



LaserLyte-Flex Datasheet
Red & Green Alignment Systems

LaserLyte-Flex

The LaserLyte-Flex is an entry-level laser alignment system. It uses interchangeable optics and a semiconductor laser diode to project a highly visible dot, line, cross, or a combined line and central dot. This helps you to accurately align and position garments, cloth, paper, wood, and metal of different shapes and surface profiles.

You don't need previous laser experience to operate the LaserLyte-Flex. As a Plug & Play module, it is ready to use almost immediately saving you time, effort, and training resources.

The LaserLyte-Flex is available in red (635, 650nm) and green (515nm) models. The green model emits light that appears more than 2X brighter to the human eye than the equivalent power in 635nm. As a result, you're more likely to see these projections against dark materials, in high ambient light levels, or from long distances.

A variety of interchangeable projection optics is available to allow you to quickly choose a pattern that suits the shape and surface profile of your target material. In addition to alignment and positioning, the option of a cross can also assist in laser targeting applications.

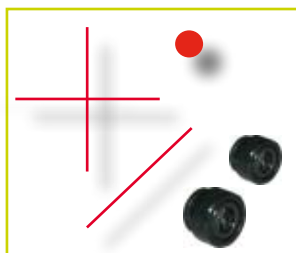
The LaserLyte-Flex system includes the laser diode module and an adjustable focus key. A choice of power supplies and extension leads are available as separate items. For a complete solution the system can also be provided with a range of mounting accessories and laser safety glasses (see section on Accessories).

Key Features:

- Entry level laser alignment system
- Plug and play via DC connector jack plug
- Interchangeable projections optics - dot, cross, line, line+dot
- Available in red or green outputs
- Up to 10mW diode power
- User adjustable focus
- Variety of mounting options



Accessories



Interchangeable Optics

The LaserLyte-Flex Alignment System has a range of interchangeable lenses that can produce a dot, line, cross or line+dot projection. The projections are simply interchangeable by screwing on and off the appropriate projection holder on the front of the laser. You can choose from a range of interchangeable optics compatible with the LaserLyte-Flex. They are outlined in the below table:

	Line 33°	Line 60°	Line 90°	Line 105°	Cross 9°	Cross 60°	Cross 100°	Long Line + Central Dot
Fan Angle (°)	33	60	90	105	9	60	100	100
Lens Type	Homogeneous	Homogeneous	Homogeneous	Homogeneous	DOE	Homogeneous	Homogeneous	Gaussian
Part Number	1125-317-000	1125-155-000	1125-156-000	1125-320-000	1125-152-000	1125-153-000	1125-338-000	1125-240-000

NOTE: Please call us if these standard projections do not meet your requirements



Power Supplies

The PS-1 & PS-4 power supplies run on 110-240 Vac input via a supplied IEC mains lead. The PS-1 powers one laser and the PS-4 powers up to four lasers. An optional key switch allows the power supply to be switched on/off at the power supply unit rather than at the mains.

Ordering part numbers (red models):

- PS-1 - UK mains lead: 5026-15-000
- PS-1 - US mains lead: 5026-16-000
- PS-1 - Euro mains lead: 5026-17-000
- PS-4 - UK mains lead: 5026-45-000
- PS-4 - US mains lead: 5026-46-000
- PS-4 - Euro mains lead: 5026-47-000

Ordering part numbers (green model):

- PS-1 - UK mains lead: 5026-29-000
- PS-1 - US mains lead: 5026-30-000
- PS-1 - Euro mains lead: 5026-28-000
- PS-4 - UK mains lead: 5026-34-000
- PS-4 - US mains lead: 5026-35-000
- PS-4 - Euro mains lead: 5026-36-000



Battery Box Power Supply

The battery box power supply is a compact ABS box that powers 1 laser. It operates from three industrial AA batteries (red models) or eight industrial AAA batteries (green model). A 2.5mm DC jack connector is fitted to the box making it compatible with a wide range of laser modules. You can control the laser output and conserve battery lifetime using the on/off rocker switch.

Ordering part number (red models): 5040-00-000

Ordering part number (green model): 5040-02-000



In Line Voltage Converter

The in-line converter allows the LaserLyte-Flex models to be powered from an industry standard 24 Vdc supply. It transforms unregulated DC voltage between 6-30 Vdc to a regulated 5 Vdc supply.

Ordering part number (red models): 5028-06-000

Ordering part number (green models): 5028-15-000



Extension Cables

Extension leads are available in a choice of lengths from 1.5-10 m. These leads have a 2.5mm DC jack plug on one end and a DC socket on the other.

Ordering part numbers:

1.5m: 5200-64-000

3m: 5200-00-407

5m: 5200-65-000

10m: 5200-66-000



MK1 Mounting Kit

The MK1 mounting kit includes a laser clamp that rotates horizontally through 360° and vertically through 180°, and a mounting post that allows additional adjustment along its length. Compatible with Global Laser's mounting brackets, the kit is also supplied with two different machine screws making it compatible with different mounting surfaces.

Ordering part number: 5000-56-000



Heavy Duty Mounting Clamp

The Heavy Duty Clamp has parallel and vertical adjustment that allows you to aim the laser in any required direction or angle. The robust aluminium construction conducts heat away from the laser module and prevents movement due to shock and vibration. The base of the clamp has a series of threaded holes that allow the clamp to be securely fastened to a stable surface.

Ordering part number: 1240-01-000



Magnetic Base

The magnetic base simply screws onto the heavy duty clamp allowing it to be attached to a ferrous surface.

Ordering part number: 1235-00-000



Adjustable Swivel Mounting Clamp

The swivel clamp provides 180° tilt movement and $\pm 45^\circ$ swivel. Its base has a series of holes that allow the swivel clamp to be fixed directly onto a machine or workbench.

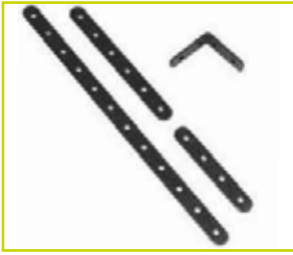
Ordering part number: 1200-03-000



Pillow Block Bearing Mount

The Pillow Block Bearing Mount contains a spherical rolling element that serves as a rotational bearing. You can quickly and easily adjust the direction of your laser module in one smooth movement without the need for an Allen key. The bearing also provides enough friction to keep the pointing direction stable.

Ordering part number: 1237-00-000



Brackets

A series of 4 brackets are available ranging from 5cm/2” to 30 cm/12” in length. A right angled bracket is also available. These can be purchased individually or as a set.

Ordering part numbers:

B2 - 5 cm/2 inch bracket: 5000-55-000

B4 - 10 cm/4 inch bracket: 5000-54-000

B6 - 15 cm/6 inch bracket: 5000-53-000

B12 - 30 cm/12 inch bracket: 5000-52-000

BS - Set of 4 brackets: 5000-51-000



Rail & Carriage Systems

The rail and carriage system can either be manual or motor-driven. The carriages are translated either by hand or computer and then locked into position. All Global Laser rail and carriage systems incorporate long-life and low friction polymer bearings that are selflubricating. The rails are also hard anodized to increase their ruggedness.



Safety Glasses

Laser safety glasses are used to protect your eyes from potentially harmful laser radiation. They are available in two frame styles and filter types including neutral density (ND) and block outs. The safety glasses are supplied with a lifetime warranty.

Ordering part numbers (red models):

630-700 nm wrap-around style: 1991-00-000

630-700 nm over-glasses style: 1990-04-000

Ordering part numbers (green model):

395-540 nm wrap-around style: 1991-03-000

395-540 nm over-glasses style: 1990-05-000



Red Laser Enhancement Glasses

Laser enhancement glasses block light outside of the visible red spectrum and therefore improve the visibility of red laser projections in outdoor or high ambient lighting conditions. These glasses meet ANSI Z87 impact standards and are supplied with a lifetime warranty.

Ordering part numbers:

Wrap-around style: 1997-01-000

Over-glasses style: 1997-00-000

Specification - Red Models

	635nm 1mW	635nm 5mW	635nm 10mW	650nm 5mW
Mechanical Information				
Dimensions (mm)	11 x 39.4 (without line optics) 11 x 44 (with line/cross optics)			
Housing	Black Anodised Aluminium			
Isolated Body	Yes			
Optical Information				
Diode Power (mW)	1	5	10	5
Wavelength (nm)	635			650
Laser Class (IEC60825-1 2014)	2	3R	3B	3R
Intensity Distribution	Gaussian			
Focus Range (mm)	20mm to Infinity			
Typical Spot Size @ 1m (mm)	<0.7			
Typical Line Thickness @ 1m (mm)	<1			
Delivery Set Focus	1000 (user adjustable)			
Environmental Information				
Operating Case Temperature (°C)	-10 to +45			
Storage Temperature (°C)	-10 to +85			
Operating Humidity (%RH)	90 (non condensing)			
MTTF @ 25°C (hrs)	≥30,000		≥49,000	≥100,000
Electrical Specifications				
Connector Type	DC Power Jack 2.5mm, Centre Pin: 0 Volts, Outer Pin: +Ve			
Lead Length (mm)	1000			
Input Voltage (Vdc)	+3.5 to 5.0			
Operating Current (mA)	35		~90	25
Reverse Polarity Protection	Yes			
Approximate operating time when powered via Battery Box (hours)	~30		~11.5	~40
NOTES All specifications are typical @ 25°C				

Specification - Green Models

	515nm 1mW	515nm 5mW	515nm 10mW
Mechanical Information			
Dimensions (mm)	11 x 39.4 (without line optics) 11 x 44 (with line/cross optics)		
Housing	Black Anodised Aluminium		
Isolated Body	Yes		
Optical Information			
Diode Power (mW)	1	5	10
Wavelength (nm)	515		
Laser Class (IEC60825-1 2014)	2	3R	3B
Intensity Distribution	Gaussian		
Focus Range (mm)	20mm to Infinity		
Typical Spot Size @ 1m (mm)	<0.7		
Typical Line Thickness @ 1m (mm)	<1		
Delivery Set Focus	1000 (user adjustable)		
Environmental Information			
Operating Case Temperature (°C)	-10 to +55		
Storage Temperature (°C)	-10 to +85		
Operating Humidity (%RH)	90 (non condensing)		
MTTF @ 25°C (hrs)	≥40,000		
Electrical Specifications			
Connector Type	DC Power Jack 2.5mm, Centre Pin: 0 Volts, Outer Pin: +Ve		
Lead Length (mm)	1000		
Input Voltage (Vdc)	+10 ±5%		
Operating Current (mA)	60	60	100
Reverse Polarity Protection	Yes		
Approximate operating time when powered via Battery Box (hours)	~19	~19	~11.5
NOTES All specifications are typical @ 25°C			

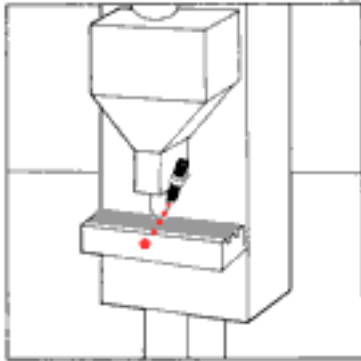
Fan Angle & Working Distance

The length of a projected line increases with fan angle and working distance (WD). For example, a line with a fan angle of 60° will be longer than a line with a fan angle of 30° when viewed at a fixed working distance and at 90° to the surface. Given the WD and available fan angle, you can extract the expected line length from the below table.

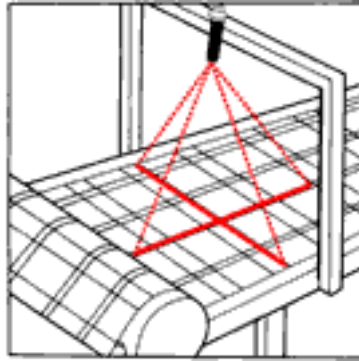
		Line 33° <i>Homogeneous</i>	Line 60° <i>Homogeneous</i>	Line 90° <i>Homogeneous</i>	Line 105° <i>Homogeneous</i>	Cross 9° <i>DOE</i>	Cross 60° <i>Homogeneous</i>	Cross 100° <i>Homogeneous</i>	Long Line & Dot 100° <i>Gaussian</i>	
Distance (mm)	250	148	289	500	652	39x39	289x289	596x596	596	Line Length (mm)
	500	296	577	1000	1303	79x79	577x577	1192x1192	1192	
	750	444	866	1500	1955	118x118	866x866	1788x1788	1788	
	1000	592	1155	2000	2607	157x157	1155x1155	2384x2384	2384	
	1250	741	1143	2500	3528	197x197	1443x1443	2979x2979	2979	
	1500	889	1732	3000	3910	236x236	1732x1732	3575x3575	3575	
	1750	1037	2021	3500	4561	275x275	2021x2021	4171x4171	4171	
	2000	1185	2309	4000	5213	315x315	2309x2309	4767x4767	4767	
	2250	1333	2598	4500	5865	354x354	2598x2598	5363x5363	5363	
	2500	1481	2887	5000	6516	394x394	2887x2887	5959x5959	5959	
	2750	1629	3175	5500	7168	433x433	3175x3175	6555x6555	6555	
	3000	1777	3464	6000	7819	472x472	3464x3464	7151x7151	7151	

Applications

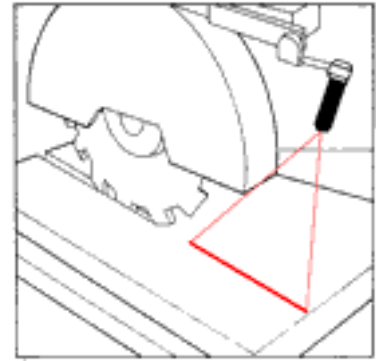
The LaserLyte-Flex Alignment System is suitable for many different applications some of which are below. If you would like to know further information about any other applications please contact your local distributor or contact Global Laser.



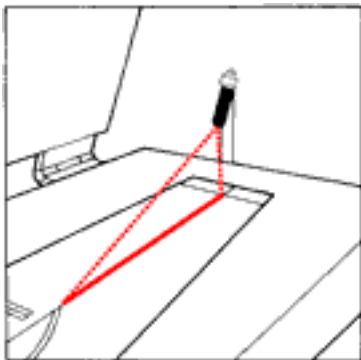
Machine Alignment



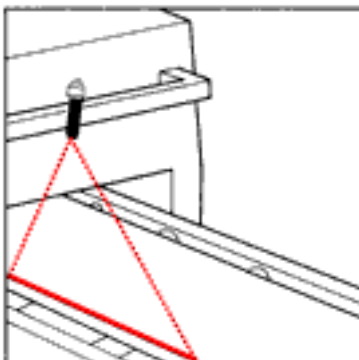
Pattern Alignment



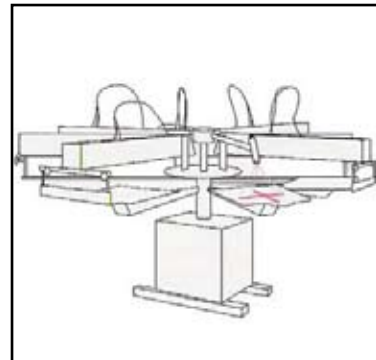
Saw & Cutting Guidance



Positioning



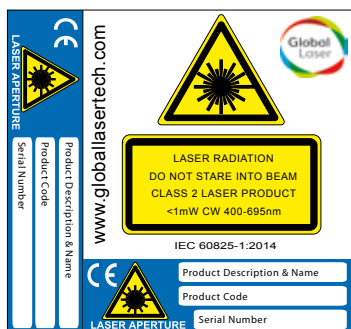
Edge Alignment



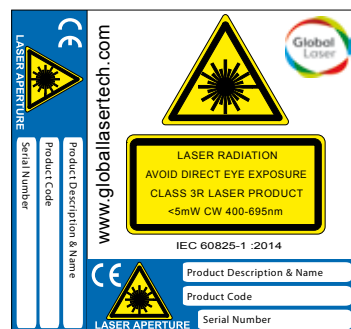
Screen Printing

Laser Safety

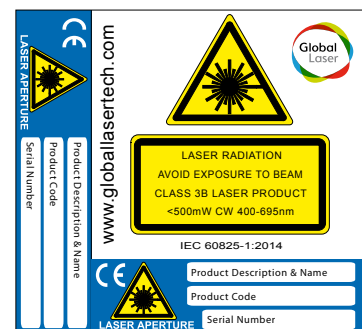
These modules are intended for incorporation into customer equipment. They are classified in accordance with IEC60825-1:2014, which should be consulted prior to designing or using any laser product. The following labels are supplied for attachment to the customer's equipment, but responsibility for compliance with the standard remains with the user.



Class 2 Label



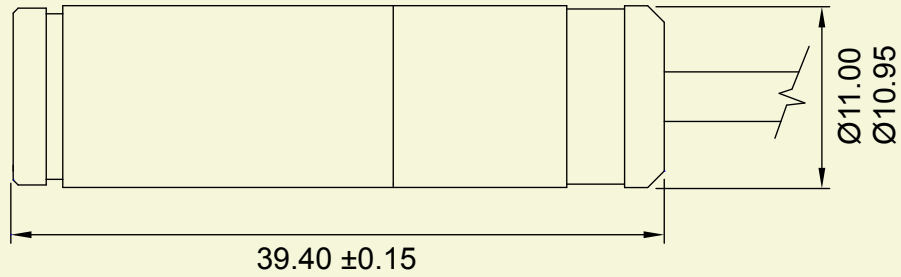
Class 3R Label



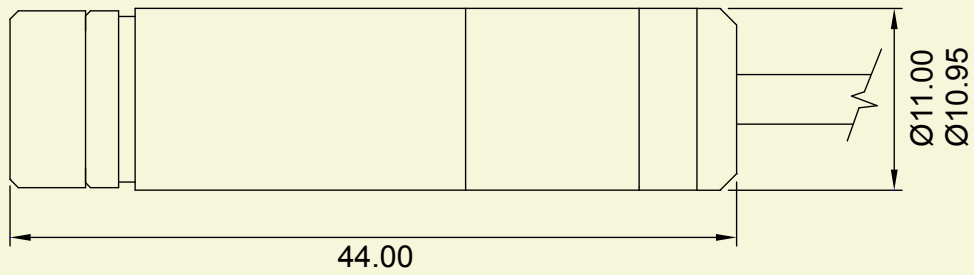
Class 3B Label

Diagrams

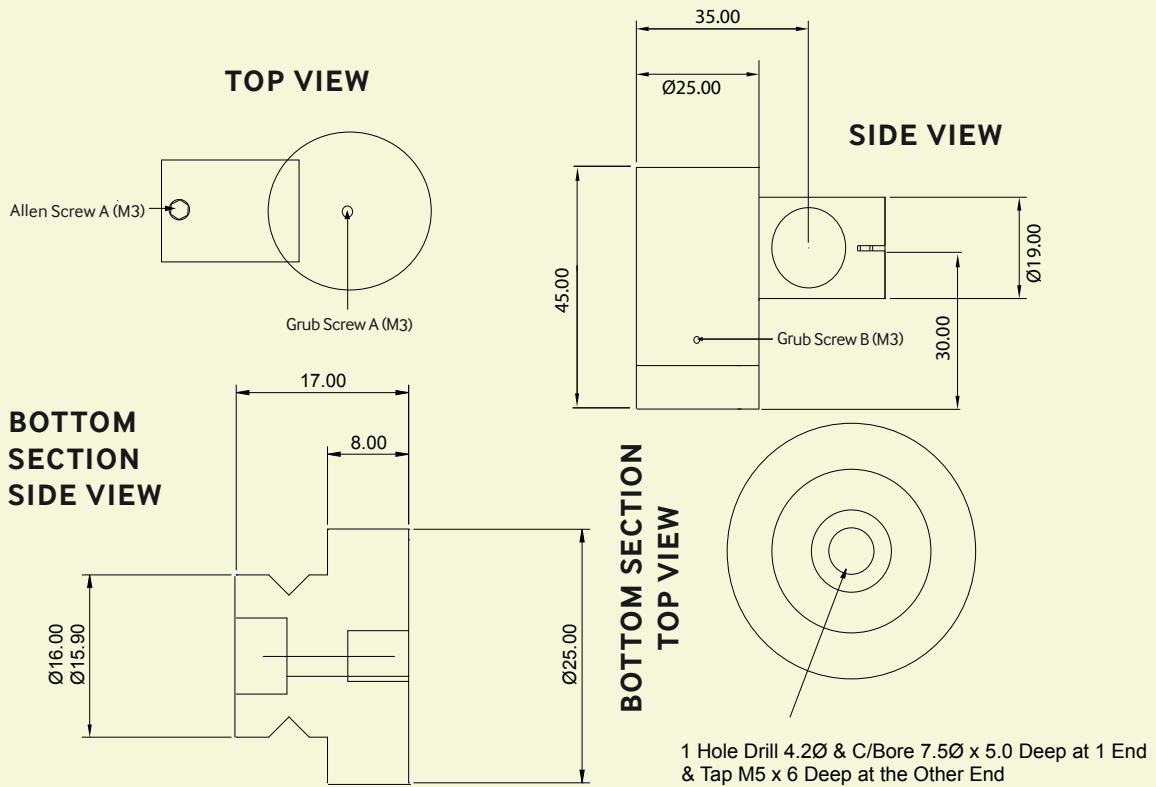
LaserLyte-Flex



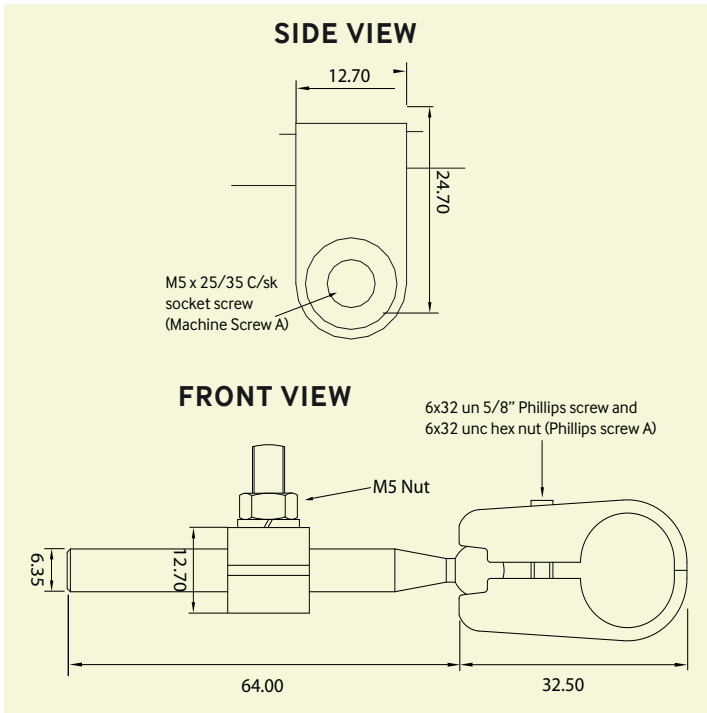
LaserLyte-Flex with Line/Cross Optics Fitted



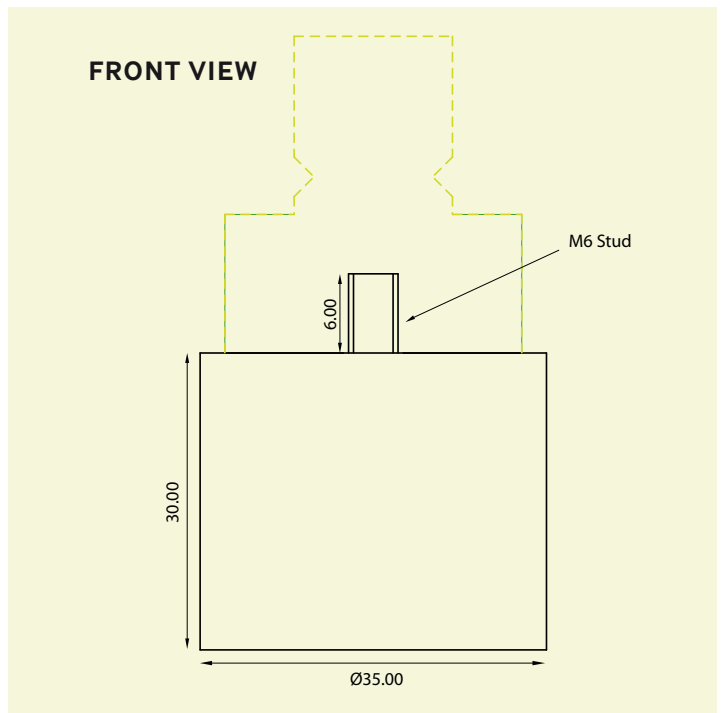
Heavy Duty Mounting Clamp



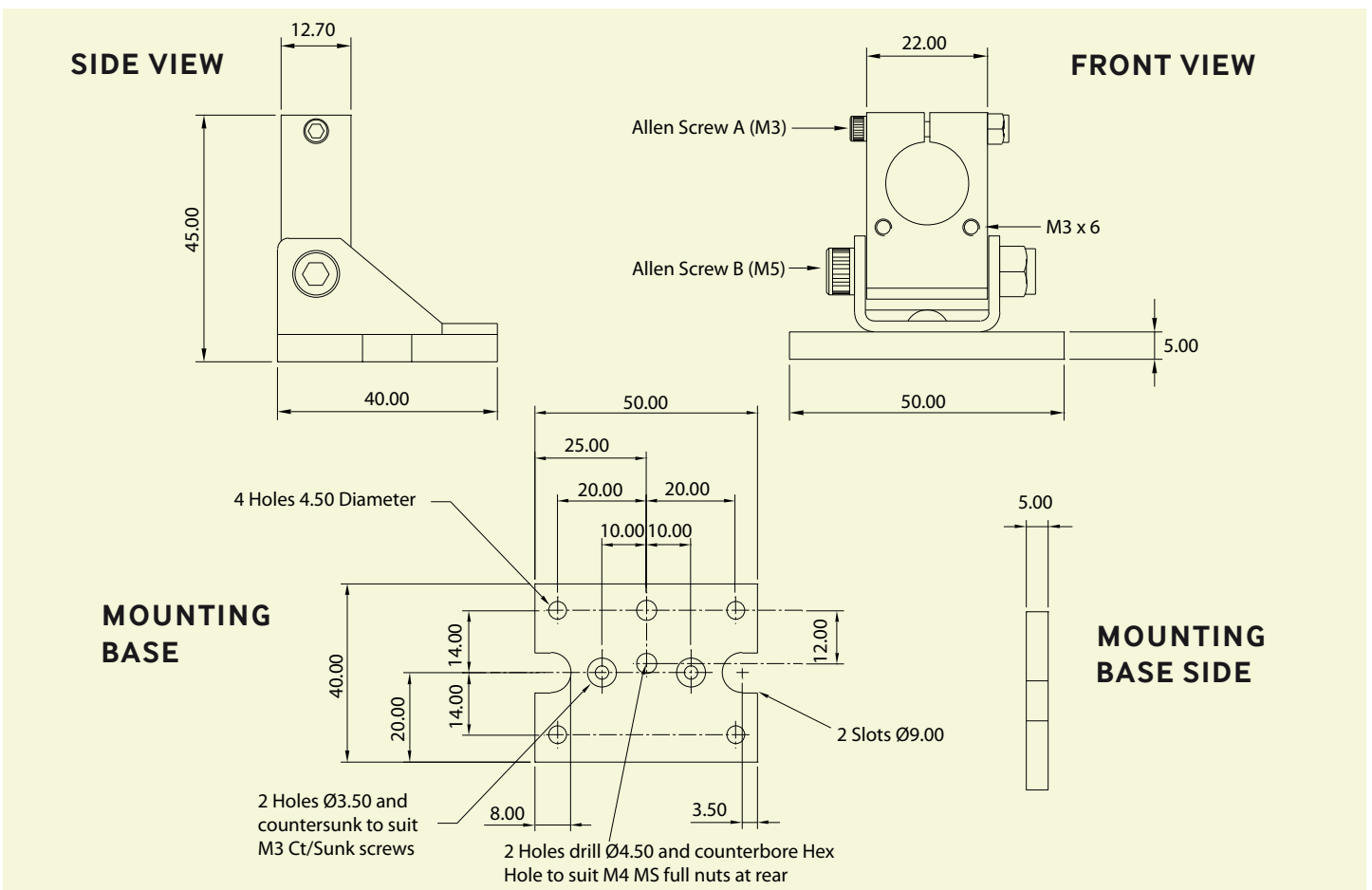
MK1 Mounting Clamp



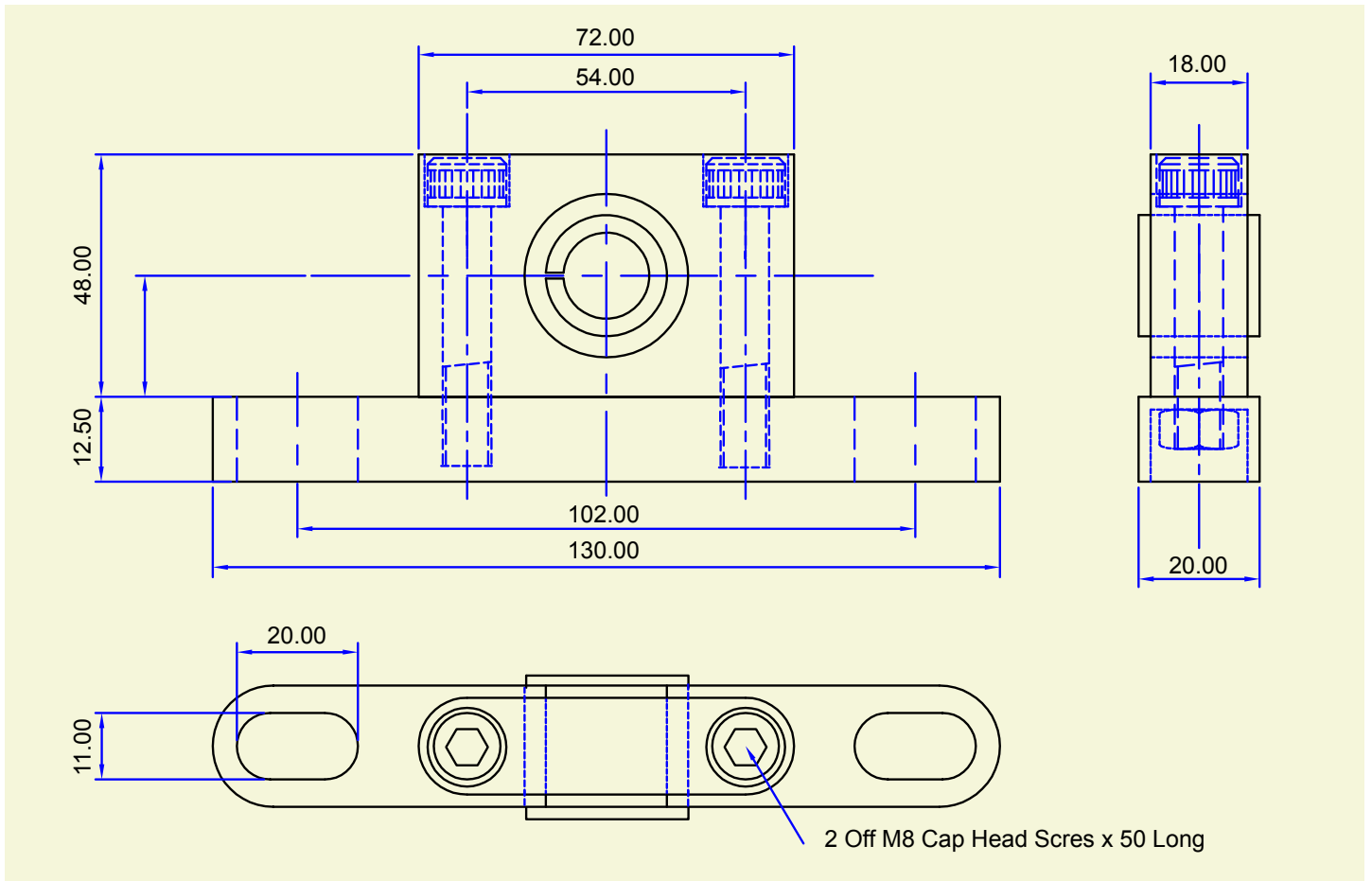
Magnetic Base



Swivel Mounting Clamp



Pillow Block Bearing Mount



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:

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

