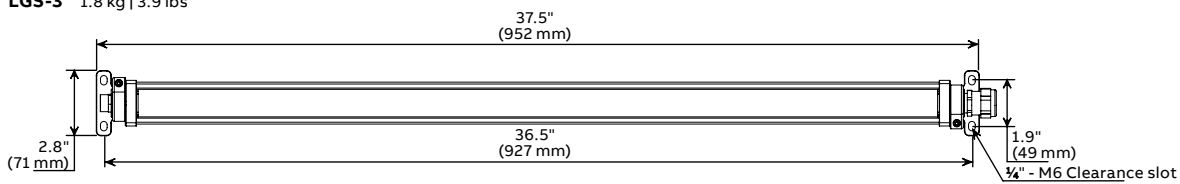
**LGS-1** 0.8 kg | 1.8 lbs



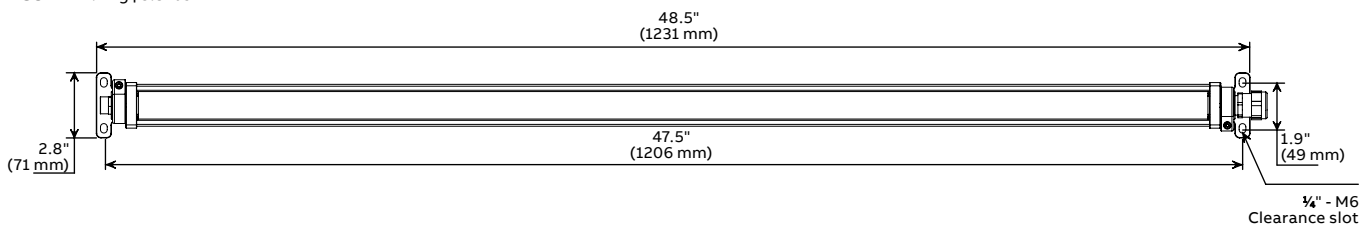
**LGS-2** 1.2 kg | 2.6 lbs



**LGS-3** 1.8 kg | 3.9 lbs



**LGS-4** 2.4 kg | 5.3 lbs

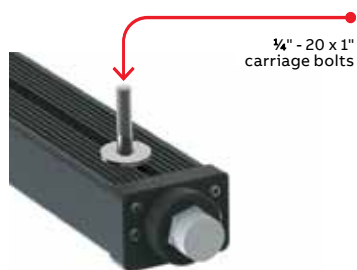


### Mounting options

**A - Adjustable mounting bracket (optional)**



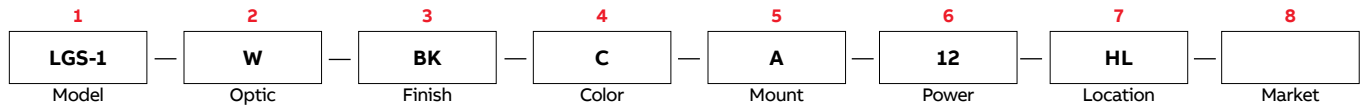
**B - Carriage bolt/surface mount (optional)**



# LGS LED

## Numbering system

### Lighting fixture



### Lighting fixture

Part	Part number	Description
1 Model	LGS-1	559 to 586 lumens
	LGS-2	1118 to 1172 lumens
	LGS-3	1677 to 1758 lumens
	LGS-4	2236 to 2289 lumens
2 Optic	W	Wide 100°
	N	Narrow 30° (DC version only)
3 Finish	BK	Black
4 Color	C	5000 K Cool white
	W <sup>1</sup>	3500 K Warm white
5 Mount	A	Adjustable
	B	Carriage bolt
6 Power	12	11–16 V DC
	24	21–28 V DC
	120	120 V AC, 50/60Hz
7 Location	HL	Hazardous location
8 Market	BLANK	Canadian market
	U	US market

<sup>1</sup>Option subject to extended lead time



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## Section B

### Emergency Lighting Products





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## Emergency lighting products

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**Hazardous location  
combo pictogram**  
69

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# VB LED

## Hazardous location battery unit



### Key features and benefits

#### Housing

- Class I Division 2, Groups A, B, C and D
- Vandal-resistant UV stabilized polycarbonate lamp cover
- Front and back plates are of a heavy duty aluminum
- Stainless steel tamper-proof screws

#### Mounting:

- Surface wall mount only
- Includes mounting lugs on each side of the housing
- Universal J-box mounting
- 1/2 inch entry on both sides and top of housing

#### Lamp type

- Choice of MR16 LED lamp wattages

#### Electronics

- Pulse plus charger
- Low voltage disconnect
- Automatic brownout protection
- Battery lock-out
- Fused output circuit
- Magnetic test switch
- Standard Advanced Diagnostics (non-audible)
- Optional Nexus® monitoring system
- 120/277 60Hz

#### Battery type

- 6 or 12V lead-calcium battery

#### Approvals

- CSA-US (to UL 924 standards)
- Evaluated to the UL 844 Standard for Class I Division 2, Groups A, B, C and D
- NEC, OSHA and NEMA compliant for above Classes and Groups
- Damp and wet location 10 to 40°C (50 to 104°F)

#### Warranty

- Unit has a five-year limited warranty

### CLASSIFICATION

CLASS I

Division 2

Groups A, B, C, D

Contact your ABB sales representative to verify classification

### CERTIFICATIONS



UL844  
UL924

US  
LR111065

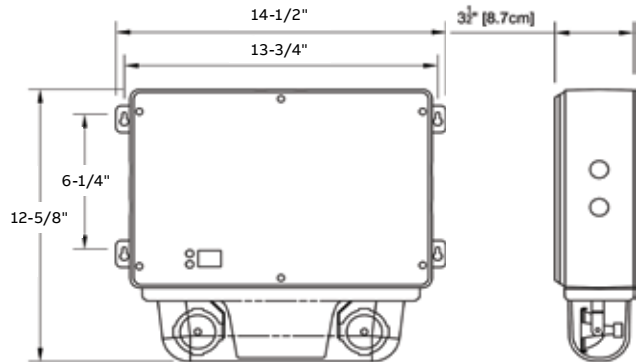


### FEATURES



nexus®

### Dimensions



### Lighting fixture

Part	Part number	Description
1 Series	<b>VB0618</b>	6V 18W lead-calcium
	<b>VB1236</b>	12V 36W lead-calcium
	<b>VB1260</b>	12V 60W lead-calcium
	<b>VB1272</b>	12V 72W lead-calcium
2 Lamps	<b>L1</b>	2 x MR16 LED 6V 4W
	<b>L2</b>	2 x MR16 LED 6V 5W
	<b>L7</b>	2 x MR16 LED 12V 4W
	<b>L9</b>	2 x MR16 LED 12V 5W
	<b>L10</b>	2 x MR16 LED 12V 6W
3 Voltage	<b>03</b>	120/277V 60 HZ
4 Color	<b>-G</b>	Gray housing
5 Charger type	<b>Blank</b>	Advanced Diagnostics non-audible
	<b>DA</b>	Advanced Diagnostics audible
	<b>NEX</b>	Nexus® wired
	<b>NEXRF</b>	Nexus® wireless
6 Options	<b>Blank</b>	No option
	<b>-T3</b>	Time delay 15 minutes

# VC LED

## Hazardous location combination unit



### CLASSIFICATION

CLASS I

Division 2

Groups A, B, C, D

Contact your ABB sales representative to verify classification

### CERTIFICATIONS



### FEATURES



nexus<sup>®</sup>

## Key features and benefits

### Construction

- Fully gasketed housing frame
- Faceplate: heavy-duty, vandal-resistant polycarbonate
- Backplate: heavy-duty aluminum
- Vandal-resistant UV stabilized polycarbonate lamp cover
- Stainless steel tamper-proof screws
- 6 inch EXIT lettering legend, available in red or green
- Field-selectable chevrons

### Mounting

- Surface wall mount only
- Backplate features universal knockouts for a standard 4 inch junction box, and four mounting eyelets used in wall mount applications
- 1/2 inch conduit entry on top and sides.

### Lamp type

- Choice of MR16 LED lamp wattages

### Battery type

- VC Model, nickel-cadmium battery, 6V-20W total battery capacity
- VC12N Model, nickel-cadmium battery, 12V-24W total battery capacity

### Electronics

- Magnetic test switch
- Standard Advanced Diagnostics (non-audible)
- Optional Nexus<sup>®</sup> monitoring system
- 120/277 60Hz

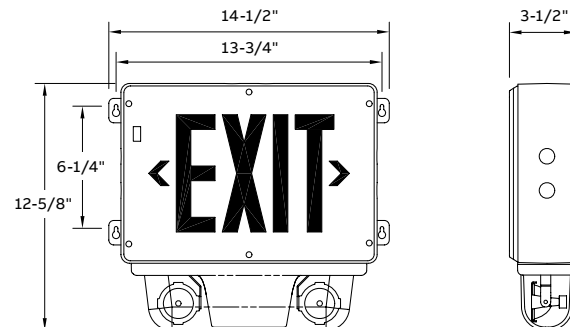
### Approvals

- CSA-US (to UL 924 standards)
- Evaluated to the UL 844 Standard for Class I Division 2, Groups A, B, C and D
- NEC, OSHA and NEMA compliant for above Classes and Groups
- Damp and wet location 10 to 40°C (50 to 104°F)
- Temperature code T4A (Max. temperature 120°C/ 248°F)
- Meets NFPA101 (Life Safety Code), NFPA 70-NEC and OSHA illumination standards

### Warranty

- Five-year limited warranty

### Dimensions



### Lighting fixture

Part	Part number	Description
1 Series/capacity	VC	6V-20W, NICD
	V12N	12V-24W, NICD
2 Lamp/wattage	L1	2 x MR16 LED 6V 4W
	L2	2 x MR16 LED 6V 5W
	L7	2 x MR16 LED 12V 4W
	L9	2 x MR16 LED 12V 5W
	L10	2 x MR16 LED 12V 6W
3 Voltage	03	120/277V 60 HZ
4 Housing/face color	GG	Gray/gray
5 Legend color	R	Red legend
	G	Green legend
6 Diagnostics	Blank	Advanced Diagnostics non-audible
	DA	Advanced Diagnostics audible
	NEX	Nexus <sup>®</sup> wired
	NEXRF	Nexus <sup>®</sup> wireless

# VE LED

## Hazardous location exit sign



### Key features and benefits

#### Construction

- Fully gasketed housing frame
- Faceplate: heavy-duty, vandal-resistant polycarbonate
- Backplate: heavy-duty aluminum
- Stainless steel tamper-proof screws
- 6 inch EXIT lettering legend, available in red or green
- Field-selectable chevrons

#### Mounting

- Surface mount
- Junction box included for wall, end or ceiling mount applications
- 1/2 inch conduit knock-out entry on top and sides.

#### Electronics

- Magnetic test switch
- Standard Advanced Diagnostics (non-audible)
- Optional Nexus® monitoring system
- 120/277 60Hz

#### Approvals

- CSA-US (To UL 924 standards)
- Evaluated to the UL 844 Standard for Class I Division 2, Groups A, B, and D
- NEC, OSHA and NEMA compliant for above Classes and Groups
- Damp and wet location 10 to 40°C (50 to 104°F)
- Meets NFPA101 (Life Safety Code), NFPA 70-NEC and OSHA illumination standards

#### Warranty

- Five-year limited warranty

### CLASSIFICATION

CLASS I

Division 2

Groups A, B, C, D

Contact your ABB sales representative to verify classification

### CERTIFICATIONS

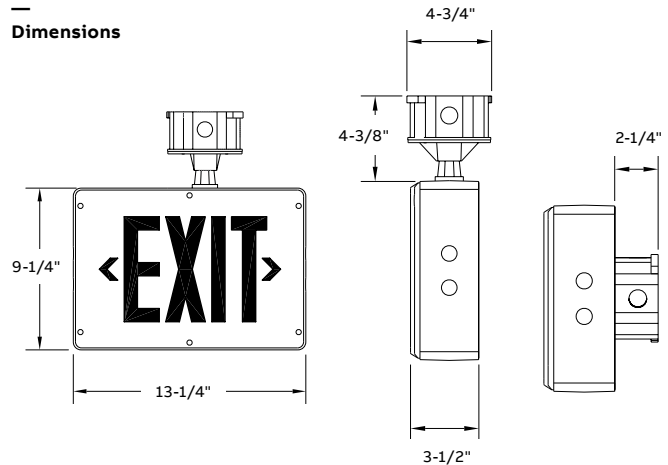


### FEATURES



nexus®

### Dimensions



### Lighting fixture

Part	Part number	Description
1 Series	VE	AC/DC (50° to 104°F Amb)
	VEN	Self-powered (NiCad) (50° to 104°F)
2 Face(s)	1	Single (ceiling/wall mount)
	2	Double (ceiling mount only)
3 Voltage	03	120/277V 60 Hz
4 Color of body/face	GA	Gray <sup>1</sup>
5 Legend	R	Red
	G	Green
6 Diagnostic	Blank	Advanced Diagnostics (non-audible)
	NEX	Nexus® wired
	NEXRF	Nexus® wireless
7 Options	CW	Cold weather (-4° to 104°F Amb) <sup>2</sup>

<sup>1</sup>Other colors available

<sup>2</sup>Available with VEN only

# VR LED

## Hazardous location remote fixture



### CLASSIFICATION

CLASS I

Division 2

Groups A, B, C, D

Contact your ABB sales representative to verify classification

### CERTIFICATIONS



UL844  
UL924

US  
LR111065



## Key features and benefits

### Description

- Available with single or double lamp heads
- Die-cast aluminum back plate with gasket
- Vandal-resistant UV stabilized polycarbonate lamp cover
- Comes standard with tamper-proof screws and bit
- Universal J-box mounting
- Extreme operational temperature range: 10 to 40°C (50 to 104°F)

### Mounting

- Surface mount
- Conduit entry 1/2" NPT

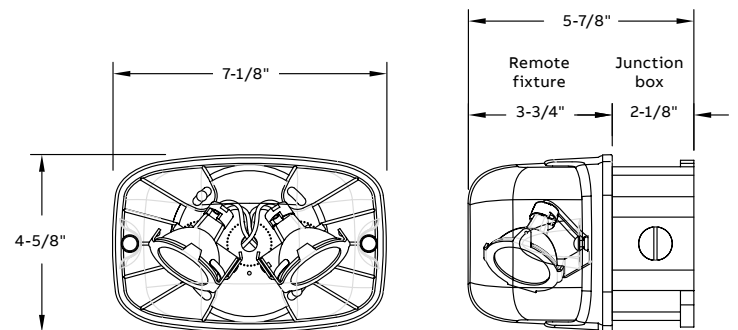
### Approval

- CSA-US (to UL 924 standards)
- Evaluated to the UL 844 Standard for Class I Division 2, Groups A, B, C and D

### Warranty

- Five-year limited warranty

### Dimensions



### Lighting fixture

Part	Part number	Description
1 Series	VR	Single C1D2
	VRD	Double C1D2
2 Lamp type/wattage	L1	6V 4W, MR16 LED
	L2	6V 5W, MR16 LED
	L7	12V 4W, MR16 LED
	L9	12V 5W, MR16 LED
	L10	12V 6W, MR16 LED
	L13	24V 4W, MR16 LED
3 Color	L26	120V 4W, MR16 LED cw wires
	-G	Gray

## Hazardous location battery unit



### Key features and benefits

- Includes the addition of Class II Div 1&2 Groups E, F and G as well as Class III ratings
- Certified Class I Zone 2, Groups IIA, IIB and IIC
- Certified Class I Division 2, Groups A, B, C and D as per CSA C22.2 No.137-M1981
- Certified temperature codes for several types of emergency lamps
- Suited for areas with the risk of flammable gases, vapors or liquids that can create an explosive atmosphere
- Heavy-duty 1/8" thick aluminum back plate with keyholes for secure wall-mount installation
- Two LED lamps, shielded by a cast aluminum housing and a polycarbonate cover
- 6W LED emergency lights provide 100 ft of egress illumination on a 6-foot wide path
- Sealed, maintenance-free, Lead-Calcium batteries with up to 150W emergency power
- Built-in microcontroller-based battery charger and auto-diagnostics circuitry
- 1/2" electrical conduit entry on both sides and at the top
- Auto-testing capabilities (specific load requirements)
- Meets or exceeds CSA C22.2 No.141-15

## Hazardous location remote fixture



### Key features and benefits

- Quality illumination requires fewer fixtures
- Certified Class I Zone 2, Groups IIA, IIB and IIC
- Certified Class I Division 2, Groups A, B, C and D as per CSA C22.2 No.137-M1981
- Temperature Codes: T4, T4A and T5 as per Canadian Electrical Code, Part I and CSA C22.2 No.137-M1981
- Extreme operational temperature range: -40°C (-40°F)
- Choice of single- or double-lamp models
- High-efficacy LED lamps of 4W, 5W and 6W
- Input voltage: 6V, 12V, 24V or 120V
- Fully gasketed die-cast aluminum back plate
- Clear polycarbonate cover, UV and impact resistant
- Easy installation on a 4-inch octagonal box (included)
- Comes standard with tamper-proof screws and bit
- Certified to CSA 22.2 No.141-15

### CLASSIFICATION

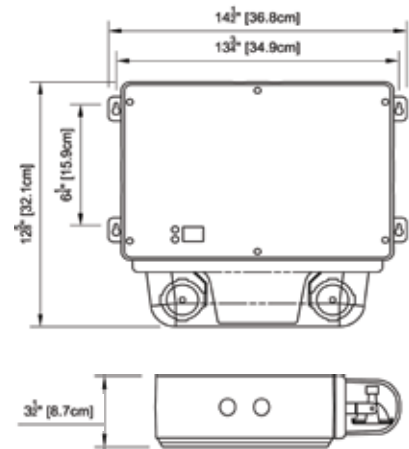
CLASS I	
Division 2	Groups A, B, C, D
CLASS II	
Division 1 & 2	Groups E, F, G
CLASS III	

Contact your ABB sales representative to verify classification

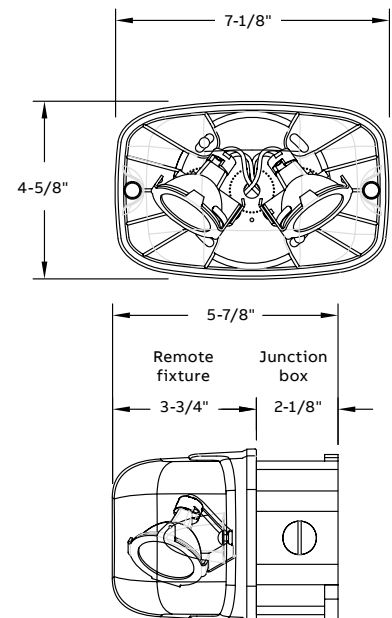
### CERTIFICATIONS



### Dimensions



### Dimensions



## Hazardous location pictogram sign



### Key features and benefits

- Compliant Class I Division 2, Groups A, B, C and D as per CSA C22 .2 No .137-M1981
- Includes the addition of Class II Div . 1&2 Groups E, F and G as well as Class III ratings
- Temperature Code T6 (maximum + 85°C (185°F)) as per Canadian Electrical Code, Part I and CSA C22 .2 No.137-M1981
- High-impact thermo-plastic frame with built-in gasket to secure against liquid leaks
- Sealed, heavy-duty, vandal-resistant polycarbonate face plate(s)
- Concealed pilot light and test switch with magnetic action
- Long-life white LED light source is warranted for 10 years
- Supplied standard with two pictogram films per face, for direction selection
- Universal AC input: two-wire 120 to 347VAC; standard DC input: two-wire 6 to 24VDC
- Energy efficient – consumes less than 2.5 Watts in AC or DC-remote mode
- Self-Powered models come standard with auto-test functions and deliver two hours of back-up legend illumination
- Suitable for cold-weather: -40°C (-40°F) for AC/DC and -20°C (-4°F) for Self-Powered models (option: -CW)
- Meets or exceeds CSA 22 .2 No . 141-15

## Hazardous location combo pictogram



### Key features and benefits

- Certified Class I Division 2, Groups A, B, C and D as per CSA C22 .2 No .137-M1981
- Includes the addition of Class II Div 1&2 Groups E, F and G as well as Class III ratings
- Certified temperature Codes for several types of emergency lamps
- Polyvinyl chloride frame, with built-in gasket to prevent water infiltration
- Heavy-duty 1/8-inch thick aluminum back plate with key-holes for wall-mount installation
- Sealed, polycarbonate vandal-resistant faceplate
- Legend illuminated by long-life white LEDs is warranted for 10 years
- Comes standard with two pictogram films for direction selection
- Two LED lamps shielded by a clear polycarbonate cover
- Sealed, maintenance-free Lead-Calcium or Nickel-Cadmium batteries
- Comes standard with auto-test, non audible
- Remote load capacity: covers with LED lights 200 ft up to 500 ft of egress illumination
- Cold-weather option: -40°C (-40°F) with only 14W extra power consumption
- Auto-testing capabilities (specific load requirements)
- Meets or exceeds CSA C22 .2 No .141-15

### CLASSIFICATION

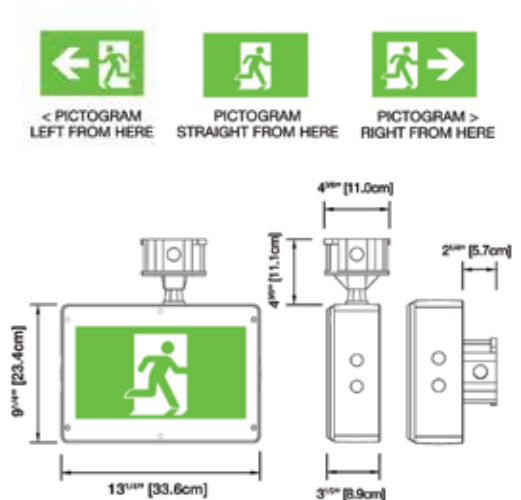
CLASS I	
Division 2	Groups A, B, C, D
CLASS II	
Division 1 & 2	Groups E, F, G
CLASS III	

Contact your ABB sales representative to verify classification

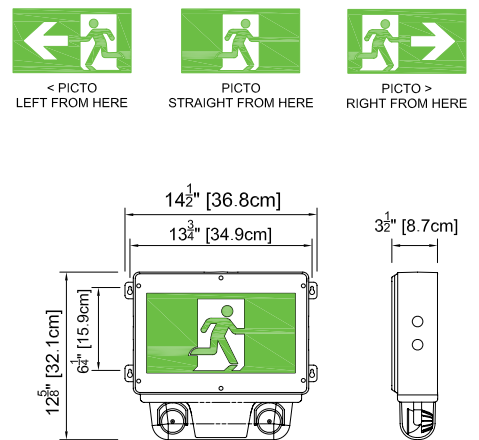
### CERTIFICATIONS



### Dimensions



### Dimensions







# Hazardous locations

## Classification

Areas where the possibility of explosion and fire is created by the presence of flammable gases, vapors, liquids, dust, fibers or flyings.

### Class I – Gases, vapors or liquids

Class I locations are those in which flammable gases, flammable liquid-produced vapors or combustible liquid-produced vapors are or may be present in the air in quantities sufficient to produce explosive or ignitable mixtures.

#### Typical class I locations

Petroleum refineries and gasoline storage and dispensing areas
Industrial firms that use flammable liquids in dip tanks for parts cleaning or other operations
Petrochemical companies that manufacture chemicals from gas and oil
Dry cleaning plants where vapors from cleaning fluids can be present
Companies that have spraying areas where they coat products with paint or plastics
Aircraft hangars and fuel serving areas
Utility gas plants and operations involving storage and handling of liquified petroleum gas or natural gas

### Class II – Combustible dusts

Class II locations are those that are hazardous because of the presence of combustible dust.

#### Typical class II locations

Grain elevators, flour and feed mills
Plants that manufacture, use or store magnesium or aluminum powders
Plants that have chemical or metallurgical processes: producers of plastics, medicines and fireworks, etc.
Producers of starch or candies
Spice-grinding plants, sugar plants and cocoa plants
Coal preparation plants and other carbon handling or processing areas

### Class III – Fibers and flyings

Class III locations are those that are hazardous because of the presence of easily ignitable fibers or where materials producing combustible flyings are handled, manufactured or used, but in which such fibers/flyings are not likely to be in suspension in the air in quantities sufficient to produce ignitable mixtures.

#### Typical class III locations

Textile mills, cotton gins, cotton seed mills and flax processing plants
Any plant that shapes, pulverizes or cuts wood and creates sawdust or flyings

Fibers and flyings are not likely to be suspended in the air but can collect around machinery or on lighting fixtures and where heat, a spark or hot metal can ignite them.

### Division 1 – Normally hazardous

Hazardous gases, vapors or dusts are present under normal operation conditions or during frequent repair and maintenance activity.

### Groups A, B, C, D

The gases and vapors of Class I locations are broken into four groups by the code A, B, C and D. These materials are grouped according to the ignition temperature of the substance, its explosion pressure and other flammable characteristics.

### Groups E, F, G

Class II dust locations groups E, F and G are classified according to the ignition temperature and the conductivity of the hazardous substance.

### Division 2 – Not normally hazardous

Hazardous gases, vapors or dusts are not present under normal operating conditions.

#### Area classification | Divisions versus zones

Continuous hazard	Intermittent hazard	Hazard under abnormal conditions
Zone 0	Zone 1	Zone 2
	Division 1	Division 2

These are simplified definitions. Complete data is in the U.S. National Electrical Code (NEC) and the Canadian Electrical Code (CEC).

## Ignition temperatures

### Group classifications

#### Ignition temperatures and group classifications for flammable gases and vapors

Material	Group	Autoignition temperature		Material	Group	Autoignition temperature	
		° F	° C			° F	° C
Acetaldehyde	C	347	175	Di-N-Propylamine	C	570	299
Acetic acid	D	867	464	Diacetone alcohol	D	1118	603
Acetic anhydride	D	600	316	O-Dichlorobenzene	D	1198	647
Acetone	D	869	465	1.1-Dichloroethane	D	820	438
Acetone cyanohydrin	D	1270	688	1.2-Dichloroethylene	D	860	460
Acetonitrile	D	975	524	Dicylopentadiene	C	937	503
Acetylene	A	581	305	Diethyl benzene	D	743–842	395–450
Acrolein (inhibited)	B (c)	455	285	Diethyl ether	C	320	160
Acrylic acid	D	820	438	Diethylamine	C	594	312
Acrylonitrile	D	898	481	Diethylene glycol monobutyl ether	C	442	228
Allyl alcohol	C	713	378	Diethylene glycol monomethyl ether	C	465	241
Allyl chloride	D	905	485	N-N-Dimethyl aniline	C	700	371
Alpha-methyl styrene	D	1066	574	Dimethyl formamide	D	833	455
Ammonia	D	928	498	Dimethyl sulfate	D	370	188
N-Amyl acetate	D	680	360	Dimethylamine	C	752	400
Aniline	D	1139	615	1,4-Dioxane	C	356	180
Benzene	D	928	498	Dipentene	D	458	237
Benzyl chloride	D	1085	1085	Dodecene	D	491	255
1.3-Butadiene	B (d)	788	420	Du-isopropylamine	C	600	316
Butane	D	550	288	Epichlorohydrin	C	772	411
1-Butanol	D	650	343	Ethane	D	882	472
2-Butanol	D	761	405	Ethanol	D	685	363
N-Butyl acetate	D	790	421	Ethyl acetate	D	800	427
N-Butyl acrylate (inhibited)	D	559	293	Ethyl acetate (inhibited)	D	702	372
Butylamine	D	594	312	Ethyl benzene	D	810	432
Butylene	D	725	385	Ethyl chloride	D	966	519
N-Butyraldehyde	C	425	218	Ethyl formate	D	851	455
N-Butyric acid	D	830	443	2-Ethyl hexanol	D	448	231
Carbon disulfide	*	194	90	2-Ethyl hexyl acrylate	D	485	252
Carbon monoxide	C	1128	609	Ethyl mercaptan	C	572	300
Chlorobenzene	D	1099	593	Ethylamine	D	725	385
Cresol	D	1038–1110	559–599	Ethylene	C	842	450
Crotonaldehyde	C	450	232	Ethylene chlorohydrin	D	797	425
Cumene	D	795	424	Ethylene dichloride	D	775	413
Cyclohexane	D	473	245	Ethylene glycol monobutyl ether	C	460	238
Cyclohexanol	D	572	300	Ethylene glycol monobutyl ether acetate	C	645	340
Cyclohexanone	D	473	245	Ethylene glycol monoethyl ether	C	455	235
Cyclohexene	D	471	244	Ethylene glycol monoethyl ether acetate	C	715	379
Cyclopropane	D	938	503	Ethylene glycol monomethyl ether	D	545	285
P-Cymene	D	817	436	Ethylene oxide	B (C)	804	429
N-Decanol	D	550	288	Ethylenediamine	D	725	385
Decene	D	455	235	Ethylenimine	C	608	320
Di-isobutyl ketone	D	745	396	2-Ethylehexaldehyde	C	375	191
Di-isobutylene	D	736	391	Formaldehyde (gas)	B	795	429

\*Carbon Disulfide has characteristics which require safeguards beyond those required for any of the above groups

## Ignition temperatures

### Group classifications

#### Ignition temperatures and group classifications for flammable gases and vapors

Material	Autoignition temperature			Material	Autoignition temperature		
	Group	° F	° C		Group	° F	° C
Fuel oils	D	410–765	210–407	Monoethanolamine	D	770	410
Furfural	C	600	316	Monoisopropanolamine	D	705	374
Furfuryl alcohol	C	915	490	Monomethyl aniline	C	900	482
Gasoline	D	536–880	280–471	Monomethyl hydrazine	C	382	194
Heptane	D	399	204	Morpholine	C	590	310
Heptene	D	500	260	Naphtha (coal tar)	D	531	277
Hexane	D	437	225	Naphtha (petroleum)	D	550	288
2-Hexanone	D	795	424	Nitrobenzene	D	900	482
Hexenes	D	473	245	Nitroethane	C	778	414
Hydrazine	C	74–518	23–270	Nitromethane	C	785	418
Hydrogen	B	968	520	2-Nitropropane	C	802	428
Hydrogen cyanide	C	1000	538	1-Nitropropane	C	789	421
Hydrogen sulfide	C	500	260	Nonane	D	401	205
Iso-Butyl acetate	D	790	421	Octane	D	403	206
Iso-Octyl aldehyde	C	387	197	Octene	D	446	230
Isoamyl acetate	D	680	360	Pentane	D	470	243
Isoamyl alcohol	D	662	350	1-Pentanol	D	572	300
Isobutyl acrylate	D	800	427	2-Pentanone	D	846	452
Isobutyraldehyde	C	385	196	1-Pentene	D	527	275
Isophorone	D	860	460	Propane	D	842	450
Isoprene	D	428	220	2-Propanol	D	750	399
Isopropyl acetate	D	860	460	1-Propanol	D	775	413
Isopropyl ether	D	830	443	Propionaldehyde	C	405	207
Isopropylamine	D	756	402	Propionic acid	D	870	466
Kerosene	D	410	210	Propionic anhydride	D	545	285
Liquified petroleum gas	D	761–842	405–450	N-Propyl acetate	D	842	450
Mesityl oxide	D	652	344	N-Propyl ether	C	419	215
Methane	D	999	537	Propyl nitrate	B	347	175
Methanol	D	725	385	Propylene	D	851	455
Methyl acetate	D	850	454	Propylene dichloride	D	1035	537
Methyl acrylate	D	875	468	Propylene oxide	B (C)	840	449
Methyl ether	C	662	350	Pyridine	D	900	482
Methyl ethyl ketone	D	759	404	Styrene	D	914	490
Methyl formal	C	460	238	Tetrahydrofuran	C	610	321
Methyl formate	D	840	449	Tetrahydronaphthalene	D	725	385
Methyl isobutyl ketone	D	840	449	Toluene	D	896	480
Methyl isocyanate	D	994	534	Turpentine	D	488	253
Methyl methacrylate	D	792	422	Unsymmetrical dimethyl hydrazine (UDMH)	C	480	249
Methyl N-Amyl ketone	D	740	393	Valeraldehyde	C	432	222
2-Methyl-1-Propanol	D	780	416	Vinyl acetate	D	756	402
2-Methyl-2-Propanol	D	892	478	Vinyl chloride	D	882	472
Methylamine	D	806	430	Vinyl toluene	D	921	494
Methylcyclohexane	D	482	250	Vinylidene chloride	D	1058	570
Methylcyclohexanol	D	565	296	Xylenes	D	867–984	464–529











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