DCLM Datasheet

Digitally Controlled Laser Module

DCLM

The DCLM Lyte-MV development kit for Global Laser combines all the functionality of Global Laser MV development kit with the addition of a market leading Digital Control circuit which allows the user to program and control the laser output via USB interface with Global Laser developed software.

The kit consists of a 35mW 660nm Lyte-MV laser module which is supplied with six interchange optics which allow the user to project a wide range of projections including uniform lines, cross, dot matrix, circles and a grid. The user adjustable focus allows the user to focus the output beam to a fine spot or projection depending on the fitted interchange optic. A robust Heavy duty clamp which has parallel and vertical adjustment and allows the user to aim the laser in any required direction or angle is also included. The kit is provided in a rugged and attractive plastic carrying case designed to securely store all the kits components.

The laser is powered via a USB port on a computer or USB hub without the need for any external power supply. The included software provides a user friendly graphical interface which allows the control of the level of the laser output powered from factory power set to off. Alternately the output can be modulated via a sine or triangle wave with the signal type or modulation frequency simply controlled via a menu in the control software which programs an on board function generator. The output can also be switched on and off via TTL with the frequency controlled from the software. PWM can also be used at a fixed frequency with the duty cycle also controlled from the software.

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Specification

Mechanical Specification				
Mass (grams)	14			
Dimensions (mm)	19 x 73.5			
Housing Material	Anodised Aluminium			
Isolated Body	Yes			
Lead Length (mm)	1000			
Connector Type	USB Micro B			
Optical Options				
Output Power (mW)	25 ±5%			
Laser Class	3B			
Power Stability Over Temperature Range (Typ)	±3%			
Wavelength (nm)	660 ±7			
Beam Size at Aperture (mm)	1 by 2.4			
Beam Divergence (mRad)	<0.3 (Full Angle)			
Bore Sighting (mRad)	≤3 (Note 1)			
Factory Set Focus (mm)	300			
User Adjustable Focus	Yes			
Enviromental Information				
Operating Case Temperature (°C)	-10 to +65			
Storage Temperature (°C)	-10 to +80			
Operating Humidity (%RH)	90 non condensing			
MTTF @ 25°C (Hours)	≥ 100,000			
Electrical Specification				
	Sine & Triangle Wave	**TTL**	**PWM**	**Power Control**
Typical Rise & Fall Time	N/A	≤1.9us	≤1.9us	N/A
Frequency Range	DC to 420Khz	DC to 357Khz	49Khz	N/A
Power Control Range	N/A	N/A	N/A	5 to 100%
Duty Cycle	N/A	Fixed 50/50	Variable 0-100%	N/A
Signal Amertude	5 to 95%	N/A	N/A	N/A

NOTES

Note1: @ Factory Set Focus
Note 2: Measured with 90% modulation depth sine wave to -3dB
Specifications are typical at 25° unless otherwise stated

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Heavy Duty Clamp

A Heavy Duty Clamp (HDC) is included as standard in the DCLM Development kit. The HDC has parallel and vertical adjustment which allows the user to aim the laser in any required direction or angle. The robust aluminium construction also assists in conducting heat away from the laser body as well as preventing movement due to shock and vibration. The base plate of the Heavy Duty Mounting Clamp has a series of threaded holes to allow the Heavy duty clamp to be securely fastened to stable surface.

Lens Options

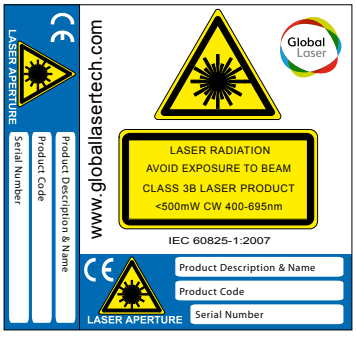
The DCLM development kit includes 6 interchange optics to suit a wide range of application. The projection include:

Uniform line optic (30° fan angle)
Cross (37° fan angle)
7 Lines (21.7° fan angle)
4x4 Grid (4.57° fan angle)
5 Concentric Circles (28.6° fan angle)
21x21 Dot Array (7° fan angle)

As supplied the Laser module is fitted with the 30° degree fan angle line lens. This can simply be changed for any of the other supplied optics by loosen the four grub screws removing the fitted optic and replacing it with the required optic.

Laser Safety

These modules are intended for incorporation into customer equipment. They are classified in accordance with IEC60825-1:2007, 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.



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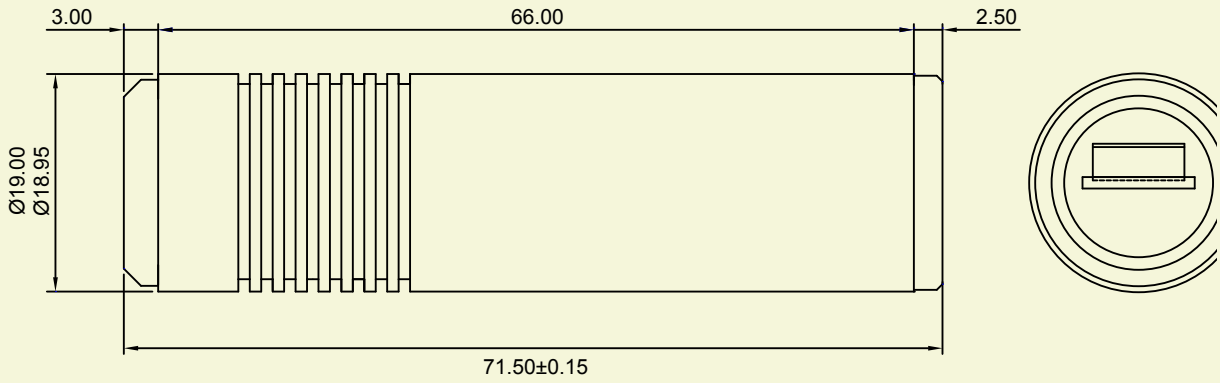
Quality & Warranty

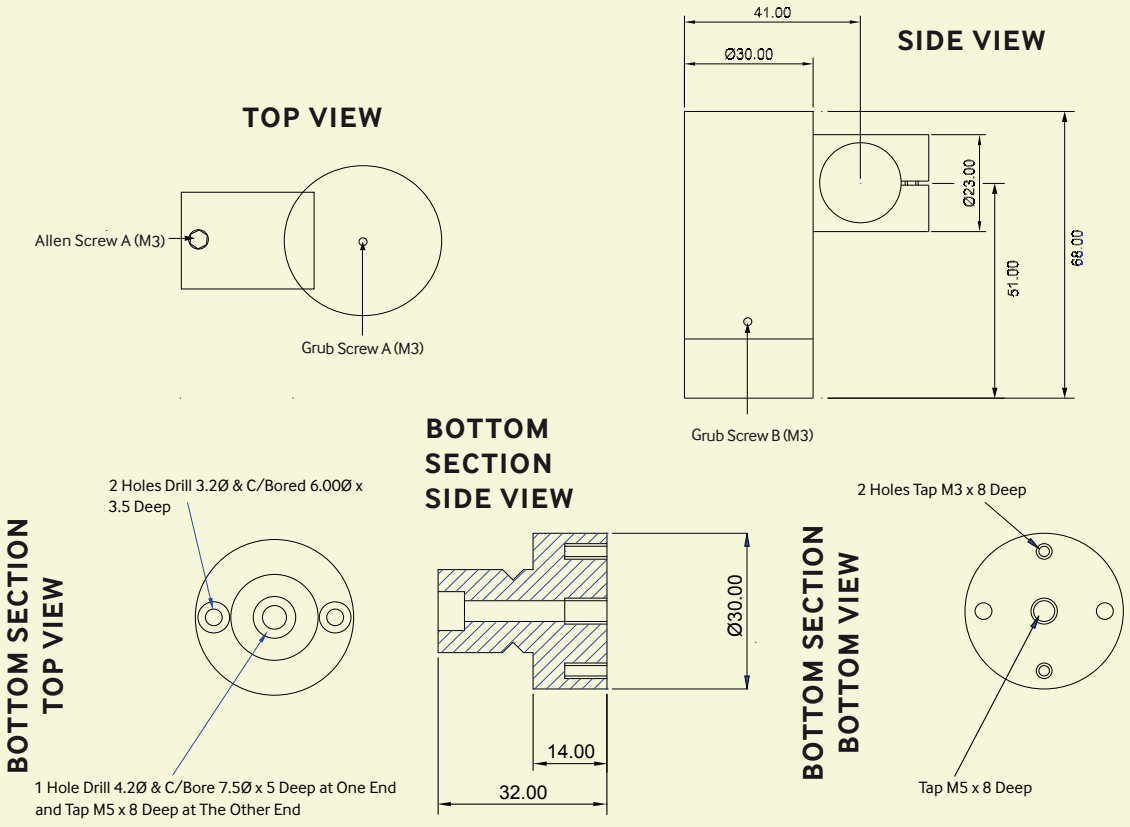
The DCLM Development Kit is supplied with a 24 month parts and labour warranty. Our manufacturing operations are certified to ISO9001.

Mechanical Drawings

DCLM Laser Module



Heavy Duty Mounting Clamp



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Notes

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 right to change descriptions and specifications without notice.

Global Laser

ISO9001 Certified

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