

PGL-LZ Series Diode Lasers



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The laser module with modulation function and powered by an OEM version 5-12V PCB and made features of excellent collimation, uniform power density, high straightness and good stability line beam.

The user can choose from red, green, or blue wavelengths depending on the application and material to be inspected.

PGL-Z Series Diode Lasers with its industrial-suited design and stable performance works perfectly as an integrated module in collimation, laser medical treatment, scientific experiment, optical instrument, etc.

FEATURES

- Excellent collimation
- Ultra compact
- Easy operating
- 5-12V PC board
- TTL & analog modulation

APPLICATIONS

- Collimation
- Laser medical treatment
- Scientific experiment
- Optical instrument

SYSTEM SPECIFICATIONS*

Wavelength	nm	405	450	520	635-660
Wavelength tolerance	nm (typical)	±5	±5	±5	±10
Output power(Ø16×40)	mW	1-100	1-50	1-50	1-100
Output power(Ø20×42)	mW	1-180	1-50	1-50	1-130
Line width	<250mm	40-200um			
Line width	@1m	< 1.0mm			
Line angles		7° 、 10° 、 15° 、 30° 、 45° 、 60° 、 75° 、 90°			
Beam line collimation**	mrad	<10			
Laser operation mode		CW			
Expected lifetime	hours	10,000			

ELECTRICAL SPECIFICATIONS

Operating voltage	DC 5-12V
Connection	Cable with flying leads

TTL MODULATION

Maximum frequency	Up to 30kHz		
Signaling levels	VIL_max<+0.9V	VIH_min>+2.2V	VIH_max<+7V

ANALOG MODULATION

Active range(optional)	DC 0-3V	DC 0-5V
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ENVIRONMENTAL CONDITIONS

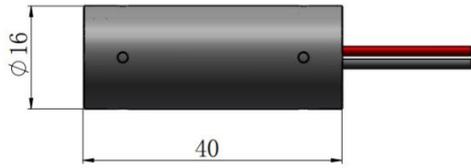
Operating temperature	°C	-10°C to +45°C
Storage temperature	°C	-20°C to +80°C
Humidity	%	< 90 %, non-condensing
Dissipated heat	W	< 1 W

*All testing data under the conditions of temperature 25°C.

**After rotated 180° the beam line position of the laser module maintains good consistency.

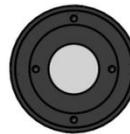
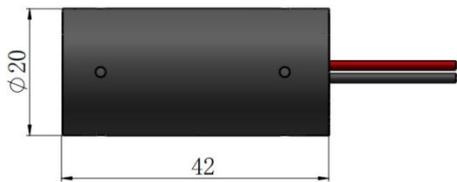
MECHANICAL SPECIFICATIONS

Dimensions of Ø16 laser and PCB (mm):



Weight	g	30 g
Length	mm	40 mm
Diameter head Ø	mm	16 mm
Material	Aluminum	

Dimensions of Ø20 laser and PCB (mm):



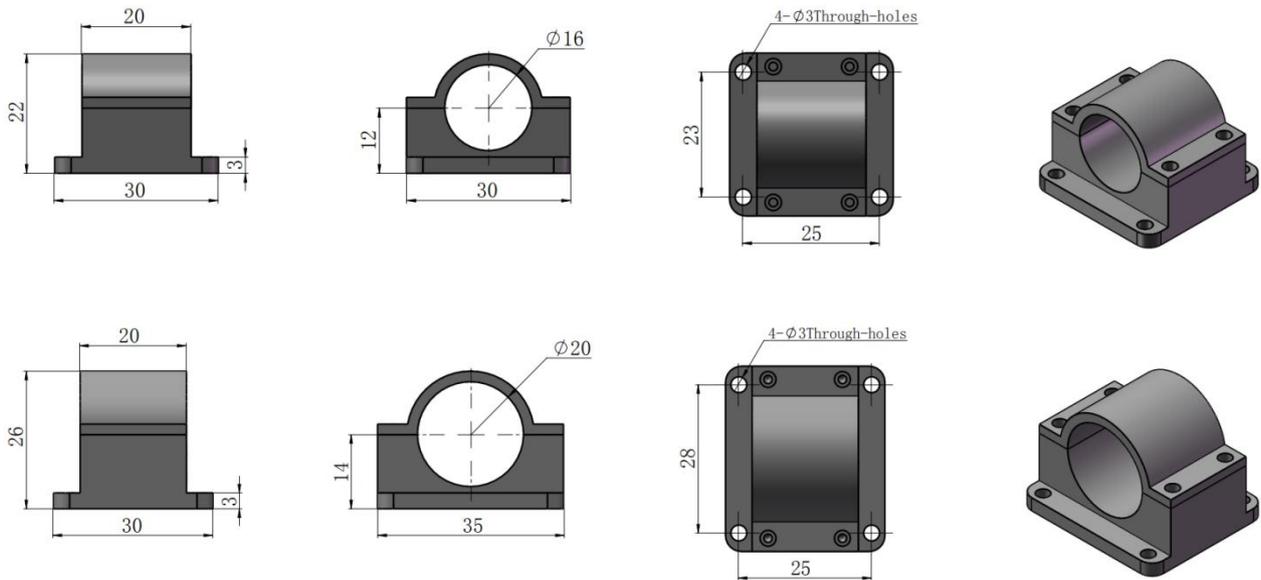
Weight	g	37 g
Length	mm	42 mm
Diameter head Ø	mm	20 mm
Material	Aluminum	

Accessories

MODULE MOUNT SPECIFICATIONS

Module mount size	mm	30 x 30x 22mm	30 x 35x 26mm
Applicable models size \varnothing	mm	16mm	20mm
Through-hole \varnothing	mm	3mm	3mm
Through-hole distance	mm	25 x 23mm	25 x 28mm

Dimensions of module mount (mm):



This simple mount acts as combined heat sink mounts diode modules. Loosen the four small set screws and remove the top half of the module mount to put the laser in. The laser is held firmly by tighten the screws. The module mount reserved 4 through-holes for user to fix the laser on a flat and thermally dissipating surface.

CONNECTOR

USB connector	Suit for access to computer control
Bayonet nut connector	Minimize distractions
Headset connector	Easy connect and disconnect

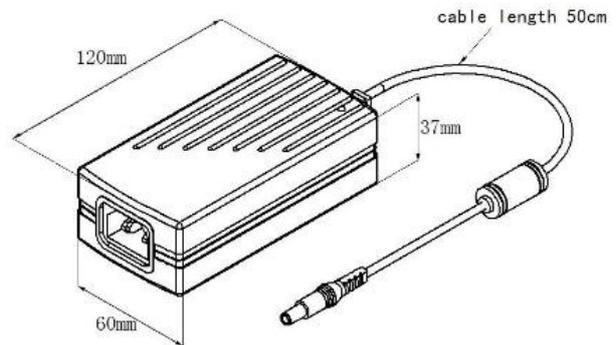
BATTERY CASE

Power supply	6-7V CR123A Lithium batteriesX2	3V AA Alkaline batteries x 2
Battery case connector	Optional, suggest using headset connector	

POWER ADAPTER***

Input		85-264V AC 47/63Hz
Output		DC 5V 5A
Adapter size	mm	120 x 60 x 37mm
Adapter cable length	m	0.5m
Cable connector		Easy connect/disconnect jack

Dimensions of power adapter (mm):



The Universal Diode Laser Module Power Supply with CE-marked provides a well-regulated 5 VDC. This auto ranging power module can be connected to any 85-264 VAC 47/63 Hz supply. There is an IEC 60320 input socket and a 0.5m output cable terminated with an easy connect/disconnect jack socket. The Headset connector which could also be found in accessories is compatible with the power supply jack.

***EF provides other types of power adapters to meet customer demand, please contact sales for details.