

LED lighting for hazardous areas
Zone 1, 2, 21 and 22

CROUSE-HINDS
SERIES

VLL Series LED Linear Fixtures



Safe. Reliable. Efficient.

EATON

Powering Business Worldwide



Safe. Reliable. Efficient.

Featuring the industry's broadest range of LED luminaires for harsh and hazardous environments, Eaton's Crouse-Hinds can deliver a lighting solution that performs reliably in even the worst operating conditions. All the while reducing your energy, maintenance and manpower costs.

Why LED?

Useful life

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

Energy efficiency

LED average energy consumption is 50% less than HID and 85% less than incandescent

Start/restart time

Instant illumination compared to 10 minute restrike time for HID

Light quality

Higher color rendering and color temperature compared to fluorescent

Environmental benefits

Mercury-free LED eliminates disposal costs and lower energy consumption for a smaller carbon footprint

Why Crouse-Hinds?

Industry-best reliability

Built to withstand extreme temperatures, vibration, water and dust

Thermal management

Effective heat sinking ensures longer life

Quality of light

Custom optics designed to maximize light distribution and intensity

Retrofit compatibility

LED fixtures are compatible with Crouse-Hinds' HID installed base

VLL Series LED Linear Fixtures

Features & specifications

The Zone 1 VLL product Series LED Luminaires with high-quality international brand LED chips, have extremely long lifespan. Multiple versions of the LED are available, providing ideal solutions for indoor or outdoor areas to retrofit existing fluorescent fixtures.

| Model | Nominal* lumens | Wattage | Efficacy | Equivalent fluorescent |
|--------|-----------------|---------|----------|------------------------|
| VLL-3L | 3200 | <25W | >125Lm/W | 2x18W |
| VLL-5L | 6000 | <50W | >125Lm/W | 2X36W |
| VLL-7L | 7300 | <60W | >125Lm/W | 2X54W |

*Lumen values apply to 5700K light color, 70 CRI fixtures. Lumen output may vary slightly for different models.

*Tolerance+/-10%



Application

- Locations where require continuous and consistent light levels in extreme ambient temperatures
- Areas requiring frequent on-and-off of lights
- Where flammable vapors, gases, ignitable dusts, fibers or flyings are present; indoors or outdoors
- Where extremely corrosive, wet, dusty, hot and/or cold conditions exist
- Marine, wet locations and hose-down environments
- Manufacturing plants; heavy industrial, chemical, petrochemical or pharmaceutical facilities; platforms; loading docks; tunnels

Benefits:

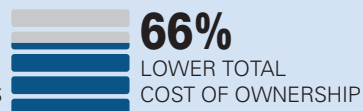
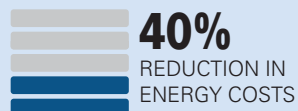
- 100-240VAC wide range of input voltage, 108-250VDC input provision for emergency systems, cranes, etc.
- 5 years maintenance free operation
- Outstanding energy savings vs fluorescent
- Outstanding water and dust proof performance (IP 66)
- Vibration resistant.
- Electromagnetic compatibility in compliance to EN 55015/61000.
- Low and slim profile , easy installation in extremely narrow space
- Quick and easy maintenance - easy access to drivers and wiring;
- Easy installation - suitable for all of existing linear fluorescent mounting brackets.
- 25% lumen output for whole lighting under emergency.

LED vs. fluorescent savings at a glance

Why are so many facilities making the switch from fluorescent to LED?

The numbers say it all.

VLL-5L vs. x 36W Fluorescent



VLL Series LED Linear Fixtures

Standard materials

- Enclosure-Glass Fiber Reinforced Plastic (GRP)
- Diffuser-Polycarbonate (PC)
- Gaskets-Silicone
- Fasteners-All external fasteners stainless steel

LED system:

- Cold white 5700K,CRI70& warm white 3000K CRI80 as standard
- Optional 4000k, 5000K
- Whole series can be replaced LED model
- Fog diffuser with soften light as standard

Certifications and compliances

- Marking accd.to IECEx
Ex db eb mb IIC Gb/Ex db eb ib mb IIC Gb(EM)
Ex eb mb IIC Gb/Ex eb ib mb IIC Gb(EM)
Ex tb IIIC T80 C Db
- Marking accd.to ATEX
II2 G Ex db eb mb IIC T5/T6 Gb
II2 G Ex db eb ib mb IIC T5/T6 Gb(EM)
II2 G Ex eb mb IIC T5/T6 Gb
II2 G Ex eb ib mb IIC T5/T6 Gb(EM)
II2 D Ex tb IIIC T80 C Db
- Certificate No.
IECEX*****
ATEX*****



Fixture life:

Fixture life and years of maintenance-free operation

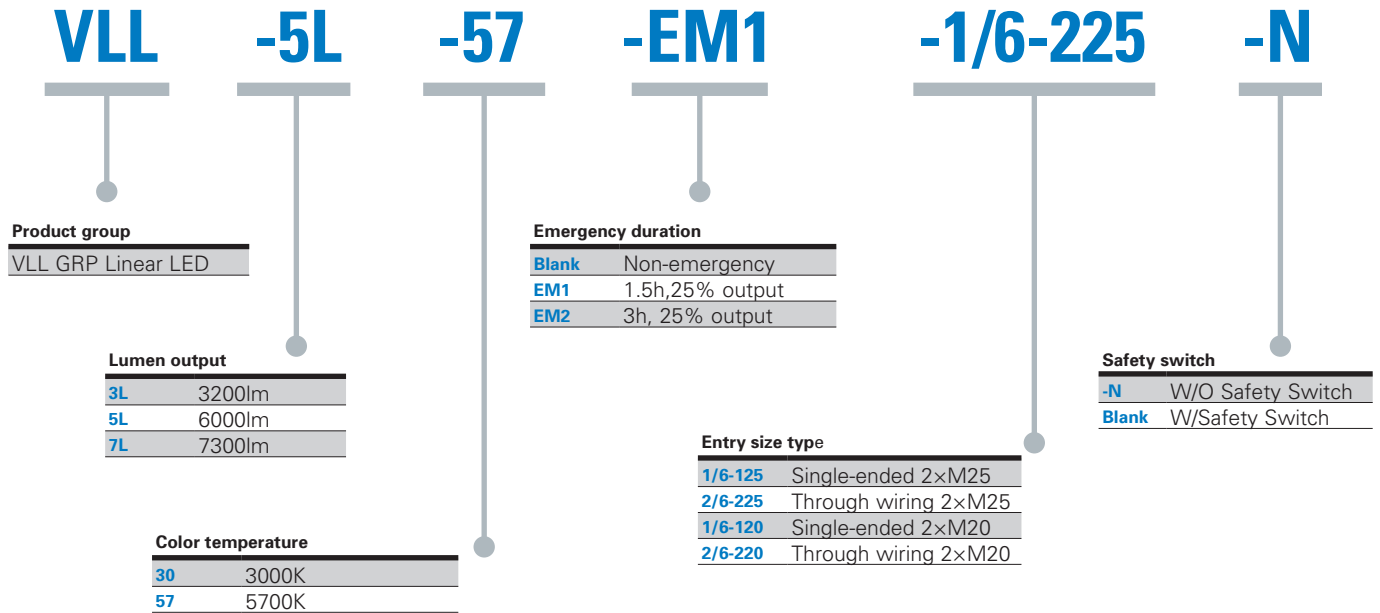
| Ambient temperature | No. of years at 24 hours usage | No. of years at 12 hours usage |
|---------------------|--------------------------------|--------------------------------|
| 25°C | 10 | 20 |
| 30°C | 10 | 20 |
| 35°C | 10 | 20 |
| 40°C | 10 | 20 |
| 45°C | 10 | 20 |
| 50°C | 7 | 14 |
| 55°C | 5 | 10 |

Technical data

| | |
|---|--|
| IECEX-certification of conformity | IECEX CQM***** |
| Ex Marking | Ex d e ib mb IIC T6 Gb Ex tb IIIC T80 C Db |
| IECEX COC | IECEX CQM***** |
| Ambient temp | -40°C to 55°C (Normal) -25°C to 55°C (Emergency) |
| Rated input volt | 100-240VAC 50/60Hz, 108-250V DC |
| Power factor | >0.9 |
| CRI | Cool white>70, warm white >80 |
| System watt | VLL 3L series: <25W VLL 5L series: <50W VLL 7L series: <60W |
| Lumen output | VLL 3L series: 3200Lm VLL 5L series: 6000Lm VLL 7L series: 7300Lm |
| Material | GRP and PC |
| Weight | VLL 3L series Normal and EM: 4.3Kg / 5.8Kg VLL 5L /7L series Normal and EM: 7.5Kg / 9.8Kg |
| Terminals | Max 6mm ² |
| Out line dimension | VLL 3L series: 732x178x125 VLL 5L /7L series:1332x178x125 |
| Backup duration & Lumen percentage | EM1=1.5h,25% output. EM2=3h, 25% output |
| IP(IEC60529) | IP66 |
| Warranty | 5 Years |

VLL Series LED Linear Fixtures

Catalog Numbering System



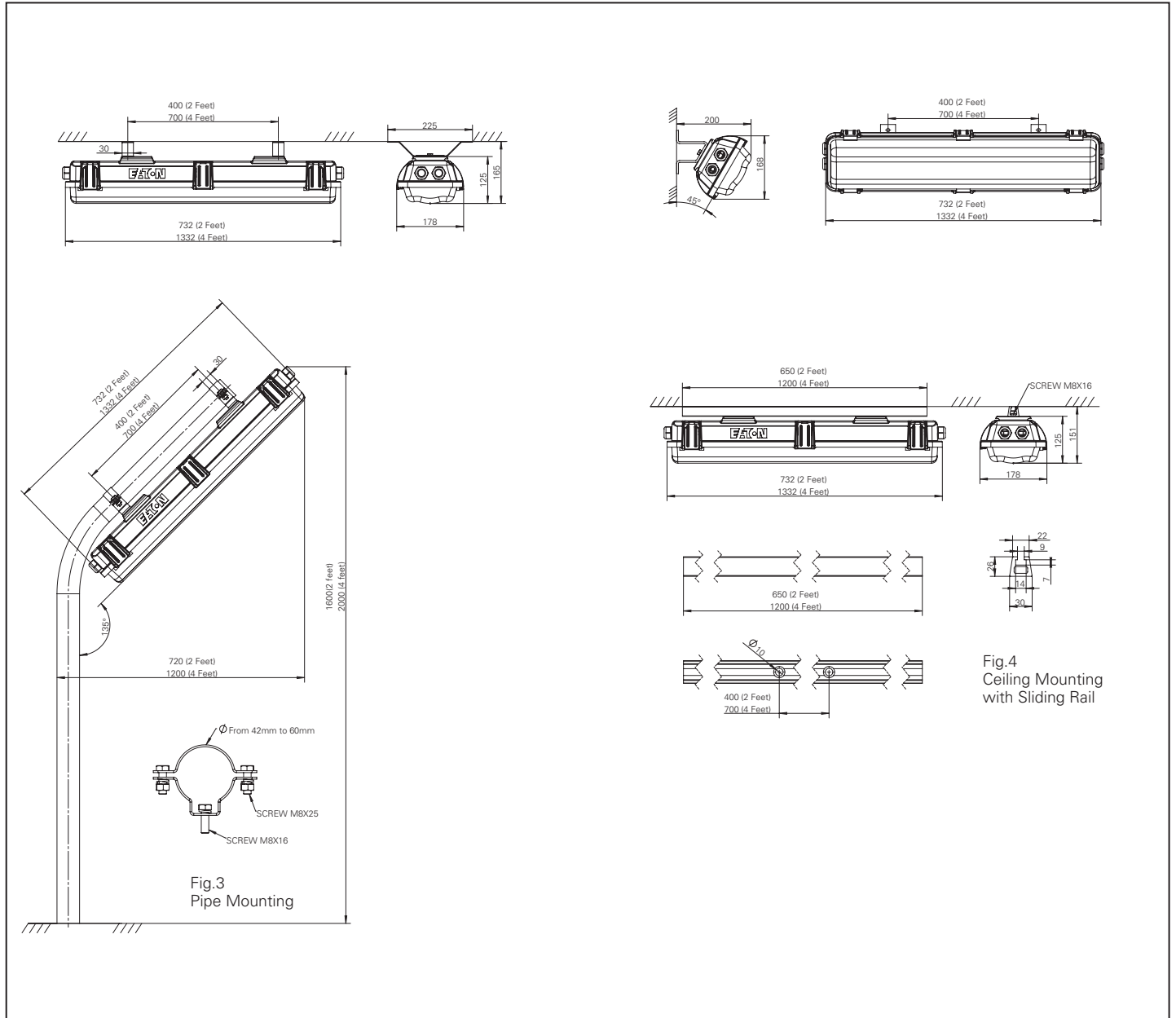
Ordering Information:

| Part No. | Product Type | Lumen output | Colour Temp* | System watt. * | Terminals | Throughwiring | | Cable gland/ Threaded | Threaded Plug | Blanking Plug |
|-------------|-----------------------|--------------|--------------|----------------|-----------|---------------|------------|-----------------------|---------------|---------------|
| | | | | | | Single-ended | Twin-ended | | | |
| CCLXXXXXXXX | VLL-3L-30-1/6-120 | | 3000k | <25W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-3L-30-2/6-220 | | 3000k | <25W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-3L-30-EM1-1/6-120 | | 3000k | <30W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-3L-30-EM1-2/6-220 | | 3000k | <30W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-3L-57-1/6-120 | | 5700K | <25W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-3L-57-2/6-220 | | 5700K | <25W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-3L-57-EM1-1/6-120 | | 5700K | <30W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-3L-57-EM1-2/6-220 | | 5700K | <30W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-5L-30-1/6-120 | | 3000k | <50W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-5L-30-2/6-220 | | 3000k | <50W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-5L-30-EM1-1/6-120 | | 3000k | <55W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-5L-30-EM1-2/6-220 | | 3000k | <55W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-5L-57-1/6-120 | | 5700K | <50W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-5L-57-2/6-220 | | 5700K | <50W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-5L-57-EM1-1/6-120 | | 5700K | <55W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-5L-57-EM1-2/6-220 | | 5700K | <55W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-7L-30-1/6-120 | | 3000k | <60W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-7L-30-2/6-220 | | 3000k | <60W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-7L-30-EM1-1/6-120 | | 3000k | <65W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-7L-30-EM1-2/6-220 | | 3000k | <65W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-7L-57-1/6-120 | | 5700K | <60W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-7L-57-2/6-220 | | 5700K | <60W | 2x6 | - | x | 4xM20 | 2 | 2 |
| CCLXXXXXXXX | VLL-7L-57-EM1-1/6-120 | | 5700K | <65W | 1x6 | x | - | 2xM20 | 1 | 1 |
| CCLXXXXXXXX | VLL-7L-57-EM1-2/6-220 | | 5700K | <65W | 2x6 | - | x | 4xM20 | 2 | 2 |

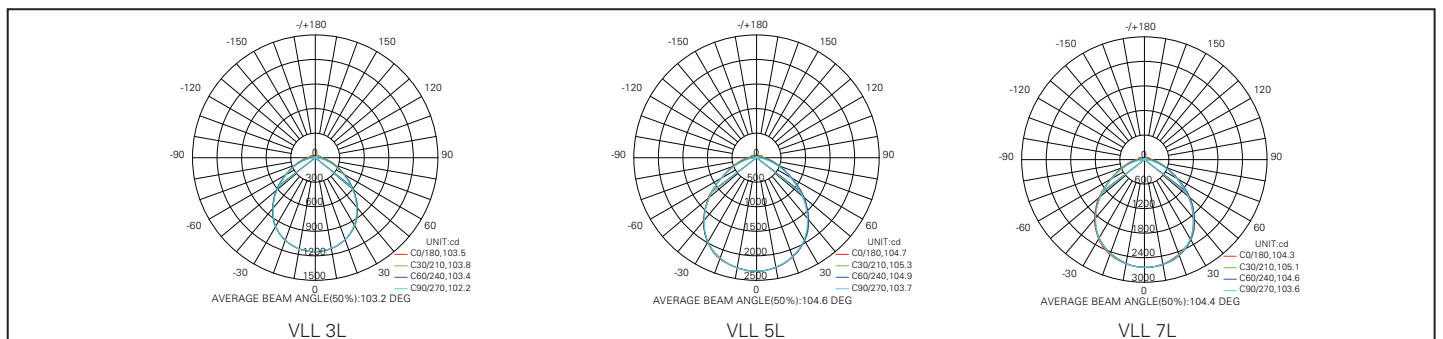
*Tolerance +/-10%

VLL Series LED Linear Fixtures

Dimension

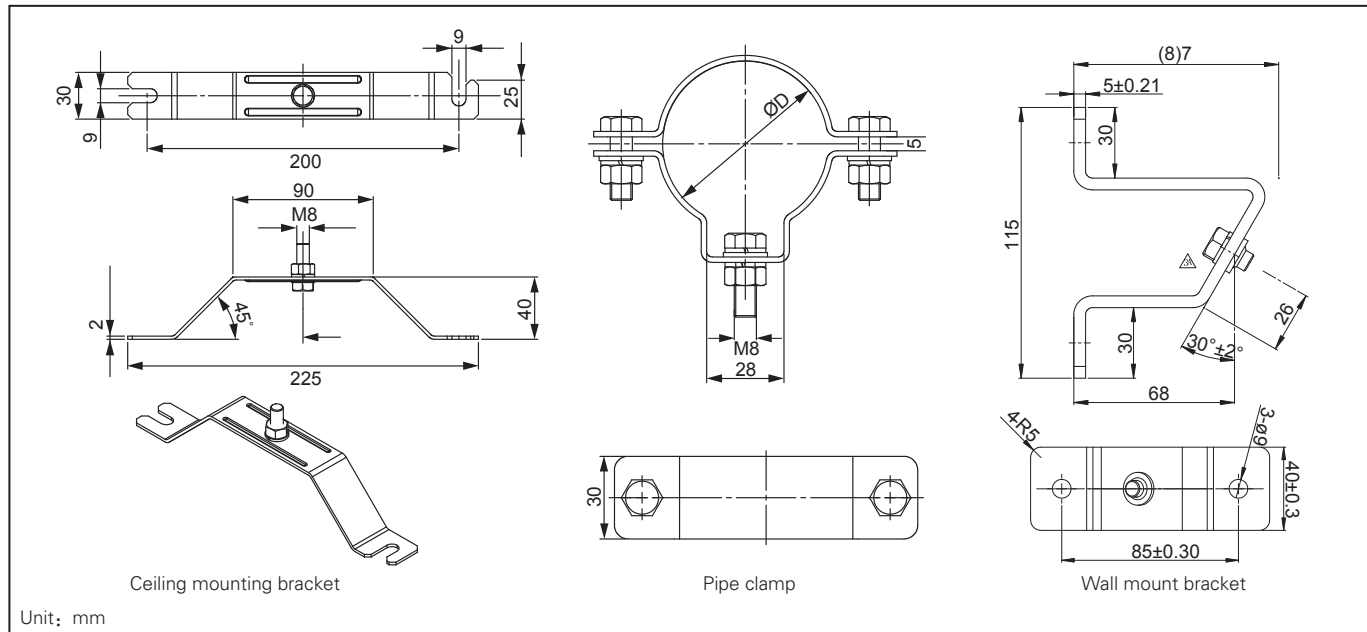


Polar curve



VLL Series LED Linear Fixtures

Mounting accessories (To be ordered separately)



Pipe mounting

| Part No | Description | Qty |
|----------|-----------------------------|-----|
| CHR11076 | Pipe clamp assy D42 316S/S | 2 |
| CHR11077 | Pipe clamp assy D42 304S/S | 2 |
| CHR11078 | Pipe clamp assy D42 plating | 2 |
| CHR11079 | Pipe clamp assy D51 316S/S | 2 |
| CHR11080 | Pipe clamp assy D51 304S/S | 2 |
| CHR11081 | Pipe clamp assy D51 plating | 2 |

Wall mounting

| Part No | Description | Qty |
|----------|-------------------------|-----|
| CHR11073 | Wall suspension 316S/S | 2 |
| CHR11074 | Wall suspension 304S/S | 2 |
| CHR11075 | Wall suspension plating | 2 |

Ceiling mounting

| Part No | Description | Qty |
|----------|------------------------------|-----|
| CHR11099 | Ceiling mounting BKT 316S/S | 2 |
| CHR11100 | Ceiling mounting BKT 304S/S | 2 |
| CHR11101 | Ceiling mounting BKT plating | 2 |

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