



VLL Linear LED Lights

Versatile Machine Vision illumination

High intensity IR and Visible LED Illuminator for Machine Vision applications. This lighting is particularly advantageous where the heat generated by traditional lighting is unacceptable.

- Choice of IR Wavelengths and Colours
- Flexibility in terms of Brightness, Beam Profile and Length
- Option for Liquid-Cooled operation

Multiple options for high flexibility

Utilising the latest high power LED technology available, the VLL Series Linear lights deliver controlled illumination over a defined target area. The VLL3 has options in brightness, colour, beam profile and size, allowing it to meet the demands of a huge range of Machine Vision applications.

The VLL3 features a single row of LEDs, each operating in free running mode. The housings are finished in black, IP67 rated and designed for optimised thermal performance for the coolest running.

Very low maintenance

Traditional types of lighting can be inconvenient and costly to repair or replace. LED technology has a much longer lifetime than traditional filament bulb solutions, making it an ideal choice for ease of use and reduced maintenance.

IR Wavelengths and Colours

The VLL3 lights are available in a choice of White, Colours and Infrared Wavelengths. Multiple Beam Profiles are available, with 30° FWHM and 12° FWHM as standard.

Constant current drive

The VLL Series responds to the drive current that the user supplies, whether constant or pulsed. This current can be provided by Gardasoft's Lighting Controllers which give a very stable output and allow high brightness pulsing or dynamic intensity control (refer to the RT Series Lighting Controllers on www.gardasoft.com)

Uniformity of illumination

The LEDs are arranged in strings that are 120mm long; each string can be independently controlled. This allows the user to apply profile correction in order to optimise uniformity of illumination along the entire length of the light.

Cooling formats

The VLL3 lights are offered with two formats for cooling; the standard product uses natural convection, but liquid cooling can be specified. Gardasoft Vision are able to advise on suitable Gardasoft chillers and coolers for the liquid cooled configurations.

SPECIFICATIONS

| Parameter | VLL3 specification |
|---|---|
| Wavelength | White, Red, Amber, Blue, Green, Yellow, 740nm, 850nm, 940nm |
| Optical beam profile | 30° FWHM 12° FWHM Other profiles can be manufactured to order |
| Power supply | See section 'LED Drive Considerations' |
| Dimensions (excluding power connection) | L1: 81mm wide, 68mm high, 327mm long L2: 81mm wide, 68mm high, 604mm long L3: 81mm wide, 68mm high, 885mm long L4: 81mm wide, 68mm high, 1165mm long |
| Power connector fitted to light | 16 way M16 connector with male contacts |
| Start-up temperature | 0°C to +40°C |
| Operating temperature | -20°C to +55°C |
| Storage temperature | -20°C to +85°C |
| Weight | L1: 1.5kg L2: 2.75kg L3: 4.25kg L4: 5.75kg |
| Environmental protection | IP67 |
| Lifetime | >100,000hrs |

Notes: 1. The light is available in four lengths 2. End of life defined at 70% brightness

| Colour | Peak wavelength | Max Luminous Intensity at 0.5m (Measured at centre of light) |
|--------|----------------------------|---|
| White | Cool white (6500k typical) | 35 kLux |
| Green | 530nm | 37 W/m ² |
| Red | 627nm | 81 W/m ² |
| Blue | 470nm | 95 W/m ² |
| IR | 850nm | 102 W/m ² |

LED Drive considerations The table below shows the total permissible constant current drive into the light.

| Light length | Max total current drive for natural convection ¹ | Total current drive for Liquid-Cooled option |
|--------------|---|--|
| VLL3-288 | 1.00A | 2.0A |
| VLL3-565 | 2.00A | 4.0A |
| VLL3-846 | 3.00A | 6.0A |
| VLL3-1126 | 4.00A | 8.0A |

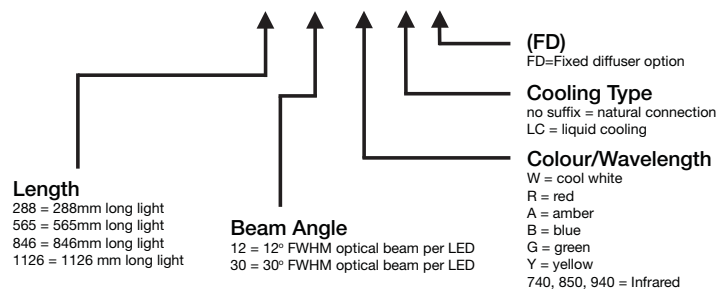
LC options produce approximately double the brightness of natural convection units

¹ Case temperature rise ≤ 23°C above ambient

ORDERING INFORMATION

VLL Part Number Format

VLL3-VV-WW-XXX-ZZ-FD



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