

Hazardous area LED lighting  
Vaporgard™ LED Luminaires

CROUSE-HINDS  
SERIES

# Vaporgard™ LED

## Low profile LED downlight



**EATON**

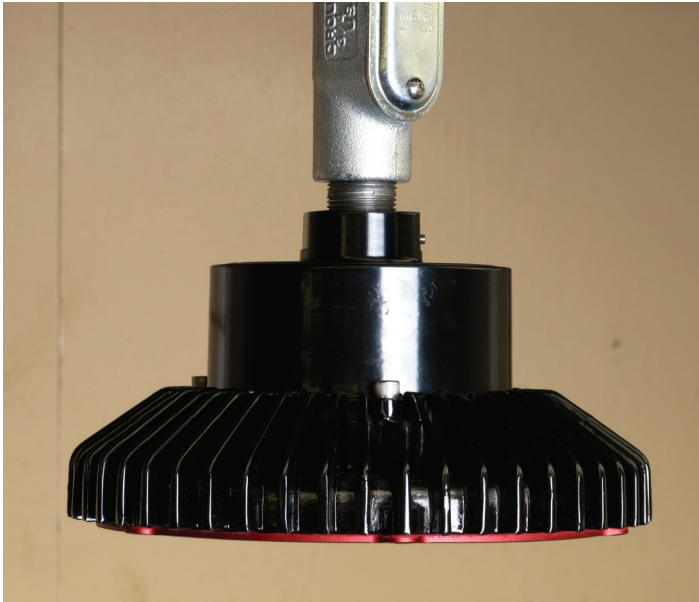
Powering Business Worldwide

# Vaporgard LED Lighting

# Safe. Reliable. Efficient.

Eaton's Crouse-Hinds offers the broadest portfolio of LED luminaires for any industrial or hazardous application.

We utilize more than 100 years of lighting expertise to maximize the benefits of LED technology to provide **safe and reliable LED luminaires for hazardous areas.**



## Why LED?

### Useful Life

- Rated life is up to 60,000 hours of maintenance-free and safe operation

### Energy efficiency

- LEDs use 90% less energy than incandescent

### Start/restart time

- Instant illumination compared to 10 minute restrike time for HID

### Light quality

- Higher color rendering and color temperature

### Environmental benefits

- LED reduces carbon footprint
- Mercury-free

## Why Crouse-Hinds?

### Industry-best reliability

- Built to withstand extreme temperatures, vibration, water and dust

### Thermal management

- Effective heat sinking ensures longer life

### Retrofit compatibility

- LED fixtures are compatible with Crouse-Hinds' Vaporgard incandescent installed base

## Why Vaporgard LED?



- 20X the life of incandescent lamps



- 50% lower profile than incandescent luminaires

## Application

### Challenge:

You're faced with high energy and maintenance costs related to your current incandescent lighting fixtures. You need a solution which will not only reduce operating expenses, but also replace your current incandescent fixtures.

### Old way:

Replace your current incandescent fixtures with a higher wattage HID luminaire. Light output has increased, however, energy costs have gone up 30%, maintenance costs are still an issue, and future regulations may require another change.

### New way:

Install Vaporgard LED luminaires reduce energy consumption and maintenance costs associated with lamp replacement. The Vaporgard LED is designed to easily adapt to existing mounting modules for ease of installation. That, along with a 20 times longer life, makes Vaporgard LED an ideal replacement.

### Benefit:

Realize 90% energy savings and eliminate maintenance by installing Vaporgard. Qualify for rebate incentives with local municipalities and federal programs. Take advantage of the robust, low profile design by installing in those hard to reach locations.





# Design features



## EASY INSTALLATION AND REPLACEMENT

- Contractor-friendly design is ideal for both retrofit and new construction applications
- Installed using the same wall and ceiling mounts as incandescent Vaporgard fixtures

## LOW PROFILE DESIGN

- Unique domeless, low profile design for low mounting heights and confined spaces where incandescent and HID based luminaires are too large to fit in the mechanical envelope required

## MULTIPLE LENS OPTIONS

- Tempered clear glass lens standard
- Diffused glass lens and teflon coated lens options available

## MODULAR DESIGN

- Compact and modular design allows for easy component replacement and future upgrades



## RUGGED HEAT SINK

- Heat sink designed to perform in high ambient temperatures up to +55°C and as low as -30°C
- Thick walled castings make for a tough, rugged housing that keeps the internal driver and LED temperature down



# Features & benefits

## Vaporgard LED

Cool white color temperature – 5000K

Provides uniform crisp, white light and is suitable for lower mounting heights, confined spaces, tunnels or utility rooms. This fixture can deliver similar light levels to 50 watt HID.

Warm white color temperature – 3000K

Provides similar benefits as the cool white version, but with a color rendering more consistent with a warm incandescent or HPS lamp source.

Available with DC power supply

For applications with DC power requirements such as solar, battery or UPS. The DC power supply is suitable for 10 VDC through 30 VDC.



V2LC



V2LW

## Benefits:

### Enhance safety and productivity

- Instant illumination and re-strike
- Cold temperature operation; no warm-up time
- Lightweight, low profile and cool surface temperatures
- Driver with internal fusing for branch circuit protection

### Reduce operation and maintenance costs

- High efficacy LEDs can save up to 90% in energy costs
- No mercury or hazardous chemicals - eliminates disposal concerns
- Mounts to existing Vaporgard mounting modules

### Reliable performance in any environment

- Shock- and vibration-resistant
- Teflon coated lens (suffix S896) option for increased safety in food processing facilities
- Operating ambient:
  - V2L: -30°C to +55°C
  - V3L: -30°C to +55°C

## Applications:

- Oil and gas refineries, drilling rigs, petrochemical facilities, food and beverage facilities, platforms, loading docks, tunnels, outdoor wall and stanchion mounted general area lighting, and where flammable vapors, gases, ignitable dusts, fibers or flyings are present
- Locations requiring continuous and consistent light levels in extreme ambient temperatures
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Type 4X, marine, wet locations and hose-down environments
- Confined space or low ceiling areas, such as tunnels, utility rooms, over doorways, entries, landings, etc.
- Areas requiring frequent on/off of lights
- Areas where maintenance is difficult or challenging
- Areas requiring shatter-protected products, such as food processing facilities
- Outdoor wall or ceiling mounted area illumination
- Low mounting heights
- Classified and hazardous locations

Model number	Nominal lumens	Wattage	Equivalent incandescent luminaire	Typical energy savings/lifetime
V2LM2C/UNV1	1,772	14	50W HID or 150-200W incandescent	90% energy savings and 50,000 hours of 24/7 operation!
V3LM2C/UNV1	3,335	29		





# Specifications

## Certifications and compliances:

### NEC and CEC

- Class I, Division 2, Groups A, B, C, D
- Class II, Divisions 1 & 2, Groups F, G\*  
\*mounting options limited

### UL Standards

- UL844; UL1598; UL1598A

### CSA Standard

- CSA C22.2 No. 137
- NEMA 4X
- IP66

### IEC

- IEC 60079-0:2011; IEC 60079-31:2013; IEC 60079-7:2017
- V2LM2/UNIV1: Ex ec IIC T5 Gc; Ex tc IIIB T62°C Dc IP66
- V2LM2/DC1: Ex ec IIC T6 Gc; Ex tc IIIB T50°C Dc IP66
- V3LM2/UNIV1: Ex ec IIC T4 Gc; Ex tc IIIB T69°C Dc IP66
- V3LM2/DC1: Ex ec IIC T5 Gc; Ex tc IIIB T60°C Dc IP66

### ATEX

- EN 60079-0: 2012+A11:2013; EN 60079-7: 2015 +A1:2018; EN 60079-31:2014
- V2LM2/UNV1:  
⊕II 3 G Ex ec IIC T5 Gc; ⊕II 3 D Ex tc IIIB T62°C Dc IP66
- V2LM2/DC1:  
⊕II 3 G Ex ec IIC T6 Gc; ⊕II 3 D Ex tc IIIB T50°C Dc IP66
- V3LM2/UNV1:  
⊕II 3 G Ex ec IIC T4 Gc; ⊕II 3 D Ex tc IIIB T69°C Dc IP66
- V3LM2/DC1:  
⊕II 3 G Ex ec IIC T5 Gc; ⊕II 3 D Ex tc IIIB T60°C Dc IP66

## Electrical ratings:

	120-277VAC input		10-30 VDC input	
	Power	Current	Power	Current
V2LM2	14W	.12A	14W	1.4A
V3LM2	29W	.24A	31W	3.0A

5 year limited warranty. Refer to the authorized distributor price book for Crouse-Hinds standard Terms and Conditions.

## Temperature ratings:

UNV1	Ambient temperature	Class I, Div. 2	Class I, Division 2	Class III, Div. 1
V2LM2	40°C	T5	T5	T5
	55°C			
V3LM2	40°C	T4	T4	T4
	55°C			

DC1	Ambient temperature	Class I, Div. 2	Class I, Division 2	Class III, Div. 1
V2LM2	40°C	T5	T5	T5
V3LM2	40°C	T6	T6	T6

## Weights:

Model number	Lbs.	kg.
Pendant mount	5.7	2.59
Ceiling mount	6.8	3.08
Wall mount	7.9	3.58
Stanchion mount	6.5	2.95



## Standard materials:

- Body and mounting modules – copper-free aluminum with Corro-free™ epoxy powder coat
- Lens bezel – aluminum with anodized finish
- Lens – heat- and impact-resistant glass
- Gaskets – silicone
- External hardware – stainless steel

## LED driver:

- Constant current regulated power supply
- 120-277VAC, 50/60 Hz
- Power factor: >0.9
- Low harmonic distortion: <20%
- Low in-rush current, <20 amps
- EMC compliant to 47CFR, Part 2, Part 15
- 10-30 VDC option available

## LED system:

- (4) High brightness LED arrays
- Cool white (5000K), CRI 70
- Warm white (3000K), CRI 82
- Neutral white (4000K), 80 CRI
- L70 >60,000 hours

# Ordering information

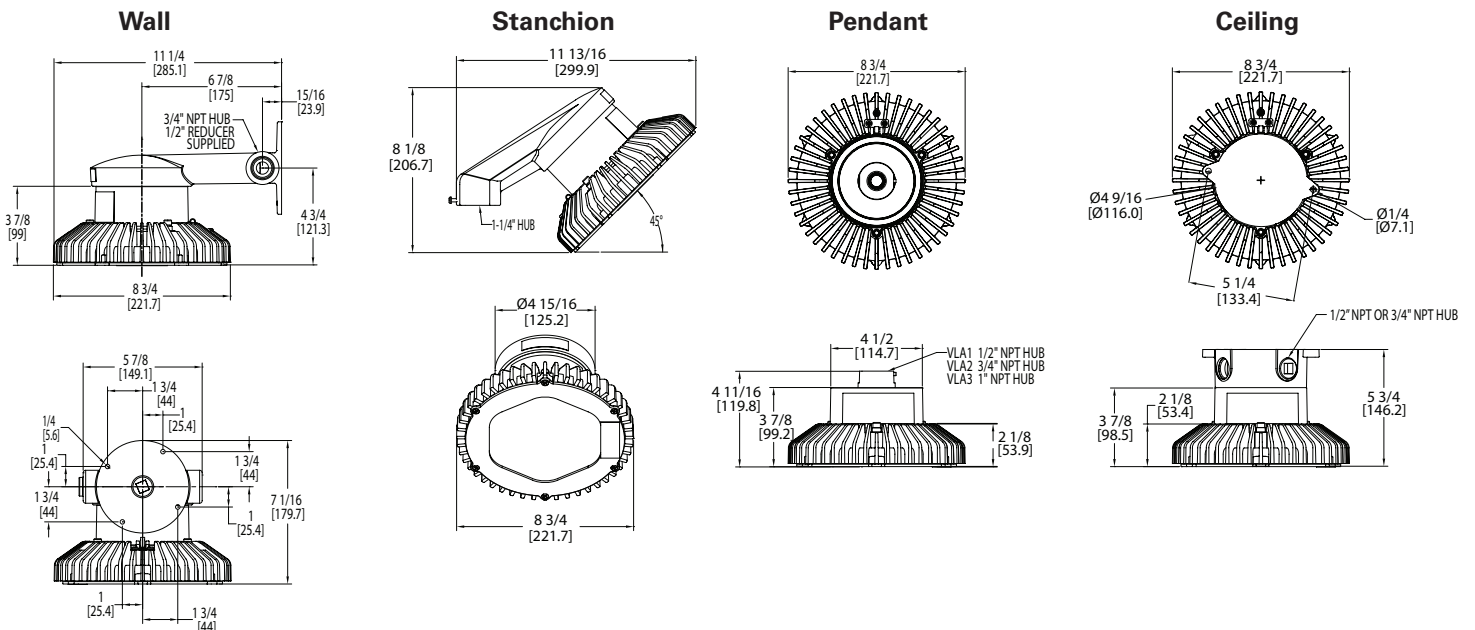
Part number example

**V2LM2CHBF1 / UNV1 S891**

Vaporgard LED, rated for hazardous areas, 1,772 lumens, Cool white (5000K), 70 CRI, wall mount with junction box, 120-277 VAC, 50/60 Hz. diffused glass lens

<b>V</b>	<b>2LM2</b>	<b>C</b>	<b>HBF</b>	<b>1</b>	<b>/</b>	<b>UNV1</b>	<b>S891</b>
<b>Series</b> <b>V</b> Hazardous area rated		<b>Mounting modules</b> <b>Class I, Division 2;</b> <b>Class II, Division 1, Groups F&amp;G</b> <b>A</b> VLA – pendant mount <b>HJ</b> VXJ – stanchion mount <b>HW*</b> VXW – wall mount <small>*Mounts directly to the wall, no VXFT junction box needed.</small>		<b>Hub size</b> <b>BLANK</b> No hub (LED housing, adapter) <b>1</b> ½" NPT (pendant, ceiling, wall) <b>2</b> ¾" NPT (pendant, ceiling, wall) <b>3</b> 1" NPT (pendant) <b>4</b> 1-¼" NPT (stanchion)		<b>Options</b> <b>BLANK</b> Clear glass lens <b>S891</b> Diffused glass lens <b>S896</b> Teflon coated lens	
<b>Lumen level (nominal)</b> <b>2LM2</b> 1,772 lumen LED <b>3LM2</b> 3,335 lumen LED		<b>OR</b> <b>Class I, Division 2;</b> <b>Class II, Division 2, Groups F&amp;G</b> <b>BLANK</b> LED housing only (warehouse/spare parts) <b>HBF</b> VXT – wall mount with VXFT junction box <b>HF</b> VXF – junction box for ceiling mount <b>HR</b> VLHR – adapter cover (for retrofit) <b>HT</b> VXT – wall mount				<b>Voltage</b> <b>UNV1</b> 120-277 VAC, 50/60 Hz; <b>DC1*</b> 10-30 VDC <small>*Rated to +40°C</small>	
<b>Color temperature</b> <b>C</b> Cool (5000K), 70 CRI min. <b>N</b> Neutral (4000K), 80 CRI min. <b>W</b> Warm (3000K), 80 CRI min. <small>*Consult factory for availability on neutral color temperature.</small>							

## Dimensions





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