



GuideLine 2

Highly Visible Alignment Lasers for Visually Demanding Surfaces

GuideLine 2 Range

The GuideLine 2 provides a reliable and robust industrial alignment laser for a wide range of applications including the alignment and positioning of materials including garments, cloth, paper, wood and metal. It features IP67 protection, a threaded barrel and the ability to operate from industrial voltage sources such as 24Vdc.

The laser is available in two power levels in 635nm, which is the brightest red wavelength. For more visually demanding applications a version in 520nm green is available which is ~ 4 times more brighter than the same power in 635nm. For all models, a range of different line generators with fan angles from 20 to 90° are available. Two different cross projections are also available. The user can also adjust the focus via an external control ring.

The laser features an IP67 rated housing to protect it from dirt and debris and a thread barrel for simply mounting with bulkheads and mounting blocks. Electrical connection is via an IP67 jack plug with an operating voltage input range of 5 to 30Vdc (520nm models 10 to 30Vdc).

A comprehensive range of accessories including mounting clamps and rail systems, mains power supplies and laser safety and enhancement glasses are also available to complement the Guideline 2.



Features



Highly Visible Red and Green Laser Outputs

Available in two power levels in 635nm, which is the brightest red wavelength. The GuideLine 635nm 10mW provides an economical entry level model for application where low levels of ambient light or shorter working distance are present. The GuideLine 635nm 40mW provides more output power to compensate for increases in working distance or ambient light levels.

For the most visually demanding applications where higher levels of ambient light are present, the material is absorbent to red wavelengths or at longer working distances, a version in 520nm green which is ~ 4 times brighter to the human eye than the same power in 635nm is available.

IP67

The GuideLine 2 features a rugged IP67 rated housing which ensures protection of the internal optics from liquids' and debris, while still allowing the user to adjust the focus of the laser.

The threaded barrel allows the user to mount the laser to bulkheads and mounting blocks whilst ensuring continued heat sinking, two mounting nuts are supplied to assist with this. Alternatively Global Laser has a number of compatible mounting clamps and rail systems for the Guideline 2.

Focus Control

If the user requires the focus to be adjusted (alter the line thickness/cross line thickness) this can be done by turning the focusing control (brass knurled section) on the middle of the laser until the desired result is achieved. This allows the laser to be set to each individual application or subject material if required.



Operating Voltage

The Guideline 2 can be powered from an industry standard 24VDC supply. The 635nm models feature an input voltage range of 5-30VDC, while 520nm models require 10-30VDC. A number of 110/240V AC power adaptors are also available for users with a mains supply.

Specifications

	GuideLine 2 635nm, 10mW, 56° Line	GuideLine 2 635nm, 40mW, 97° Line	GuideLine 2 520nm, 10mW, 56° Line	GuideLine 2 520nm, 50mW, 97° Line
Part Numbers				
RS Part Number	RS1271561	RS1271563	TBC	RS1271564
Global Laser Part Number	1549-01-000	1549-02-000	1549-10-000	1549-03-000
Mechanical Information				
Mass (grams)	98			
Dimensions (mm)	19/M18			
Length (mm)	115			
Housing	Hard Anodised			
Isolated Body	Yes			
Connector Type	2.5mm IP68 DC			
Optical Information				
Diode Power (mW)	10	40	10	50
Wavelength (nm)	635	640	520	520
Line Fan Angle (°)	56	97	56	97
Line Type	Gaussian			
Factory Set Focus Distance (meter)	1			
Typical Line Width @1m (Q1e ²) (µm)	<550	<400	<550	<400
Typical Line Length @1m (mm)	~1000	~2260	~1000	~2260
User Adjustable Focus	Yes			
Laser Class (IEC 60825:1 2007)	1M			
Environmental Information				
Operating Case Temperature (°C)	-10 to +45		-10 to +55	
Storage Temperature (°C)	-10 to +80			
Operating Humidity (%RH)	90 (non condensing)			
MTTF @ 25°C (hrs)	≥ 50,000		≥ 10,000	
IP Rating	67			
Electrical Specifications				
Input Voltage (Vdc)	5 - 30		10 - 30	
Operating Current @ 5Vdc (mA)	≤60	≤100	n/a	
Operating Current @ 24Vdc (mA)	≤20	≤30	≤50	
Reverse Polarity Protection	Yes			
NOTES All specifications are typical @ 25°C				

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° to the surface a line with a fan angle of 97° will be longer than a line of 56°.

Fan Angle (°)	Distance to Object (mm)	Line Length (mm)
56	100	106
97	100	226

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

		Fan Angle (°)	
		56°	97°
Distance From Object (mm)	250	266	565
	500	532	1130
	750	798	1695
	1000	1063	2261
	1250	1329	2826
	1500	1595	3391
	1750	1861	3956
	2000	2127	4521
	2250	2393	5086
	2500	2569	5651
	2750	2924	6217
	3000	3190	6782
	3250	3456	7347
	3500	3722	7912
	3750	3988	8477
	4000	4254	9042
	4250	4520	9608
4500	4785	10173	
4750	5051	10738	
5000	5317	11303	

Visibility

For more visually demanding applications it is recommended that the 520nm green models are used. A 520nm model is ~ 4 times brighter than the same model in 635nm. Laser Enhancement Glasses can also enhance projections from the 635nm models which is useful where there are high levels of ambient light.

Optional Accessories

The GuideLine 2 has a wide range of options to suit a variety of applications. These options include mounting clamps, power supplies, enhancement glasses.

Mounting Clamps

The heavy duty mounting clamp allows the GuideLine 2 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. This can be purchased directly from RS Components, the product number is RS127-1551.



Heavy Duty Mounting Clamp

Mains Power Supplies

For users that require an off the shelf power supply a 110/240 Vac power adaptor is available. A 5V version will power all 635nm versions and a 10V will power all 520nm version of the GuideLine 2.

RS Part Number	Global Laser PartNumber	Description
TBC	5026-42-000	1 Outlet Power Supply 10V 1A (UK,US/Euro Lead)
TBC	5026-43-000	4 Outlet Power Supply 10V 1A (UK,US/Euro Lead)



Power Supply

Battery Box Power Supply

The Battery Box from Global Laser is a portable voltage source for CW laser diode modules. It is housed in a compact ABS box with an on/off switch to allow the user to control battery lifetime. The batteries can be replaced by simply removing four screws and the base of the box.

RS Part Number	Global Laser Part Number	Description
TBC	5040-05-000	10V battery Box Power Supply



Battery Box Power Supply

Power Leads

A power lead is required to power the GuideLine 2. Two 1000mm version can be purchased directly from RS Components. One with flying leads and another suitable to be used with our power supplies or battery box.

RS Part Number	Global Laser Part Number	Description
RS697-1565	1549-04-000	Cable for GuideLine-2 1m Flying Leads
TBC	1549-11-000	Cable for GuideLine-2 1m to Power Supply



Power Leads

Red Laser Enhancement Glasses

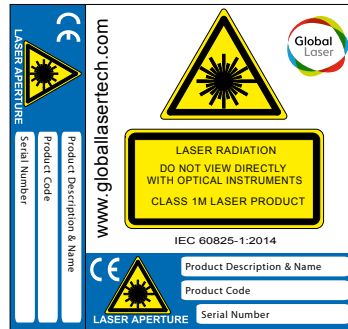
To compliment our wide range of alignment laser diode modules we have introduced a range of Laser Enhancement Glasses which enhance projections in the red wavelength range (630nm to 670nm) by blocking light in other wavelengths, thus improving the visibility in outdoors or bright lighting conditions. The glasses also meet ANSI Z87 impact standard. This can be purchased directly from RS Components, the product number is RS127-1570.



Red Laser
Enhancement Glasses

Laser Safety

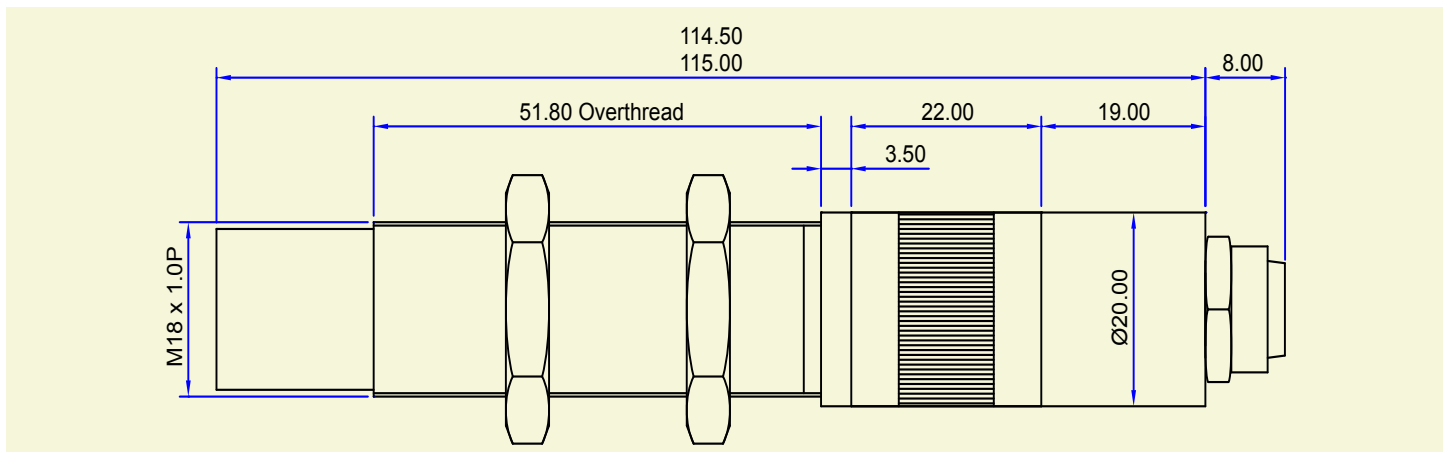
Our lasers are compliant to IEC 60825-1:2014 standards. All four models of the GuideLine 2 fall within laser classifications 1M. An example of the label is shown below.



Class 1M Label

Mechanical Dimensions

GuideLine 2



Drawings are not to scale

Please Note: Global Laser reserve the rights to change descriptions and specifications without notice.



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