

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/DC) for inside and above the tracks and wall mount (P2LCHT2/DC) 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 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 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 12VDC through 24VDC.

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:

- DesignLights Consortium® (pending)

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

IEC Standard

- CE



Specifications

Electrical ratings:

	120-277VAC input		12-24VDC 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
- Gaskets – silicone
- External hardware – stainless steel
- Factory-sealed, no external seals required

LED driver:

- Constant current regulated power supply
- 120-277VAC, 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
- 12-24VDC option available

LED system:

- (4) High brightness LED arrays
- Cool white (5000K), CRI 70
- Warm 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 window

Series	
P	Harsh/heavy industrial areas

Lumen level (nominal)	
2LM2	1,772 lumen LED
3LM2	3,335 lumen LED

Color temperature	
C	Cool (5000K), 70 CRI min.
N	Neutral (4000K), 80 CRI min.
W	Warm (3000K), 80 CRI min.

Mounting modules	
BLANK	LED housing only (warehouse/spare parts)
HBF	VXT – wall mount with VXFT junction box
A	VLA – pendant mount
HJ	VXJ – stanchion mount
HW*	VXW – wall mount
HF	VXF – junction box for ceiling mount
HR*	VLHR – adapter cover (for retrofit)
HT	VXT – wall mount

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

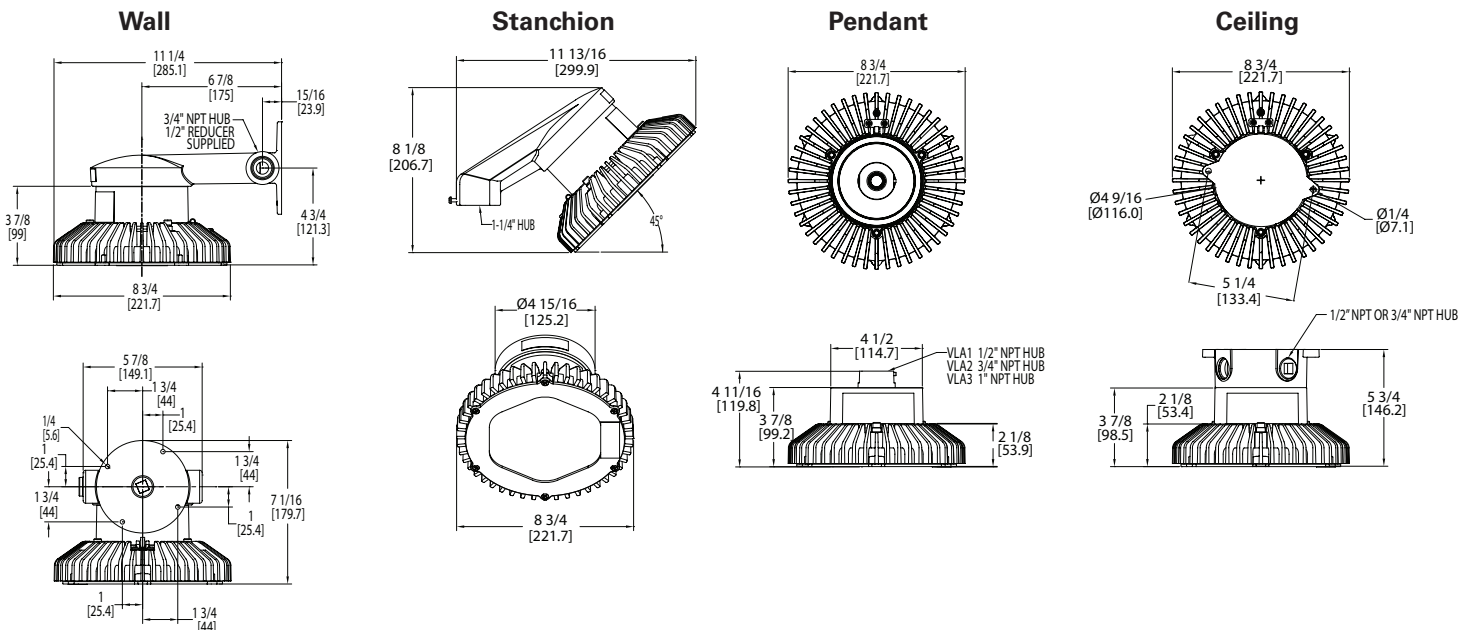
Hub size	
BLANK	No hub (LED housing, adapter)
1	½" NPT (pendant, ceiling, wall)
2	¾" NPT (pendant, ceiling, wall)
3	1" NPT (pendant)
4	1-¼" NPT (stanchion)

Options	
BLANK	Clear glass window
S891	Diffused glass window
S896	Teflon coated window

Voltage	
UNV1	120-277 VAC, 50/60 Hz;
DC1*	10-30 VDC

*Rated to +40°C

Dimensions



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