

Pro Series LED Lighting  
Vaporgard™ Pro LED Luminaires

CROUSE-HINDS  
SERIES

# Vaporgard™ Pro 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 and provide the safest, **most reliable LED luminaires on the market today.**



## Why LED?

### Useful Life

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

### Energy efficiency

- LED average energy consumption is 90% less 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' incandescent installed base

## Why Vaporgard LED?



- 20X the life of incandescent lamps



- 50% lower profile than incandescent luminaires

## Application - mining shovel retrofit

### Challenge:

A copper mine runs P&H 2300 electric shovels 24 hours a day, 365 days a year and at a cost of \$12,500 per hour. Each shovel has 10-16 luminaires; ~6 above the tracks for visibility of potential material obstructions and ~8-10 inside the interior for walkways, safety lighting and general illumination.

### Problem:

Current lighting on shovel is incandescent

- Lamps need replacing every 1-2 weeks due to excessive vibration on equipment and can take up to an hour to replace
- Lumen output is low and creates poor visibility in critical areas both inside and outside the shovel due to inadequate lighting.

### Solution:

Vaporgard™ LED Series Luminaires; ceiling mount (P2LCHF2/DC1) for inside and above the tracks and wall mount (P2LCHT2/DC1) for service areas.

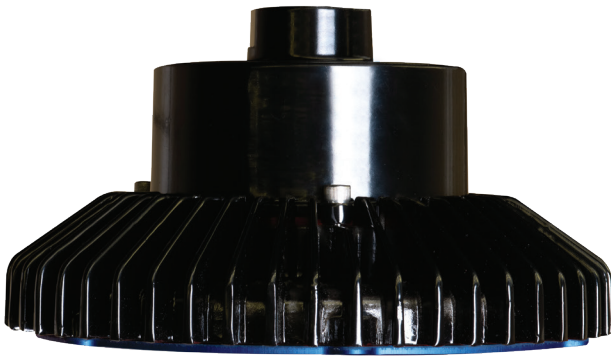
### Benefit:

Vaporgard™ LEDs essentially eliminated lamp maintenance and saved over \$1M in downtime

- First shovel outfitted has operated without fixture failure for over 15 months
- Plant maintenance took lamp replacement off of the PM list
- Fixtures paid for themselves in roughly 3 months due to maintenance free operation



# Design features



## EASY INSTALLATION AND REPLACEMENT

- Contractor-friendly design is ideal for both retrofit and new construction application
- 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, teflon coated lens and clear polycarbonate 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 Luminaires

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 a 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.

Model number	Nominal lumens	Wattage	Equivalent incandescent luminaire	Typical energy savings/lifetime
P2LM2C/UNV1	1,772	14	50W HID or 150-200W incandescent	90% energy savings and 50,000 hours of 24/7 operation!
P3LM2C/UNV1	3,335	29		



P2LC



P2LW

## 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
- 70,000 hours rated life can provide 8 years of maintenance-free lighting
- 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
- Low starting temperature: -30°C
- Operating ambient: -30°C to +55°C

## Applications:

- For areas with mounting heights up to 60 feet
- Heavy industrial, mine site processing areas, platforms, loading docks, tunnels, outdoor wall, stanchion mounted general area lighting and areas requiring frequent on-and-off of lights
- 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
- Ordinary non-hazardous locations

## Certifications and compliances:

### NEC and CEC

- Wet Locations, Type 4X, IP66

### UL Standards

- UL1598 Luminaires, UL1598A Marine

### CSA Standard

- cUL Listed to CSA Standard CSA C22.2 No. 250



# Specifications

## Electrical ratings:

	120-277 VAC input		10-30 VDC input	
	Power	Current	Power	Current
P2LM2	14W	.12A	14W	1.4A
P3LM2	29W	.24A	31W	3.0A

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

## 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 or optional polycarbonate
- Gaskets – silicone
- External hardware – stainless steel
- Factory-sealed, no external seals required

## LED driver:

- Constant current regulated power supply
- 120-277 VAC, 50/60 Hz
- Active power factor correction, >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
- Neutral white (4000K), CRI 80
- Warm white (3000K), CRI 82
- L70 >60,000 hours

## 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



# Ordering information

Part number example

**P2LM2CHBF1 / UNV1 S891**

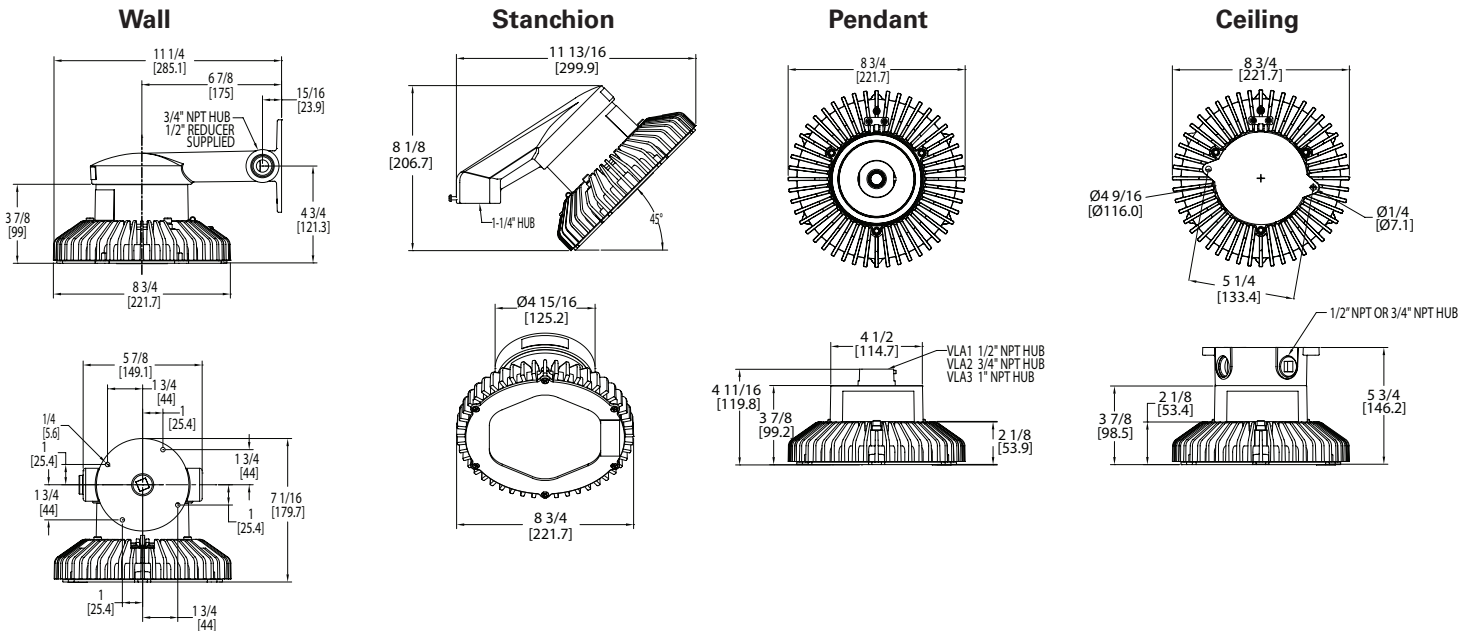
Vaporgard LED, rated for harsh/heavy industrial areas, 1,500 lumens, Cool white (5000K), 70 CRI, wall mount with junction box, 120-277 VAC, 50/60 Hz. diffused glass lens

<b>P</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>Mounting modules</b>		<b>Hub size</b>		<b>Options</b>	
<b>P</b>	Harsh/heavy industrial areas	<b>BLANK</b>	LED housing only (warehouse/spare parts)	<b>BLANK</b>	No hub (LED housing, adapter)	<b>BLANK</b>	Clear glass lens
<b>Lumen level (nominal)</b>		<b>HBF</b>	VXT – wall mount with VXFT junction box	<b>1</b>	½" NPT (pendant, ceiling, wall)	<b>S891</b>	Diffused glass lens
<b>2LM2</b>	1,772 lumen LED	<b>A</b>	VLA – pendant mount	<b>2</b>	¾" NPT (pendant, ceiling, wall)	<b>S896</b>	Teflon coated lens
<b>3LM2</b>	3,335 lumen LED	<b>HJ</b>	VXJ – stanchion mount	<b>3</b>	1" NPT (pendant)	<b>S903</b>	Clear polycarbonate lens
<b>Color temperature</b>		<b>HW*</b>	VXW – wall mount	<b>4</b>	1-¼" NPT (stanchion)	<b>Voltage</b>	
<b>C</b>	Cool (5000K), 70 CRI min.	<b>HF</b>	VXF – junction box for ceiling mount	<b>UNV1</b> 120-277 VAC, 50/60 Hz;			
<b>N</b>	Neutral (4000K), 80 CRI min.	<b>HR*</b>	VLHR – adapter cover (for retrofit)	<b>DC1*</b> 10-30 VDC			
<b>W</b>	Warm (3000K), 80 CRI min.	<b>HT</b>	VXT – wall mount	*Rated to +40°C			

\*Mounts directly to the wall, no VXFT junction box needed.

\*Consult factory for availability on neutral color temperature.

## Dimensions







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