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Data Sheet
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532nm Green Dot DPSS Laser Modules Designed for IEC 60825-1, EN 60825-1, JQA (Japan Quality Assurance) Compliances

GMP532-J Series

Overview

The Lasermate GMP532-J series laser modules are 532nm green diode-pumped solid-state laser modules in cylinder package with output power <1mW and 3V DC operating voltage. The class II laser modules meet Single Fault Failure requirements.

Features

- 532nm green DPSS laser module
- Automatic Power Control (APC) circuit with limited current to protect module
- Low operating current
- Compact size
- Output power stability 5%
- Better beam quality with glass beam expander and glass collimator
- Designed for IEC 60825-1, EN 60825-1 and JQA compliances

Applications

- Pointing
- Leveling
- Sensing

Product Overview

The following table shows the list of available part numbers, wavelength, optical output power, laser class, operating current, and laser beam off center axial of brass housing for GMP532-J series laser modules.

Part Number	Wavelength (nm)	Output power (mW)	Laser class	Operating Current (A)	Laser beam off center axial of brass housing (degrees)
GMP532-1F3-JP-G	532	0.5-0.99	II	<0.30	≤+/-5
GMP532-1F3-JPB3-G	532	0.5-0.99	II	<0.30	≤+/-3
GMP532-1F3-JPB1-G	532	0.5-0.99	II	<0.30	≤+/-1.5

Specifications of GMP532-J Series 532nm Green DPSS Laser Modules (JQA Compliance)

Model Number	GMP532-1F3-JPY-G
Wavelength	532 nm
Mode	TEM_{00}
Output power (mW) @ 3VDC, 25 °C	0.5-0.99
Laser class	Class II
Laser beam off center axial of brass housing	≤+/-5 degree **(Y= blank)**; ≤+/-3 degree **(Y=B3)**; ≤+/-1.5 degree **(Y=B1)**
Operating Current (A)	<0.30
Operating Voltage	3V DC
Circuit Design	APC with limited current, CW operation mode, meets Single Fault Failure Requirements for IEC 60825-1, EN 60825-1, and JQA (Japan Quality Assurance) compliances
Stability	≤±5% @ the constant temperature
M^2	< 2
Linewidth	< 0.1 nm
Polarization	Linear
Lens	the glass beam expander, the glass collimator, plastic focus lens
Beam Divergence	<1.2 mrad
Beam Diameter ($1/e^2$)	< 2 mm
Connector	Standard: Black wire (-); red wire & brass case (+)
Length of wires	10 cm
Storage Temperature	10 - 50 °C
Optimum Operating Temperature	20 - 30 °C
Expected Lifetime	>3,000 hr
Dimensions (LxW)	Dia. 12mm x L. 35.3+/-0.5 mm (green laser head), W. 12 mm x L. 20 mm (driver circuit board)

Notes:

1. Additional heat sink or cooling fan may be needed to stabilize the output power of laser module if the laser module is operated continuously in a period of time.
2. The expected lifetime of green laser module is based on the MTTF (Mean Time To Failure) rating of 808nm laser diode used in the green laser module.

Additional Notes

- The GMP532-J series diode pumped solid stated green 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.
- IEC 60825-1, EN 60825-1, and JQA require the laser products to meet Single Fault Failure Requirements, which require the highest emitted power under reasonably foreseeable single fault failure conditions never higher than the laser classification. Therefore, for class II or class 2 laser products, the output power is <1mW, the highest emitted power under reasonably foreseeable single fault failure conditions for this laser shall never be >1mW.
- Specifications are subject to change without notice.

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