

532nm, DPSS green Laser Module

Application

Industrial areas / Medical / Biochemical / Laser Tag

Property

Wavelength Range = 532nm (others optional)

Introduction

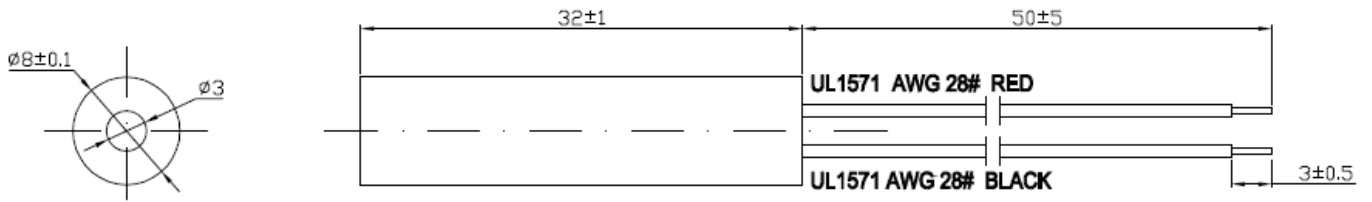
Egismos created compact green diode laser module. With its diameter of just 8mm this laser can be easily applied making it perfect solution for applications where dimensions and size are priority. Good visibility and compact size makes it attractive for many different industries like military, security, medical etc.



Specifications(T=25°C)

| Items | Symbols | S835321R, S835325R S835321R-ST02, S835325R-ST02 | H835321R, H835325R |
|-----------------------|-----------------|--|----------------------|
| Mode | | CW(for S835321R) Pulse Width Modulation (for S835321R-ST02) | CW |
| Wavelength | λ | 532nm | 532nm |
| Lens | | Glass | Glass |
| Spot | R | Round | Round |
| Spot Size | R | <15mm round at 10m | <15mm round at 10m |
| Diameter x Length | $\Phi \times l$ | 8x32 mm | 8x32 mm |
| Output Power | Po | <1mW, <5mW | <1mW, <5mW |
| Power Stability | | <20% | <20% |
| Divergence Angle | mrad | <1.5 | <1.5 |
| Operating Voltage(DC) | Vo | 3V | 3V |
| CW Operating Current | Io | 180~250mA, 280mA max | 180~250mA, 280mA max |
| Operating Temperature | To | 15°C ~ +32°C | 15°C ~ +35°C |
| Storage Temperature | Ts | -10°C ~ +70°C | -10°C ~ +70°C |
| Housing Material | | Stainless | Stainless |
| Mean time to failure | | >5000 hrs | >8000 hrs |

Outline Dimensions



Spot size Define

S8 series Round Shape at 10m



Power Stability

The actual output power will be between the range 2.5mW to 3.5mW, but once you make sure the value, for example, $3\text{mW} \pm 0.15\text{mW}$ or $3.2\text{mW} \pm 0.16\text{mW}$ in the $25\text{ }^{\circ}\text{C}$ temperature. Then the power stability represents 5%.

Spot size

The spot size is defined as a Gaussian beam. In optics, a Gaussian beam is a beam of electromagnetic radiation whose transverse electric field and intensity (irradiance) distributions are well approximated by Gaussian functions. Many lasers emit beams that approximate a Gaussian profile, in which case the laser is said to be operating on the fundamental transverse mode, or "TEM00 mode" of the laser's optical resonator. When refracted by a diffraction-limited lens, a Gaussian beam is transformed into another Gaussian beam (characterized by a different set of parameters), which explains why it is a convenient, widespread model in laser optics.

Mean time to failure (MTTF)

Mean time to failure (MTTF) is the length of time a device or other product is expected to last in operation. MTTF is one of many ways to evaluate the reliability of pieces of hardware or other technology. It's important to note, however, that the mean time to failure metrics provided by companies regarding specific products or components may not have been collected by running one unit continuously until failure. Instead, MTTF data is often collected by running many units, even many thousands of units, for a specific number of hours.

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.

Class I

The maximum permissible exposure(MPE) cannot be exceeded, it includes High-power lasers within an enclosure that prevents exposure to the radiation and that cannot be opened without shutting down the laser. For example, a continuous laser at 600nm can emit up to 0.39mW, but for shorter wavelengths, the maximum emission is lower.

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 IIIA

“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 IIIB

“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 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.

Specifications are subject to change without notice.

