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Data Sheet
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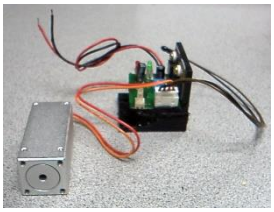
1064nm Infrared Dot DPSS Laser Modules, TTL Modulation up to 1kHz, Mounting Screw Holes

GMR1064 Series



Overview

The Lasermate GMR1064 series laser modules are 1064nm infrared diode-pumped solid-state laser modules in rectangular package with different available output power levels and 9-15VDC operating voltage. The laser module features Automatic Power Control (APC) circuit design and with mounting screw holes.

Features

- 1064nm infrared DPSS laser module
- Automatic Power Control (APC) circuit design
- Low cost
- Fixed focus
- Rectangular package
- With mounting screw holes
- Output power stability 5%
- Compact size

Product Overview

The following table shows the list of available part numbers, wavelength, optical output power, laser class, operating current, linear polarization, and optional AC adapter for GMR1064 series laser modules.

Part Number	Wavelength (nm)	Output power (mW)	Laser Class	Operating Current (A)	Linear Polarization	AC Adapter included
GMR1064-5F9C2	1064	3-5	IIIb	<0.4	100:1	No
GMR1064-10F9C2	1064	>10	IIIb	<0.4	100:1	No
GMR1064-20F9C2	1064	>20	IIIb	<0.4	100:1	No
GMR1064-50F9C2	1064	>50	IIIb	<0.4	100:1	No
GMR1064-100F9C2	1064	>100	IIIb	<0.6	100:1	No
GMR1064-5FBC2	1064	3-5	IIIb	<0.4	100:1	Yes
GMR1064-10FBC2	1064	>10	IIIb	<0.4	100:1	Yes
GMR1064-20FBC2	1064	>20	IIIb	<0.4	100:1	Yes
GMR1064-50FBC2	1064	>50	IIIb	<0.4	100:1	Yes
GMR1064-100FBC2	1064	>100	IIIb	<0.6	100:1	Yes

Specifications of GMR1064 Series 1064nm Infrared DPSS Laser Modules

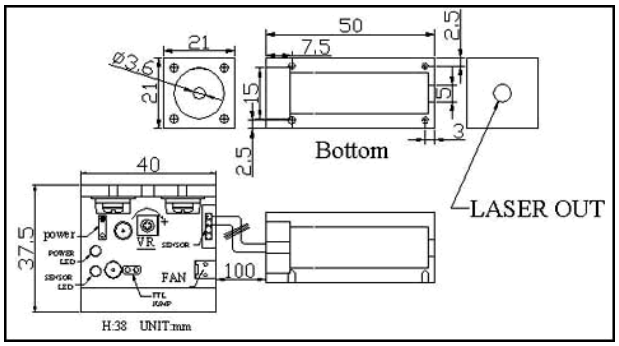
Model Number	GMR1064-XFYCZ				
Wavelength	1064nm				
Mode	TEM00				
Output Power (mW) @ 25 °C	3-5 **(X=5)**	>10 **(X=10)**	>20 **(X=20)**	>50 **(X=50)**	>100 **(X=100)**
Laser Class	IIIb				
Operating Current (A)	<0.4				<0.6
PCB Driver	9-15V DC **(Y=9)**; PCB driver in box with switch **(Y=B)**				
Focus	Fixed				
Circuit Design	APC				
Operation Mode	CW with TTL capable and up to 1KHz				
M^2	< 2				
Linewidth	< 0.1 nm				
Linear Polarization	About 100:1 **(Z=2)**				
Beam Divergence	<1.4 mrad				
Beam Diameter ($1/e^2$)	< 1 mm				
Stability*	+/-5% @ 25 +/- 3 °C				
Overheat Protection	Optional for Y=9				
AC adapter	Included for Y=B, No for Y= 9				
Connector	For **Y=9**: Black (-) & red (+) wires for CW & Jump for TTL For **Y=B**: DC-Jack for CW & BNC for TTL				
Storage Temperature	10 - 50 °C				
Optimum Operating Temperature	22-28 °C				
MTTF**	5,000 hrs				
Dimensions (LxWxH)	50 x 21 x 21 mm (laser head) For **Y=9**, W. 40 x L. 37.5 x H. 38 mm (PCB driver including heat sink) For **Y=B**, W. 60 x L. 80 x H. 45.5 mm (PCB driver in box)				

Notes:

1. Additional heat sink or cooling fan may be needed to stabilize the output power of laser module.
2. MTTF (Mean Time to Failure) is based on the MTTF rating of high power 808nm laser diode used from the laser diode manufacturer.

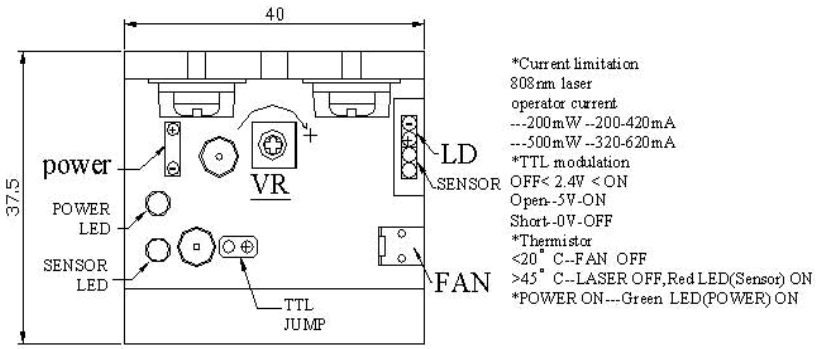
Mechanical Outline (unit: mm)

Laser Module

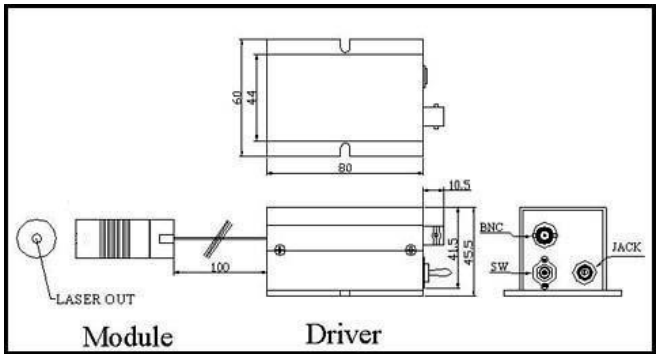


PCB Driver

9-15V PCB (Y=9)



Subassembly PCB in Box with Switch (Y=B)



Additional Notes

- The GMR1064 series diode pumped solid stated infrared laser modules, which use laser diode pumped Nd:YVO_4 crystal coupled with KTP as a frequency doubler, are designated solely as OEM components for incorporation into the customer's end products. Therefore, it is the customer's responsibility to comply with FDA requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to FDA Performance Standards for Light-Emitting Products for detailed information.
- Specifications are subject to change without notice.

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