



**Survelase Maxi Datasheet  
Long Distance Targeting Laser**

# Survelase Maxi

The Survelase Maxi combines all the features of Global Laser's Survelase with additional benefits of Analogue and TTL modulation, higher output powers and a higher level of bore sighting accuracy.

The 17mm diameter housing combines an achromatic lens, laser diode and APC control circuit which allows output powers up to 30mW, optional analogue or TTL modulation and the convenience of operating from a 5 volt DC power source. A further benefit being the lens arrangement is precisely set during manufacture to accurately align the output beam to the outer sleeve ensuring a high level of boresight accuracy.

The Survelase Maxi is suitable for a wide range of applications where a small spot at a longer distance is required, e.g. positioning, targeting and alignment.

It is available in 650nm and a more visually intense 635nm where improved visibility is required. The focus mechanism allows the output beam to be adjusted to your requirements via a focus key.



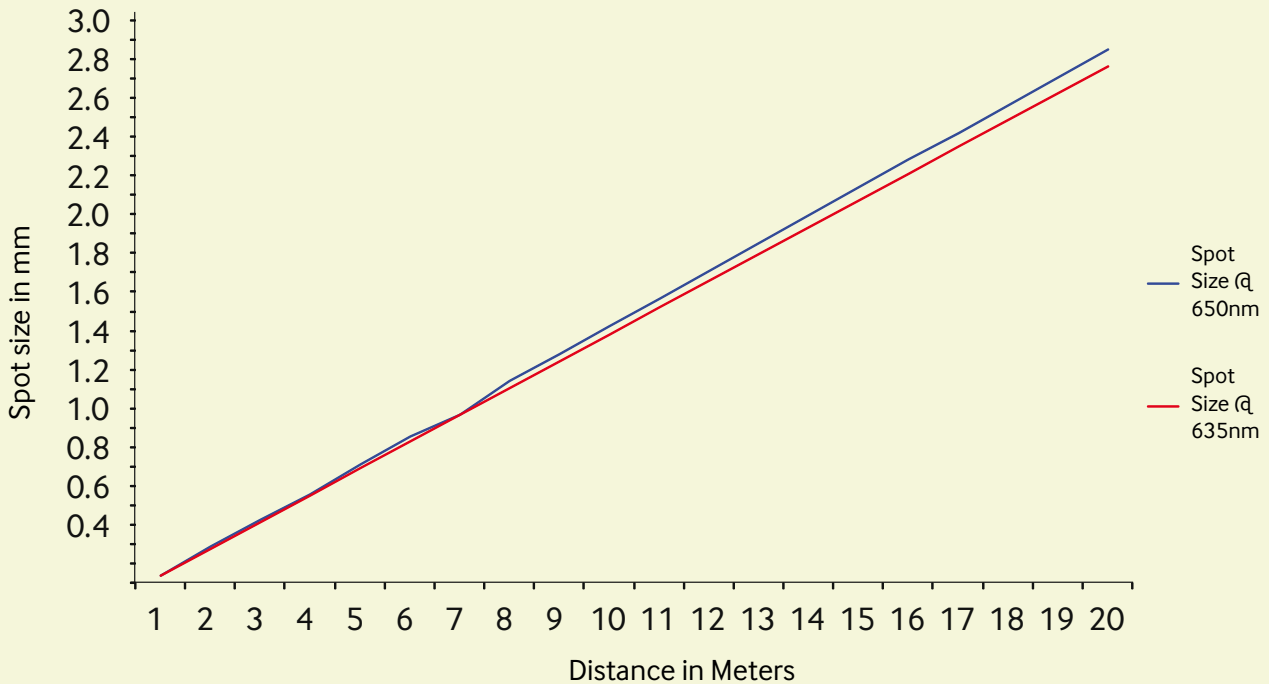
# Specifications

Mechanical Information		
Dimensions (mm)	17 by 70	
Weight (grams)	34	
Housing	Anodized Aluminium	
Isolated Body	Yes	
Optical Information		
Wavelength (nm)	635	650
Diode Power (mW)	1, 5, 13	1, 5, 10, 30
Power Stability (typical)	3%	
Focus	Factory set at collimation or adjustable	
Beam Size At Aperture (mm)	7.5	
Optimum Collimation Distance	140 meters (@ 635nm)	
Distance To Waist	70 meters (@635nm)	
Beam Divergence (Full Angle) (mrad)	0.25 (Typical)	
Minimum Focus Distance (mm)	180	
Smallest Spot Size (µm)	<45 (Typical)	
Boresight (mrad)	≤1 (Typical) (Note 1)	
Environmental Information		
Operating Case Temperature (°C)	-10 to +45 #	
Storage Temperature (°C)	-40 to +85	
Operating Humidity (%RH)	90 (non condensing)	
MTTF @ 25°C (hrs)	25,000*	
Electrical Specifications		
Input Voltage (Vdc)	5 ±5%	
Operating Current	*	
Connector Type	Flying Leads	
Red Lead	Plus Volts	
Black Lead	0 Volts	
Yellow Lead	Modulation	
Lead Length (mm)	500	
Reverse Polarity Protection	Yes	
	LC Version	PWM Version
Frequency Range (Typical)	DC to 300 KHz (Note 2)	DC to 500KHz
Control Voltage Range	0-1V (See Chart)	N/A
Modulation Input Voltage	0-1V	<.4V = Off >2 = On
<p>NOTES</p> <p>Note 1: @ Factory set focus</p> <p>Note 2: Measured with 90% modulation depth sine wave to 3dB</p> <p>* Varies with laser diode type and output power</p> <p># The operating case temperature range is depended on the laser diode fitted. The quoted information is the typical range. Some wavelengths and powers may have a wider operating temperature range. Please contact us for the temperature range for individual models.</p>		
All specifications are typical @ 25°C		

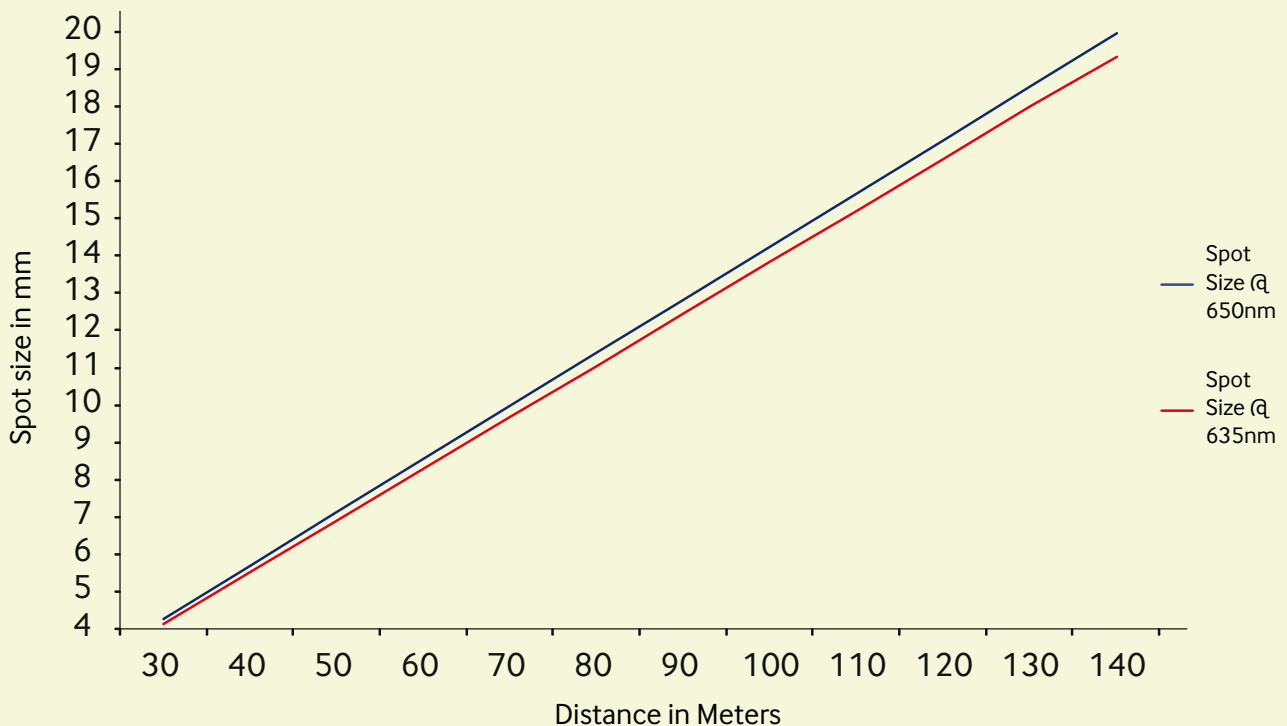
# Focusing Characteristics

The Survelase Maxi is available in two versions. One has the unit focus factory set at collimation, the other version has the focus set at your required focusing distance. A focus key is supplied to allow the user to adjust the focus. Please state which version you require when ordering and specify your required focus distance.

## Short Range Spot Size



## Long Range Spot Size



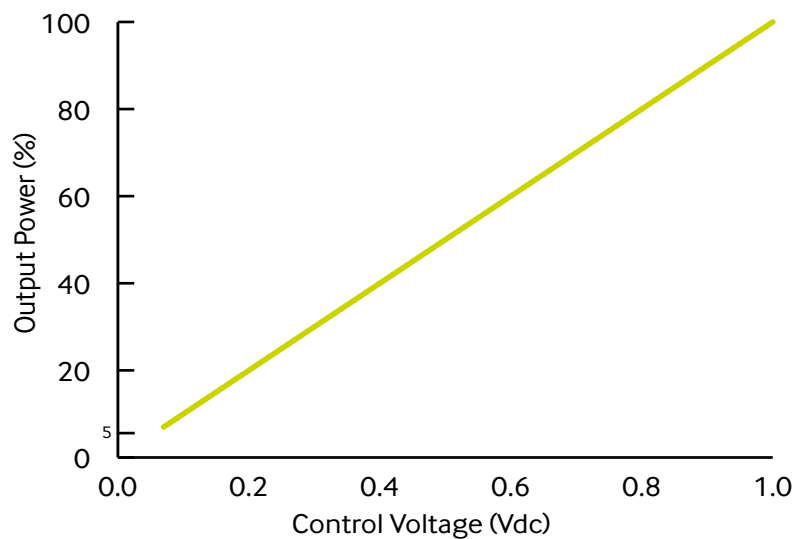
# Standard Driver Types

Two driver boards are available for the Survelase Maxi laser, either a Linear control or Pulse Width Modulation.

## Linear Intensity & Analogue Modulation Control (LC Model)

### 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 300 KHz. Please note: applying more than 1V 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.*

## Pulse Width Modulation TTL Digital Control (PWM Model)

The Survelase Maxi laser is also available with a TTL driver board that allows the unit to be gated on and off, or pulse-width modulated at TTL voltage levels via the yellow control lead.

Rise Time: < 0.5us\*

Fall Time: , 0.5us\*

\* = *Varies with model*

# Mounting Options

## Heavy Duty Mounting Clamp

The optional heavy duty mounting clamp allows the Survelase Maxi 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.



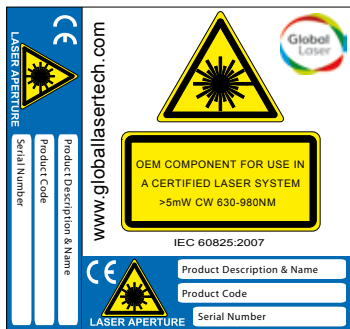
## Magnetic Base

The Magnetic base is an optional accessory which allows the heavy duty mounting clamp to be magnetically attached to a ferrous surface, negating the need for any mounting holes.

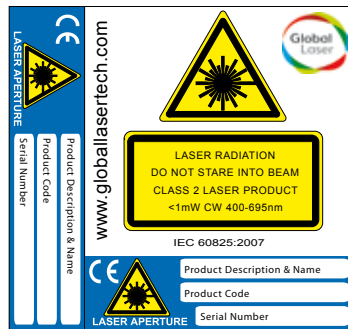


# Laser Safety

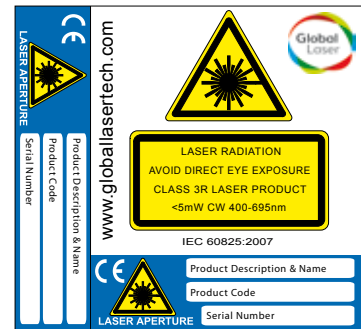
Our lasers are compliant to IEC 60825-1 standards. The lasers fall within one of the following classifications depending on power and wavelength.



OEM Laser Label



Class 2 Laser Label



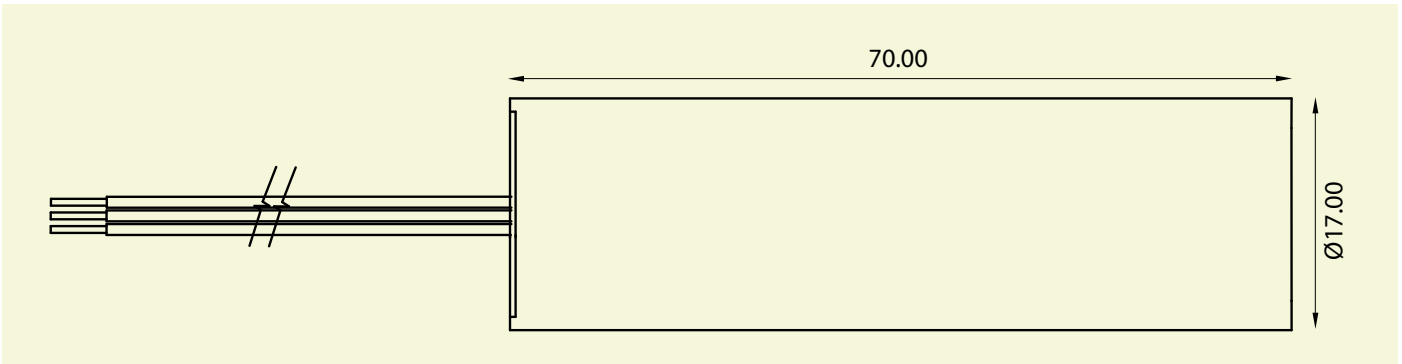
Class 3R Laser Label

## Quality & Warranty

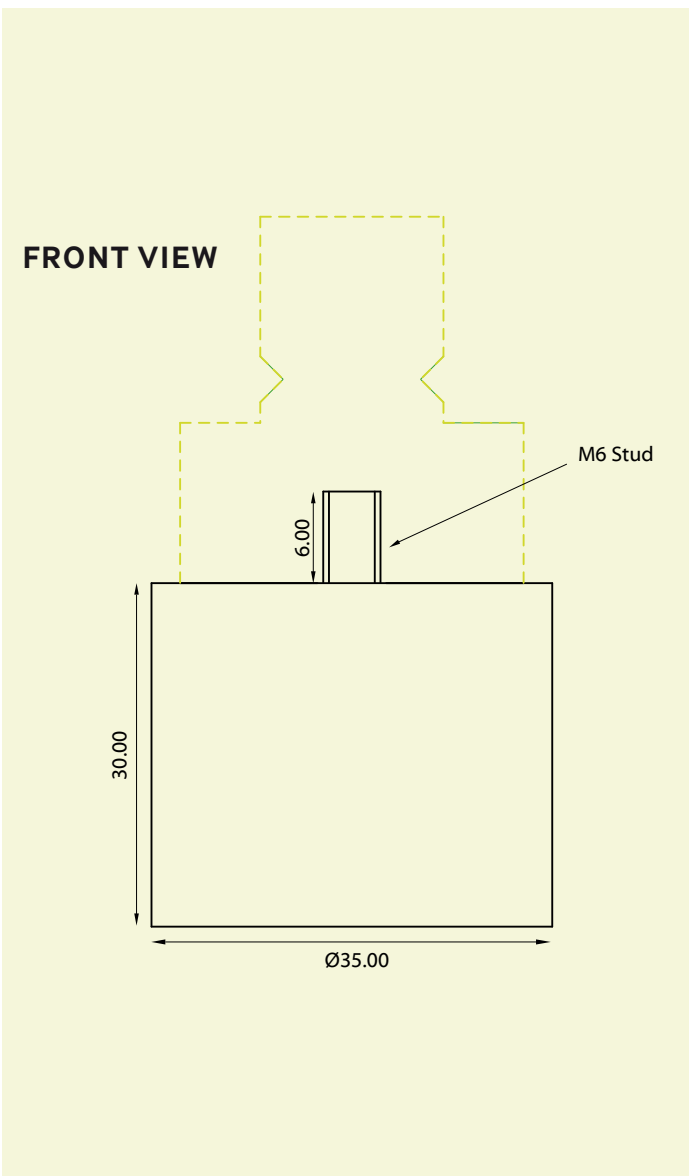
The Survelase Maxi range is supplied with a 12 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.

# Mechanical Dimensions

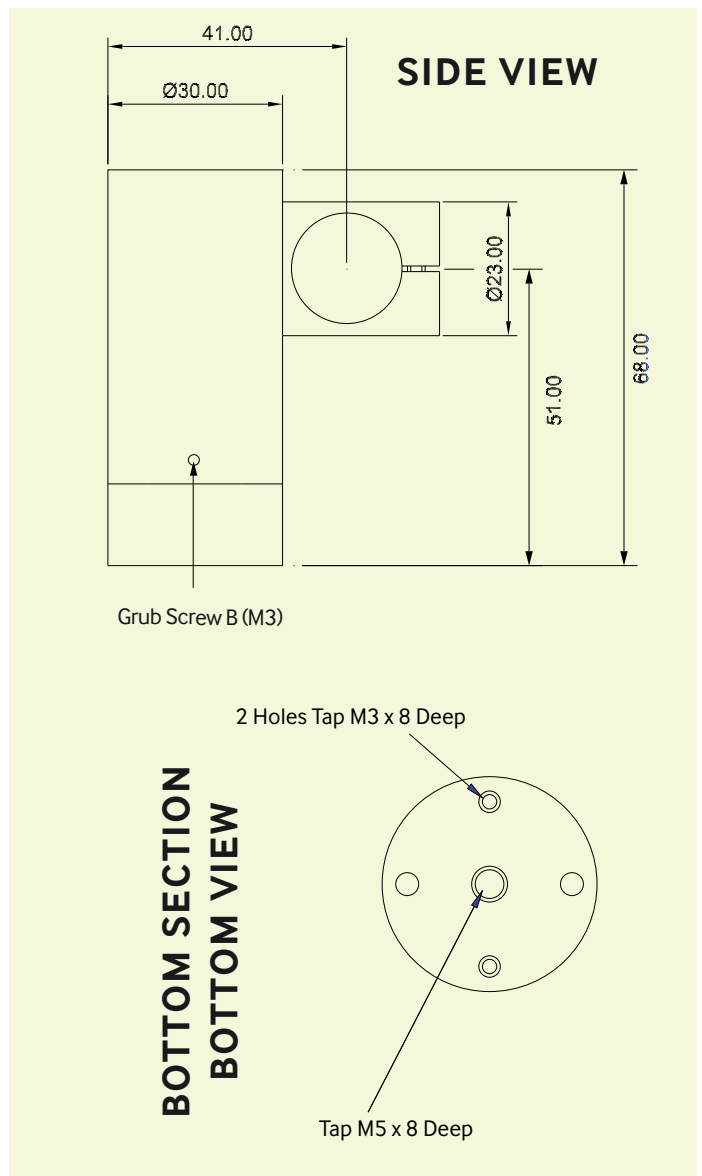
Survelase Maxi Laser Module



## Magnetic Base



## Large Mounting Clamp



Drawings are not to scale.

# Notes

Please note: Global Laser reserve the rights 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:



9090-05-050 Rev 2 28/01/2014



T: +44 (0)1495 212213  
F: +44 (0)1495 214004  
E: [sales@globalasertech.com](mailto:sales@globalasertech.com)  
[www.globalasertech.com](http://www.globalasertech.com)

Global Laser Ltd  
Unit 9-10  
Roseheyworth Business Park  
Abertillery, Gwent NP13 1SP UK