



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

Ideal for high
quality spots at long
working distances



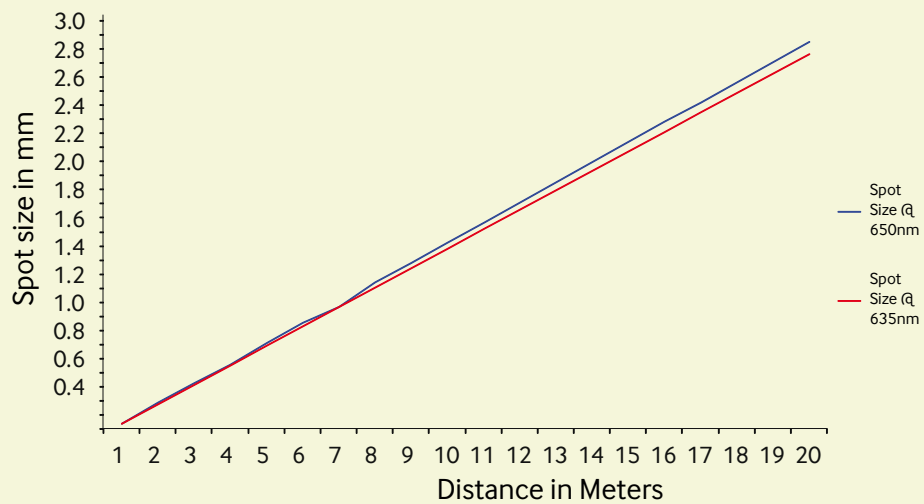
Specifications

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

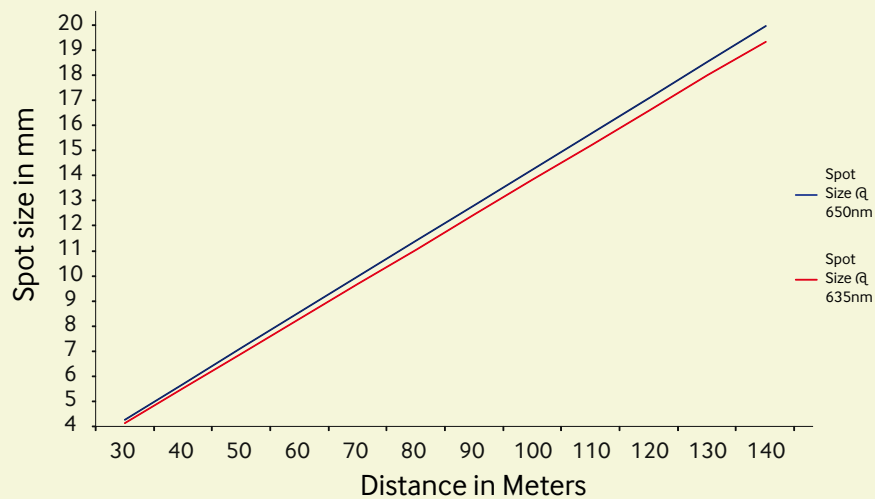
Focusing Characteristics

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

Short Range Spot Size



Long Range Spot Size

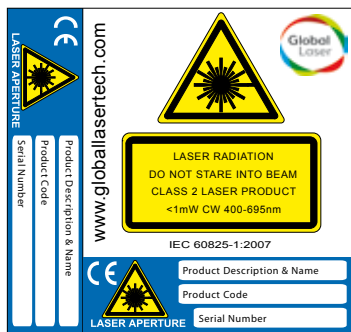


TTL Modulation

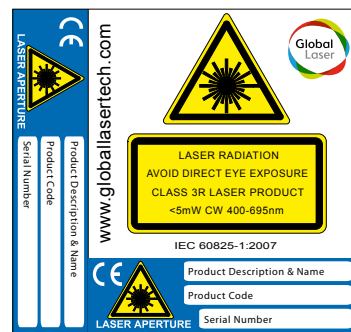
A common requirement for applications which use photo detectors, cameras and other non-visual sensing is the ability to rapidly switch the laser output ON and OFF. Simply applying and removing the supply voltage is rarely satisfactory and in certain cases can result in the destruction of the module. 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



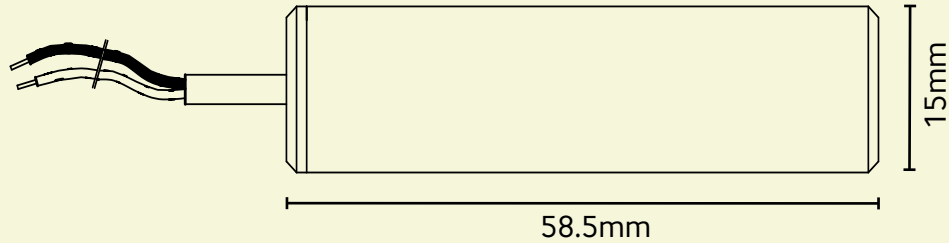
Class 3R Label

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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