A Global Laser Brand

FireFly Mini Green

FireFly Mini Green

The FireFly Mini Green sets a new standard for small industrial grade, green laser diode modules. A radically new design provides TE stabilised performance without TE size cost and power consumption.

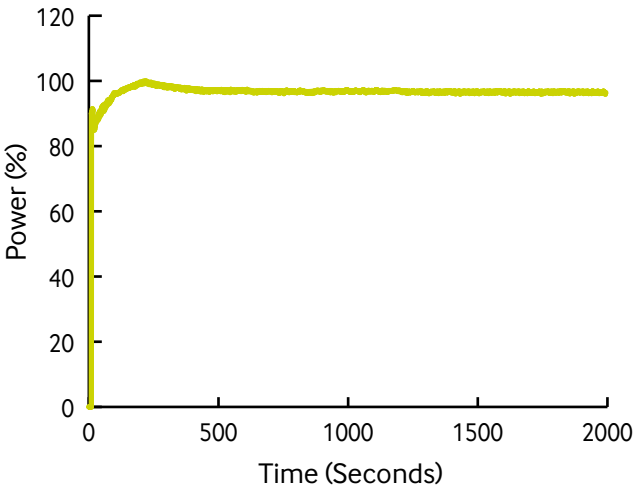
The self-contained laser offers the user impressive power stability over a wide operating temperature with a quick warm up time.

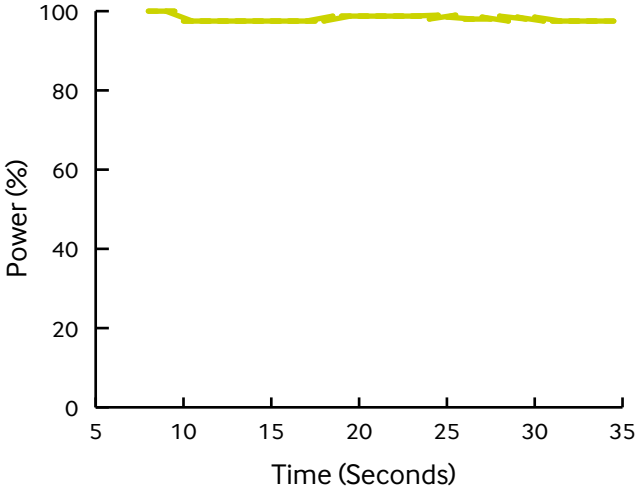
The new unit is ideal for space constricted applications whilst still offering the high performance linear and TTL/PWM Modulation capabilities that have come to be expected from Global Laser.

High accuracy bore slight aligned spot with low divergence and achieved by the integrated optics allows focusing over a wide operating range.

Power Stability

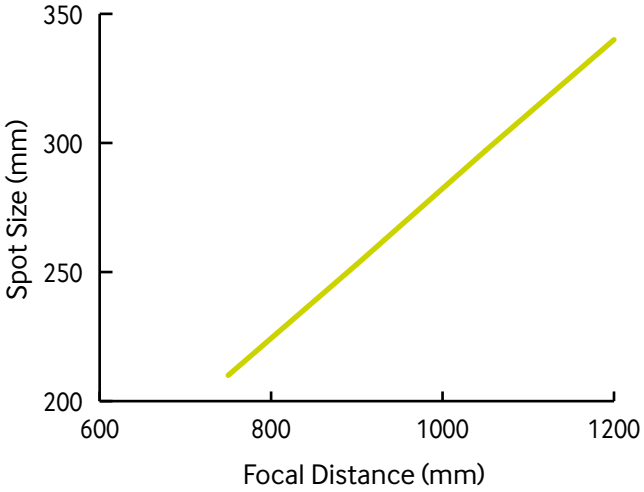
The profiles below show the typical power stability vs. time and power stability vs. temperature.

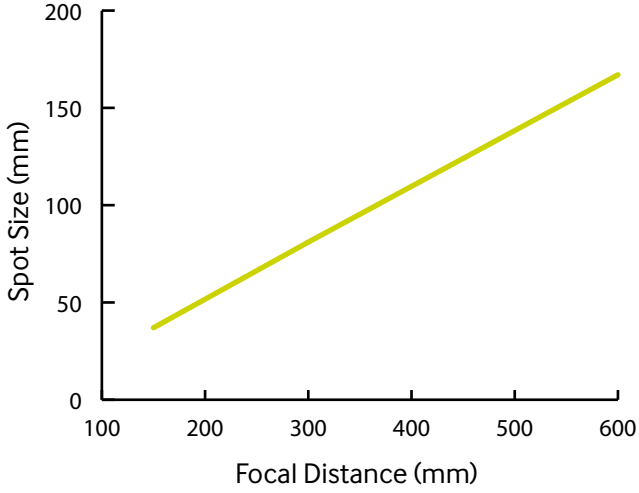




Focussing Characteristics

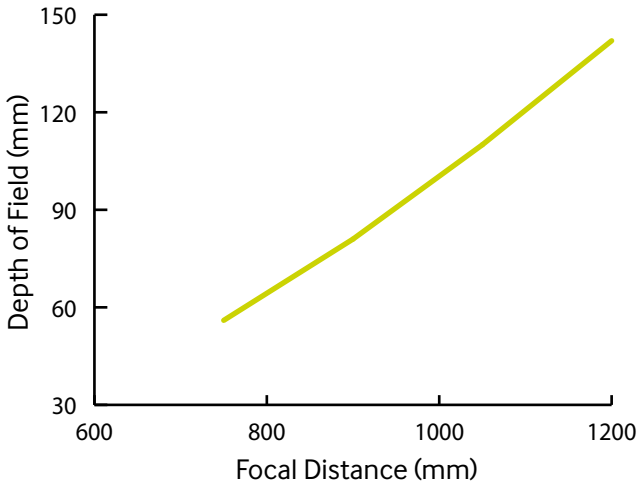
The following charts show the typical focusing of the FireFly laser. The focus charts indicate the minimum spot size (at 1/e2) achievable for a specific projection distance.

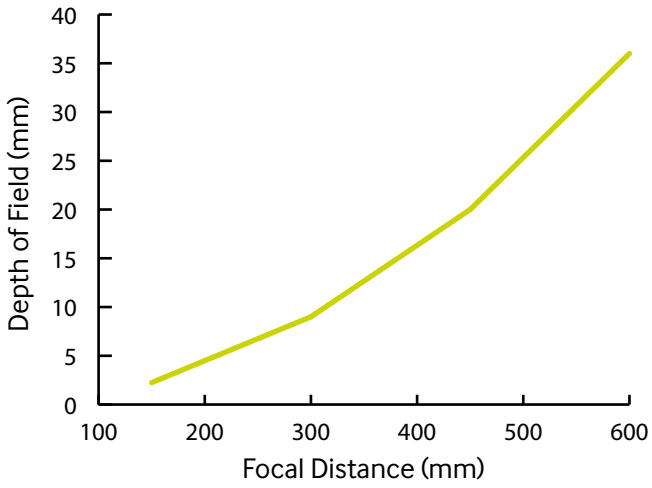




Depth of Field Characteristics

The following charts show the typical depth-of-field performance of the FireFly laser. The depth-of-field is defined asthe distance between two points either side of the pre-set focus at which the spot size increases by a factor of √2.





Standard Driver Types

Pulse Width Modulation TTL Digital Control (PWM)

The FireFly Mini 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. The standard version offers non inverting TTL where an input signal of < 0.4 V = off and > 2 V = on and vice versa for the inverted model. Frequency bandwidth is typically 50 kHz.

Rise Time: < 10us (typical)
Fall Time: < 10us (typical)

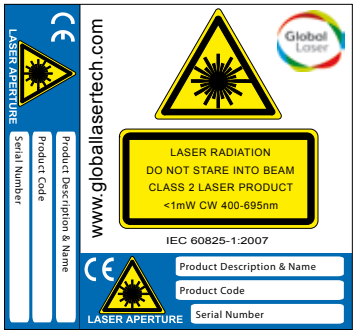
Specifications

Mechanical Information	
Mass (grams)	30
Dimensions (mm)	15 x 75
Housing	Green Anodised Aluminium
Isolated Body	Yes
Input Leads	CW Version - 250mm Cable *2 wires, Red (+ve) Black (0V)*
	Modulated Version - 500mm Cable *3 wires, Red (+ve) Black (0V) Yellow (Modulation)*
Optical Information	
Diode Power (mW)	1
Wavelength (nm)	532
Intensity Distribution	TEM_{00}
Focus Range (mm)	115 to infinity
Warm Up Time to 75% of Full Power	< 30 seconds
Power Stability Over Operating Range	<10%
Power Stability Over Constant Temperature	< 1%
Beam Size At Aperture (mm)	1
Minimum Beam Divergence (mrad)	0.1
Pointing Stability (mrad)	0.5
M^2	<1.2
Focus	User Adjustable
Bore Sighting (mrad)	<2
Environmental Information	
Operating Case Temperature (°C)	+5 to +35
Storage Temperature (°C)	-10 to +85
Operating Humidity (%RH)	90 (non condensing)
MTTF @ 25°C (hrs)	>10,000
Electrical Specifications	
Input Voltage	3.3Vdc to 5Vdc
Operating Current (mA)	350 max (Diode Dependant)
Connector Type	CW Version - Flying Leads
Cable Length (mm)	250
Reverse Polarity Protection	Yes
Over Temperature Protection	Yes
Modulation	
Typical Rise & Fall Time	<10
Frequency	DC to 10 kHz
Modulation Input Voltage	<.4V = Off >2V = On

NOTES
All specifications are typical @ 25°C

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.



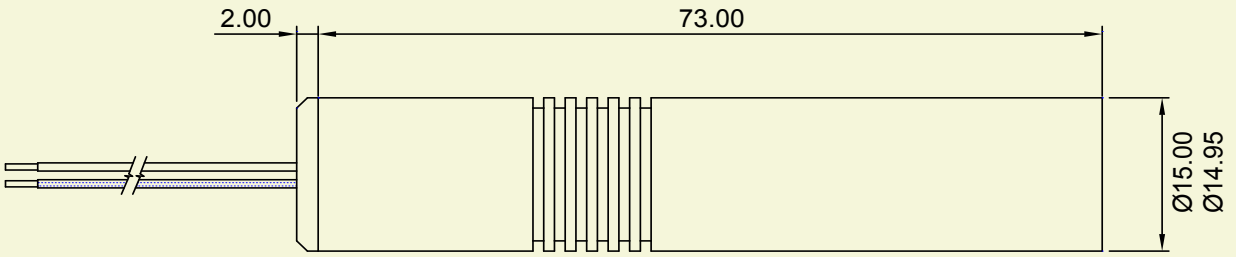
Class 2 Label

Quality & Warranty

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

Mechanical Drawings

FireFly Mini



Drawings not to scale

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

ISO9001 Certified

IMATRONIC
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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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