



# Laserlyte Alignment System

premier & acculase modulatable/ machine vision lyte-mv/dragonfly green/  
imatronic/**laserlyte**/laserlyte-flex/guideline/hawkeye detector/  
firefly green/firefly green mini/thread mountable cameo/15mm blue/  
survelase/survelase maxi/beta tx/bluelyte/varilite lc/dca/microblock/  
accessories/projection lenses/energy efficient/customised solutions.



The Laserlyte alignment system is a unique, user adjustable, plug and play system suitable for a wide range of applications, i.e. alignment and these applications include positioning of materials for garments, cloth, paper, wood and metal.

The system has a wide range of projections including variable intensity dot, adjustable line and variable intersecting angle cross, which combined with user adjustable focus allows the system to meet any number of applications. A wide range of wavelengths and intensities are available in order to maximise the visual appearance of the projection even against the darkest materials.

The V series has four power ranges from standard power (650nm, 5mW) to ultra bright (635nm, 15mW). This combined with six projections ranging from dots to crossed lines. A unique focus mechanism also allows the user to adjust the focus without removing any optics.

The 532nm Greenlyte system which is 9 times brighter than a 650nm laser to the human eye is particularly suited for use on surfaces such as hot steel, working at longer distances and in high ambient light level. Two models are available with powers of 1mW and 5mW. Six projections are available including, dot, cross and lines. Further flexibility allows the line and cross projection optics to be interchangeable between modules.

A range of mounting brackets, electrical leads and power supplies allow the system to provide a complete solution, ready to use with no previous laser experience required.



# Selection Guide

This catalogue covers our Laserlyte Range of red and green laser and is broken down into various sections. Please use the guide below to go straight to the relevant section.

Section	Product	Description
S1	Features	A brief look at the features
S2	Applications	Applications that the Laserlyte Alignment System is ideal for
S3	Model Matrix	Powers and projections options available
S4	Features	An in-depth look at the features
S5	Line Graph	Line graph calculator
S6	Fan Angle & Working Distance	Using the Laserlyte Alignment System at different angles
S7	Specifications	Detailed specification
S8	Accessories	A list of accessories available
S9	Laser Safety	Laser safety advice and classifications of the entire range
S10	Mechanical Drawings	Mechanical drawings for the Laserlyte and Greenlyte lasers

# S1. Features

The main features of the Laserlyte Range:-

- Plug and play system
- Available in red or green outputs
- Wide range of projection options
- Variable intensity Dot and Cross models
- User adjustable focus control
- 110/240 Vac & 12/24 Vdc powered
- Wide range of mounting options and accessories
- No technical laser experience required

# S2. Applications

- Garment manufacturing
- Screen printing
- Tyre manufacturing
- Saw cutting
- Fabric cutting
- Patient positioning
- Rotary press alignment


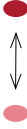




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The Laserlyte alignment system is a unique, user adjustable, plug and play system suitable for a wide range of applications













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# S3.Model Matrix

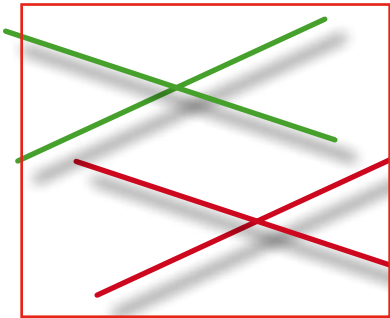
					
<b>Dot (D)</b>	<b>Dot With Variable Intensity (DVI)</b>	<b>Variable Length Line (VLL)</b> <i>Fan Angle 30° to 80°</i>	<b>Long Line With Dot (LL+D)</b> <i>Fan Angle 30° to 80°</i>	<b>Intersecting Crossed Lines (RXL)</b> <i>Fan Angle 55°</i>	<b>Small Cross With Variable Intensity (Xvi)</b> <i>Fan Angle 9°</i>

<b>Standard Power</b> V5 Range - 650nm 5mW						
<b>Bright Power</b> V3 Range - 635nm 5mW						
<b>Super Bright</b> V2 Range - 635nm 10mW						
<b>Ultra Bright</b> V1 Range - 635nm 15mW						

	<b>Dot (D)</b>	<b>Fixed Short Line</b> <i>Fan Angle 30°</i>	<b>Fixed Long Line</b> <i>Fan Angle 55°</i>	<b>Extra Long Line</b> <i>Fan Angle 90°</i>	<b>Cross</b> <i>Fan Angle 55°</i>	<b>Long Line With Dot (LL+D)</b> <i>Fan Angle 100°</i>
<b>Greenlyte</b> 532nm 1mW						
<b>Greenlyte</b> 532nm 5mW						

Key To Projections	
V Series	Greenlyte
D = Dot; which you can focus to a precise spot at any distance	D = Dot; which you can focus to a precise spot at any distance
Dvi = Dot; which you can focus to a precise spot at any distance, and vary the intensity	Fixed Line = A Fixed length line, available with fan angles of 30°, 55° & 90°
VLL = Variable Length Line; you can double the length of the line by spreading light from 30° to 80° fan angle	Intersecting Crossed Lines = Crossed lines which can be rotated to intersect at any angle, from any angle of mounting
LL+D = Long 80° line with central dot enabling both vertical and horizontal alignment	Fixed Long Line with a Dot = A fixed length line (100° fan angle) with a central dot enabling both vertical and horizontal alignment
RXL = Crossed Lines which can be rotated to intersect at any angle, from any angle of mounting	
Xvi = Small fixed cross which also has variable intensity	

# S4. Features



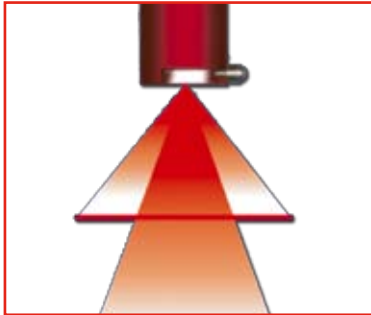
## Multiple Projections & Brightness

The Laserlyte alignment system has various power and wavelength outputs from the Greenlyte range (532nm, 1 & 5 mW) to the V range (from 650nm 5mW up to 635nm, 15mW). Each one has a wide range of different projections from dots to variable intersecting crosses enabling them to meet a wide range of alignment applications.



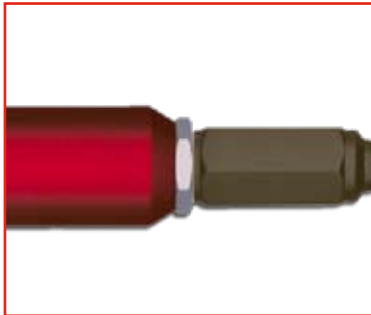
## Adjustable Focus

The V range has a unique user adjustable focus control which allows the user to focus (vary the thickness of the projection) the laser at any required distance without the inconvenience of remove any projection lens. A focus key is supplied to enable this.



## Adjustable Projections

A wide range of the Laserlyte modules feature an adjustable projection control, this allows the user to vary projection of the laser such as the intensity of the dot, the length of the line and adjust the intersection angle of the cross to produce a 90° cross at any mounted position. (See model matrix for further details).



## Plug & Play

The LaserLyte system has been designed so that the user can operate the system efficiently and effectively via simple DC connector jack plugs.



## MK1 Mounting Kit

The MK1 mounting kit is compatible with the V range. The laser clamp rotates horizontally through 360° and vertically through 180° and the mounting post allows vertical movement. The mounting clamp is compatible with Global Laser's mounting brackets and is supplied with two different lengths of machine screws to increase the range of mounting surfaces which can be utilised.



## Heavy Duty Mounting Clamp

Two models of the heavy duty clamp are available, one model for the V range and one for the GreenLyte range. The Heavy duty clamp has parallel and vertical adjustment which allows the user to aim the laser in any required direction or angle. The base plate of the heavy duty clamp has a series of threaded holes to allow the heavy duty clamp to be securely fastened to stable surface.



# S6. Fan Angle & Working Distance

The size of the fan angle (or spread of the beam) will determine how long the line is. When viewed from the same distance and at 90 degrees to the surface a line with a fan angle of 80 degrees will be longer than a line of 30 degrees.

Fan Angle (Degrees)	Distance to Object (mm)	Line Length (mm)
30	100	54
80	100	168

As a guide to relationship between working distance, line length and fan angle please see table below

		Fan Angle (Degrees)				
		9°	30°	55°	80°	90°
Distance From Object (mm)	250	39	134	260	420	500
	500	79	268	521	839	1000
	750	118	402	781	1259	1500
	1000	157	536	1041	1678	2000
	1250	197	670	1301	2098	2500
	1500	236	804	1562	2517	3000
	1750	275	938	1822	2937	3500
	2000	315	1072	2082	3356	4000
	2250	354	1206	2343	3776	4500
	2500	394	1340	2603	4195	5000
	2750	433	1474	2863	4615	5500
	3000	472	1608	3123	5035	6000
	3250	512	1742	3384	5454	6500
	3500	551	1876	3644	5874	7000
	3750	590	2010	3904	6293	7500
	4000	630	2144	4165	6713	8000
	4250	669	2278	4425	7132	8500
	4500	708	2412	4685	7552	9000
4750	748	2546	4945	7971	9500	
5000	787	2679	5206	8391	10000	
5250	826	2813	5466	8811	10500	
5500	866	2947	5726	9230	11000	

Line Length (mm)



# S7. Specifications

	V Range	Greenlyte
<b>Mechanical Information</b>		
Width by Height (mm)	14 x 69	17 x 112 (with line & cross optics is 128)
Housing	Red Anodized Aluminium	Green Anodized Aluminium
Isolated Body	Yes	Yes
<b>Optical Information</b>		
Diode Power (mW)	1 to 15*	5
Wavelength (nm)	635- 650	532
Intensity Distribution (Output Beam)	Gaussian	Gaussian
Focus Range	6mm to infinity	300mm to infinity (125 without line or cross optic)
Warm up time to 75% of full power	N/A	< 30 Seconds
Delivery Set Focus	1000 (User Adjustable)	1000 (User Adjustable)
<b>Environmental Information</b>		
Operating Case Temperature (°C)	-10 to +45 *	5 to +35 *
Storage Temperature (°C)	-10 to +85	-10 to +85
Operating Humidity (%RH)	90	90
MTTF @ 25°C (hrs)	>25,000*	10,000
<b>Electrical Specifications</b>		
Connector Type	DC Power Jack	DC Power Jack
Reverse Polarity Protection	Yes	Yes
NOTES * Varies with laser diode type All specifications are typical @ 25°C		

# S8. Laserlyte Accessories

The following accessories are included with the complete Laserlyte system:

## V Range

x1 Laser, x1 MK1 Mounting Clamp, x1 1.5m Electrical Lead, x1 Focus Key

*Please note the you will need to purchase a PS-1 (1 way), PS-4 (4 way) or (1 way) 12/24 Vdc power supply separately.*





## Greenlyte Range

x1 - Laser, x1 - Focus Key. You can also purchase any combination of projection optics shown in the product matrix.



*Please note the Greenlyte range you will need to purchase a PS-1 (1 way) or (1 way) 12/24 Vdc power supply and power lead separately.*

There are also a number of Greenlyte systems available which consist of:

x1 Laser, x1 Projection Option, x1 Heavy Duty Mounting Clamp, x1 Focus Key, x1 3m Electrical Lead, x1 PS-1 power supply and plug

Mounting Accessories		
<b>Heavy Duty Mounting Clamp</b>	The Heavy Duty Mounting Clamp allows the Laserlyte alignment system parallel and vertical adjustment which allows the user to aim the laser in any required direction or angle. Please state whether you require the Heavy Duty Clamp for the V range or the Greenlyte.	
<b>MK1 Mounting Clamp</b>	Simple, Cost effective moutning kit (V range only)	
<b>Magnetic Base</b>	The Magnetic base is an accessory which allows the heavy duty mounting clamp to be magnetically attached to a ferrous surface, negating the need for any mounting holes.	
<b>Brackets</b>	Brackets are available with holes at regular Intervals for mounting clamps. B12 - 30cm/12" B6 - 15cm/6" B4 - 10cm/4" B2 - right angled 10cm/4" BS - one of each	

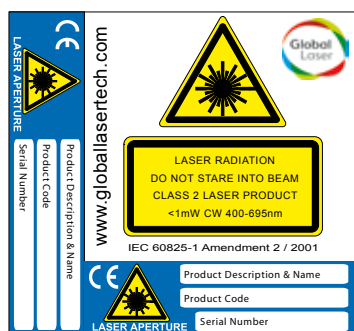
## Electrical Options

<b>Power Supplies</b>	PS-1 for 1 laser (110/240 Vac) PS-4 for up to 4 lasers (110/240 Vac) (V range only) 24Vdc for 1 laser  Please state which IEC lead you require when ordering (UK, Euro or US) and if you require a key switch (PS-1 and PS-4 only).	
<b>Power Leads</b>	Power leads to connect the laser module to power supply are available in the following lengths:  1.5m, 3m, 5m, 10m,  Other leads available upon request.	

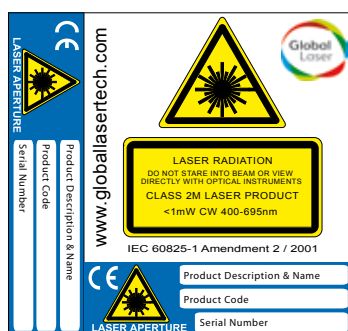
# S9. Laser Safety

Model	Classification of the Laser Power Out Conform to
V3D, V3DVi, V5D V5DVi, Greenlyte 1mW	Class 2
V2VLL, V3VLL, V5VLL, V3LL+D, V3VLL+D, V3RXL, V5RXL, V3Xvi, V5Xvi	Class 2M
V1VLL, Greenlyte 5mW	Class 3R

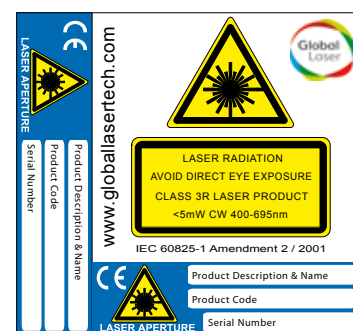
Our Lasers are compliant to IEC 60825-1 standards. The lasers fall within one of the following classifications depending on power, wavelength and fan angle. The labels supplied with the units are shown below.



Class 2 Laser Label



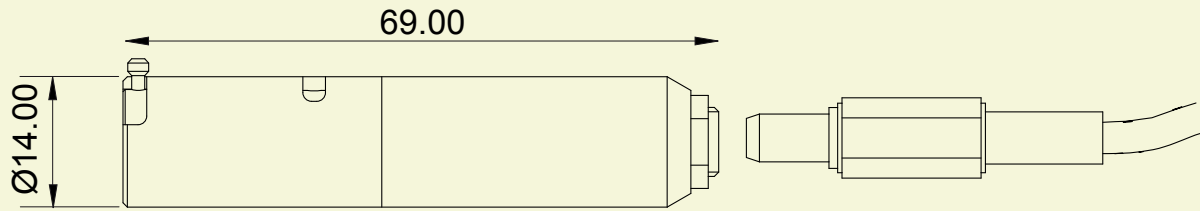
Class 2M Laser Label



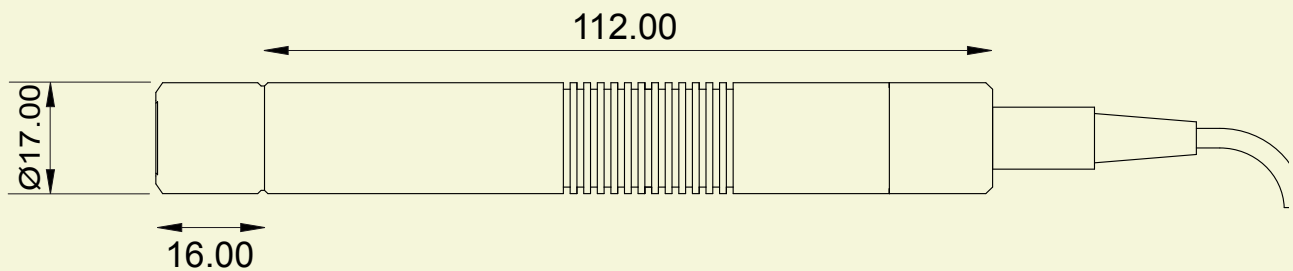
Class 3R Laser Label

# S10 Mechanical Dimensions

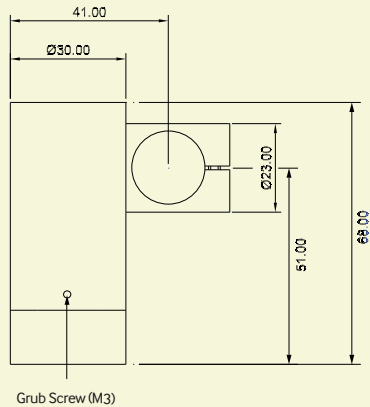
## V - Laserlyte Laser Module



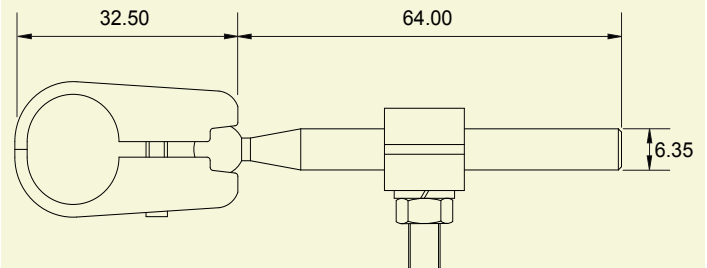
## Greenlyte Laser Module



## Heavy Duty Mounting Clamp



## MK1 Clamp



## Quality & Warranty

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

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. Your Local Distributor is:

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