



BlueLyte LC Datasheet

premier & acculase modulatable/ machine vision lyte-mv/dragonfly green/
imatronic/laserlyte/laserlyte-flex/guideline/hawkeye detector/
firefly green/firefly green mini/thread mountable cameo/**bluelyte**/
survelase/survelase maxi/beta tx/bluelyte dpss/varilite lc/dca/microblock/
accessories/projection lenses/energy efficient/customised solutions.

BlueLyte LC

The BlueLyte LC from Global Laser provides a user friendly, reliable & compact laser module in the Violet/Blue wavelength range with a number of market leading features

Stable output power is offered over a wide temperature range with the additional benefit of a LC (Linear Control) control circuit. The LC control circuit allows you to control the output intensity linearly by applying a voltage of between 0 & 1 volt, to the control input. This same control circuit also provides analogue modulation with modulation speeds in excess of 500kHz. The output intensity will faithfully replicate any arbitrary signal you wish to apply with a 0-1 Volt amplitude and within the limits of the laser module's maximum rise and fall time.

Further flexibility is provided by a choice of collimating lens providing circular or elliptical beams. The user adjustable collimating lens allows simple adjustment to provide a collimated beam or a focused spot at a required distance. A wide range of line generators and projection patterns are also available.

A wide range of output powers is available which combined with the compact 15mm diameter housing with a robust industrial connector and choice of optional mounting clamps provides a complete blue laser solution.

The BlueLyte LC offers
the user modulation
speeds in excess of
500kHz



Lens Options

Two standard user collimating adjustable lens type are available:-

Standard Lenses:-

S Lens: Produces an elliptical collimated beam or focussed spot

C2 Lens: Produces a circular collimated beam or focussed spot

Please note we have a number of other collimating lens options. If the listed lenses do not meet your requirements please call us.

Optional Line Lens Assemblies:-

L4 Line Lens: Produces a gaussian line with a full fan angle of typically 8°

L8 Line Lens: Produces a gaussian line with a full fan angle of 16°

Aligned Rod Lens: Produces gaussian line with a full fan angle of typically 90°

Please note other fan angles are available upon request

Power Options

Maximum Power Output With Lens

Wavelength	Power	S Lens	C2 Lens
405nm	5, 15, 50, 75	75mW	50mW
Custom	Please call with your requirements		
<i>Please note that all wavelength tolerance can vary typically by $\pm 10\text{nm}$</i>			
<i>Not all the powers are available with all lens options</i>			

Mounting Options

Heavy Duty Mounting Clamp

The optional heavy duty mounting clamp allows the BlueLyte LC range to be securely fixed at any required direction or angle. The base plate has a series of threaded holes which allows the clamp to be fixed directly onto a machine or workbench.

Magnetic Mount

A magnetic base is also available which allows the heavy duty clamp to be magnetically attached to a ferrous surface, negating the need for any mounting holes.

Swivel Mount Clamp

The optional swivel clamp allows the BlueLyte LC to be mounted securely. It offers the user up and down movement as well as $\pm 45^\circ$ horizontal swivel. The base plate has a series of holes which allows the clamp to be fixed directly onto a machine or workbench.



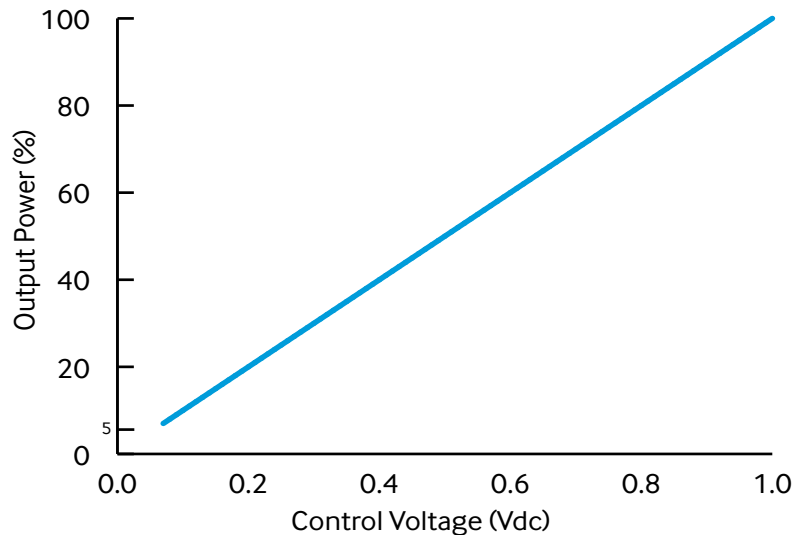
Specifications

Mechanical Information	
Mass (grams)	17
Dimensions (mm)	15 by 47
Housing	Blue & Black Anodised Aluminum
Isolated Body	Yes
Lead Length (mm)	300 (Other lead length available on request)
Connector Type	4pin Binder
Optical Information	
Wavelength (nm)	Power's (mW)
405	5, 15, 50, 75
Power Stability Over Temperature Range (Typical)	≤1% *
Beam Size at Aperture	*
Beam Divergence	*
Bore Sighting (mrad)	≤10 (Note 1)
Environmental Information	
Operating Case Temperature (°C)	0 to +70*
Storage Temperature (°C)	-20 to + 85*
Operating Humidity (%RH)	90 non condensing
MTTF @ 25°C (hrs)	≥ 7000
Electrical Specifications	
Input Voltage +ve (Vdc)	8
Black Lead (Vdc)	0
Yellow Lead	Modulation
Blue Lead	Enable
Operating Current (mA)	≤200
Reverse -Polarity protection	Yes
Frequency Range (Typical)	DC to 750kHz (Note 2)
Control Voltage Range	0 - 1V (See chart)
Modulation Input Voltage	0 - 1V
TTL Enable (Blue lead)	Low = Off High = On
NOTES * = Varies with Laser Diode type Note 1: Factory set focus. Note 2: Measured with 90% modulation depth sine wave to -3dB. Specification are typical at 25 °C unless otherwise stated	

Standard Driver Types

Linear Intensity & Analogue Modulation Control User Adjustable Intensity Control

Using the yellow control lead output power intensity may be linearly controlled from zero to the maximum factory set value. This may be achieved using a simple resistor or by applying a control voltage between 0 and 1V where 0Vdc is off and +1 Vdc is maximum with a linear relationship for every value between, e.g. an input of 0.5V would produce an output intensity of half maximum.



Modulation

Using the yellow control lead the laser may be modulated by using an external signal. The required voltage range is 0 to +1 Vdc (to set the maximum intensity), frequency range is DC to 750 kHz. Please note: applying more than 1 V does not increase the power above maximum but it can reduce the maximum frequency of modulation.

Note: Intensity control and modulation functions may be used together.

TTL Enable (Blue Lead)

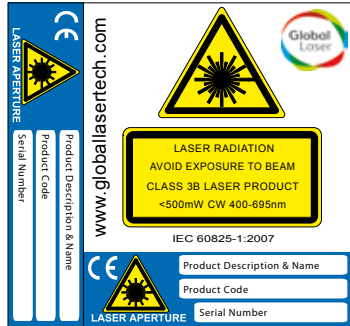
An on/off switch function is available via the blue wire. Applying 0V will switch the laser off whilst applying V supply leaves the laser switched on. This is partially useful for safety interlocks or enable switch's required for laser systems.

A TTL switch can also be utilised via this lead. TTL High = on and TTL Low = off. Maximum frequency is 100 Hz.

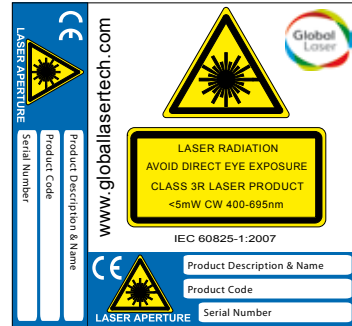
If not using this function please connect the lead to the V supply or the laser will not switch on.

Laser Safety

Our lasers are compliant to IEC 60825-1 standards. The lasers fall within one of the following classifications depending on power and wavelength.



Class 3B Laser Label



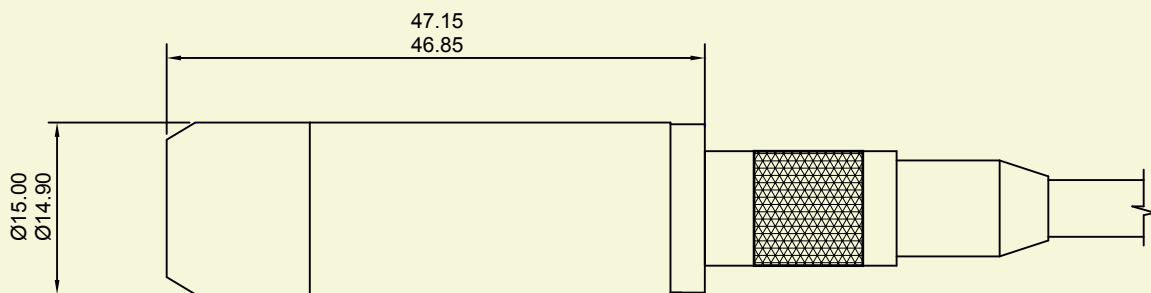
Class 3R Laser Label

Quality & Warranty

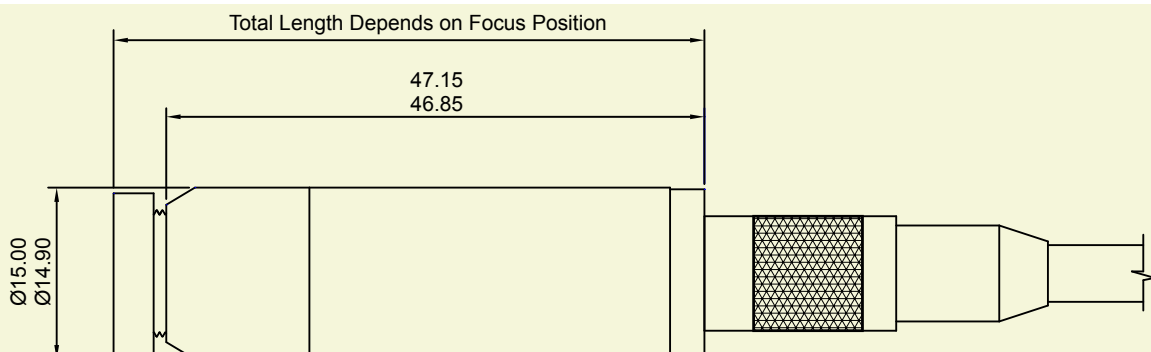
The BlueLyte LC range is supplied with a 12 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.

Mechanical Drawings.

BlueLyte LC

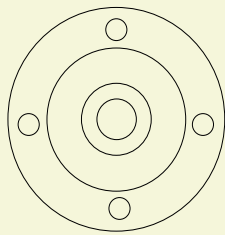
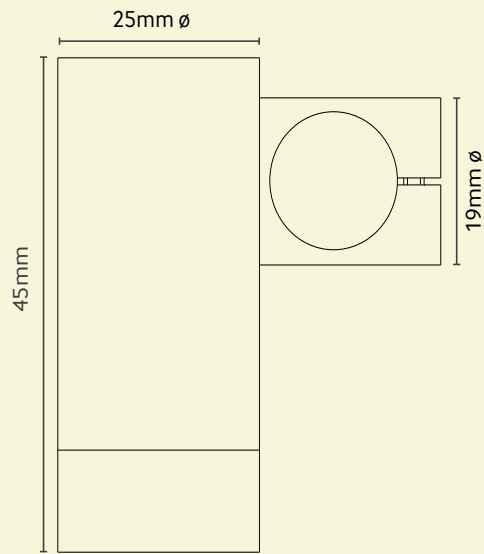


BlueLyte LC with External Optics

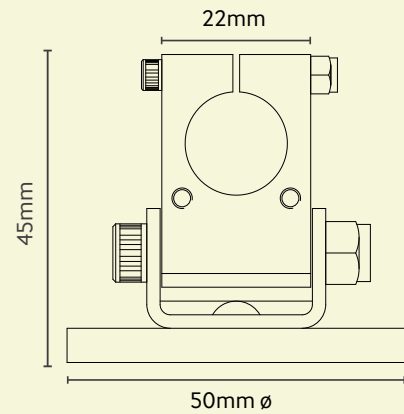


Mechanical Drawings

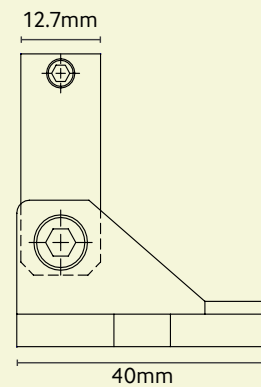
Heavy Duty Mounting Clamp



Swivel Clamp



Mounting hole on base 4 x 4.5mm



Please Note: Global Laser reserve the right to change descriptions and specifications without notice.

For further information about any of our products please contact your local distributor or you can contact Global Laser in the UK.
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