



**Survelase Module**  
*Long Distant Targeting Laser*

# The Survelase

A 15mm diameter housing with a custom designed achromatic lens arrangement allows the Survelase to produce small spots over a wide range of working distance with the additional benefit of user adjustable focus. Combined with the internal APC control circuit which operates on a 5 volt DC power source and with the added feature of TTL modulation makes this laser a complete package, flexible for a wide range of applications.

The Survelase 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 635nm and with powers of 1mW and 5mW. The focus mechanism allows the output beam to be adjusted to your requirements via a focus key.

## Features

- Small well defined spots at longer working distances
- 635nm with powers of 1mW and 5mW
- Will operate on CW and TTL modulation
- Excellent focus & spot quality
- Rugged design
- Low operating current
- User adjustable focus

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Ideal for high  
quality spots at long  
working distances

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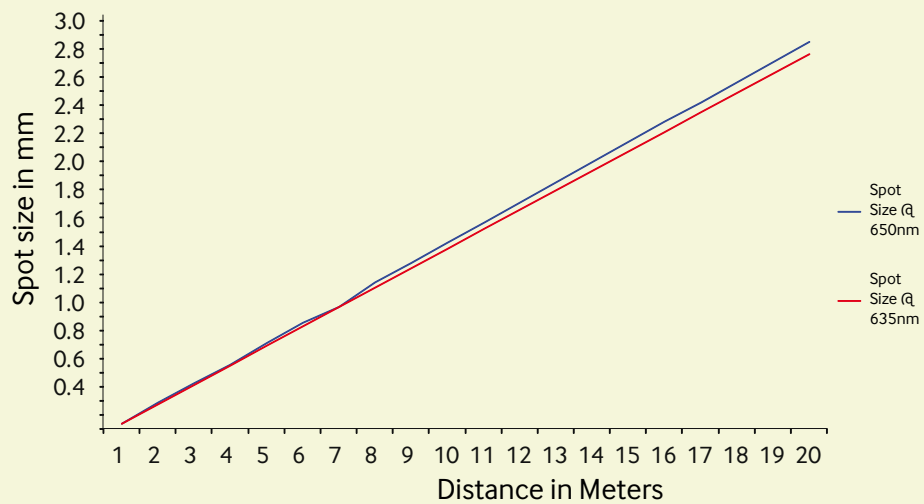
# Specifications

Product Specification		
<b>Farnell Part Number</b>		
<b>Imatronic Part Number</b>	1600-14	1600-15
<b>Model</b>	Survelase 635nm 1mW	Survelase 635nm 3mW
<b>Output Power (mW)</b>	0.9	4.5
<b>Wavelength (nm)</b>	635	
<b>Laser Class</b>	2	3R
<b>Operating Voltage (Vdc)</b>	3.5 to 5.0	
<b>Operating Current (mA)</b>	30-50	55-75
<b>Operating Case Temperature (°C)</b>	0 to +45	
<b>Storage Temperature (°C)</b>	-40 to +85	
<b>Beam Size At Aperture (mm)</b>	7.5	
<b>Beam Divergence (Full Angle)</b>	0.25mrad (Typical)	
<b>Boresight (mrad)</b>	≤2.5	
<b>Focus</b>	Factory set at collimation	
<b>Optimum Collimation Distance</b>	140 meters (λ 635nm)	
<b>Distance To Waist</b>	70 meters (λ 635nm)	
<b>Minimum Focus Distance (mm)</b>	200	
<b>Smallest Spot Size</b>	<50 microns (Typical)	
<b>MTTF @ 25°C (hrs)</b>	>29,000	>49,000
<b>Power Stability (Typical)</b>	± 3% (15° - 45°)	
<b>Mass (g)</b>	22	
<b>Dimensions (mm)</b>	15 by 58.5	
<b>Housing</b>	Anodized Aluminium	
<b>Isolated Body</b>	Yes	
<b>Connector Type</b>	Flying Leads	
<b>Lead Length (mm)</b>	100	
<b>Input Leads</b>	<b>Red Lead</b>	+Ve
	<b>Black Lead</b>	0V
	<b>Blue Lead</b>	TTL
<b>Frequency Range</b>	≤1Khz	
<b>Operating Humidity (%RH)</b>	90 (non condensing)	
<b>Reverse Polarity Protection</b>	Yes	
NOTES All specifications are typical @ 25°C		

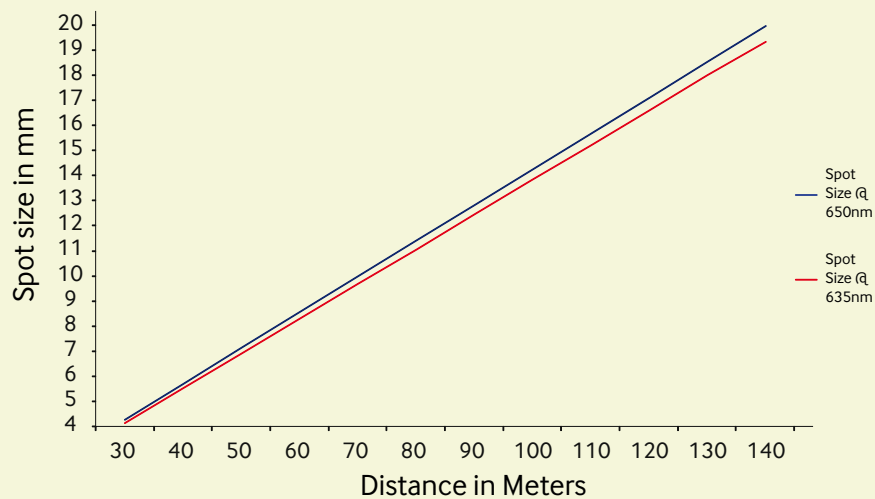
# Focusing Characteristics

The Survelase laser module is factory set at collimation, but is supplied with a focus key.

## Short Range Spot Size



## Long Range Spot Size

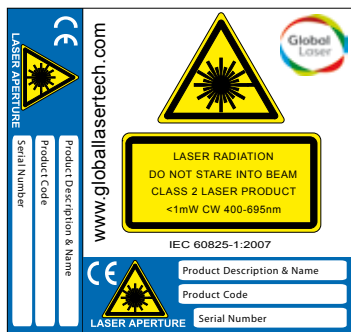


# TTL Modulation

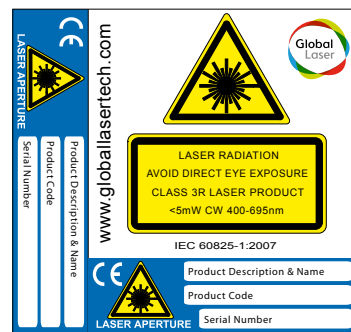
A common requirement for applications which use photo detectors, cameras and other non-visual sensing is the ability to rapidly switch the laser output ON and OFF. Simply applying and removing the supply voltage is rarely satisfactory and in certain cases can result in the destruction of the module. This is because laser diodes are very sensitive to spikes and surges, which are often the result of uncontrolled supply switching. To overcome this limitation the Survelase can be ordered with an additional input via a third input wire that controls the output of the laser module in a reliable and predictable way. A logic LOW level turns the output completely OFF. However, applying a logic HIGH turns the laser ON after a control input delay. This sets the maximum rate at which the module can switch fully ON and OFF. Bandwidth is typically  $\leq 1\text{Khz}$ .

# Laser Safety

Our lasers are compliant to IEC 60825-1 2007 standards. The lasers fall within one of the following classifications depending on power and wavelength.



Class 2 Label



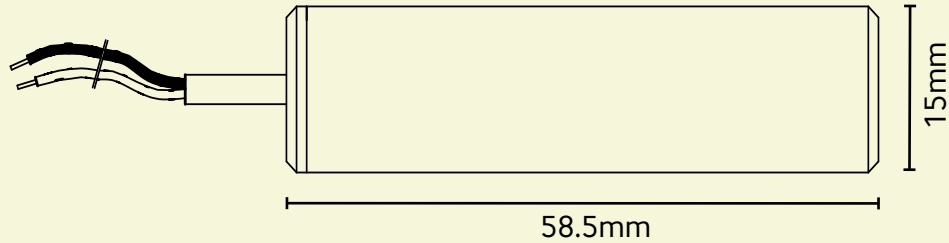
Class 3R Label

# Quality & Warranty

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

# Mechanical Drawings

## Survelase Laser Module



*Drawings are not to scale.*

Please note: Imatronic reserve the right to change descriptions and specifications without notice.



ISO9001 Certified



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