

Green DPSS Laser Diode Modules

532nm



532nm DPSS Green Laser Diode Module

The ProPhotonix green laser diode modules offer highly visible green light output near the centre of the sensitivity of the human eye, making them ideal for visual alignment applications. They are designed to ensure high reliability, giving a complete DPSS laser diode solution for OEM use. The circular beam output of these modules makes them ideal for a wide range of alignment and targeting applications.

For output powers at 0.9 or 4mW, modules are available with a very compact design, just 14mm diameter. Power stability is better than 5% over 7 hours. The anodised aluminium housing gives the module electrical isolation, and the module incorporates a user adjustable focusing lens.

With over fifteen years experience in manufacturing lasers for a wide range of demanding applications, ProPhotonix can also offer customised solutions for a range of OEM applications. For further information on how ProPhotonix can help you meet your needs, or to discuss your requirements from a green laser module, please contact us.

Key Features

- Circular beam profile
- High reliability
- Compact, self-contained design
- Visible Light $\lambda = 532\text{nm}$
- 0.9mW or 4mW power available

Applications

- Medical alignment
- Industrial alignment
- Scientific equipment

Product Specifications

(Tc=25 C°)

| | |
|-----------------------------------|--------------------------|
| Wavelength | 532 nm |
| Beam Size (typ 1/e ²) | 1.2 mm |
| Beam Circularity | ≤ 1.3: 1 |
| Beam Divergence | ≤ 2.0 mrad |
| Mode | TEM ₀₀ |
| Operating Voltage | 4 -6V DC |
| Operating Current (25°C) | < 300 mA |
| Operating Temperature (ambient) | + 10°C to ± 30°C |
| Storage Temperature | - 40°C to + 60°C |
| Housing Material | Anodised Aluminium |
| Weight | 40g |
| Lifetime MTTF (typ) | 5000 hours |
| Modulation | 0 to 1kHz, 5V=ON, 0V-OFF |
| Mechanical | Ø14mm ± 0.1mm by 60 mm |
| Output Power Options | 0.9 or 4 mW |

Part Numbering

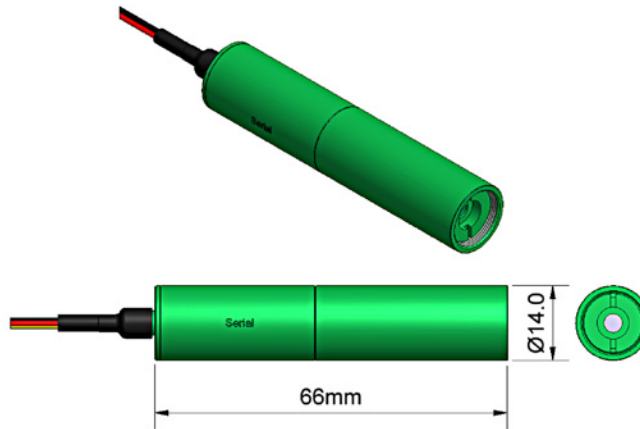
To order your Green DPSS Laser Module, use the product code GRN - 532 - Select Power (XX) - C

GRN - 532 - 0.9/4 - C

Eg.

GRN-532 - 0.9 - C

Dimensional Diagram



Laser Safety

The light emitted from these devices has been set in accordance with IEC60825. However, staring into the beam, whether directly or indirectly, must be avoided. IEC60825 classifies laser products into three different categories depending on light emitted, wavelength and eye safety.

CLASS II

“Caution”, visible laser light less than 1.0mW. Considered eye safe, normal exposure to this type of beam will not cause permanent damage to the retina.

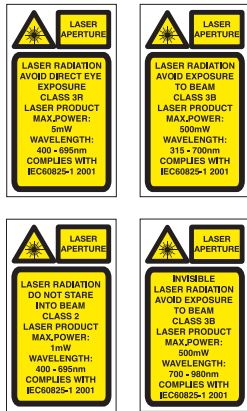
CLASS IIIIR

“Danger”, visible laser light between 1.0mW and 5.0mW. Considered eye safe with caution. Focusing of this light into the eye could cause some damage.

CLASS IIIIB

“Danger”, infrared (IR), and high power visible lasers considered dangerous to the retina if exposed.

NB: It is important to note that while complying with the above classifications, unless otherwise stated, our laser diode products are not certified and are designed solely for use in OEM products. The way in which the device is used in the final product may alter its original design classification, and it is the responsibility of the OEM to ensure compliance with the relevant standards.



NB. Without the inclusion of laser drive circuits, the output powers cannot be set in accordance with EN60825 since they are designed for OEM use and not certified devices as defined in the specification. The manufacturer of the complete laser product is responsible for complying with the requirements of EN60825. Manufacturers of products using laser ast 35 sq. cm. be used, Thermal transfer cream can be used to improve contact and heat dissipation.

Heat Sinking

If the case temperature of the laser diode exceeds its maximum specification, premature or catastrophic failure may occur. To ensure the maximum life of the laser diode, it is recommended that an additional electrically insulated heatsink of at least 50 sq cm be used. Thermal transfer cream can be used to improve contact and heat dissipation. Do not restrict air circulation around the device.

Power Connections

These DPSS laser diode modules require a regulated input voltage of 4-6V. Connections are made via the 3 pre-tinned external flying leads, (red is positive, black is negative, yellow is modulation).

WARNING: The housing is internally connected to the positive supply rail. Damage to the external anodised surfaces will result in the housing being at positive potential. Specifications subject to change without notice. E&OE

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