

Single-Mode 532nm Module



The laser has a unique built-in output power control through the use of an input DC voltage for a fairly linear control. The spectral mode has been tested to be true single mode throughout the output power controlled range from 5-100% without any need for external optical attenuators. The laser comes with built in isolator against specular reflections with better than 20 dB rejection power. This greatly improves the stability of the laser operations.

Applications

This laser package is designed for OEM Integration and is ideal for:

- Spectroscopy
- Optical Trapping
- Metrology
- Illumination

Key Features

- TEM00 Beam Quality
- 10,000 Hours Statistical Lifetime
- Low Noise and Excellent Power Stability
- Flexibility in Integration into Custom OEM Systems
- TTL and Analog Modulation Available
- Integral Polarization Isolator for > 50 mW

Standard Wavelengths

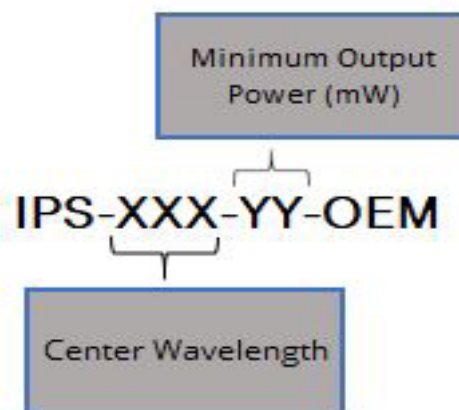
532nm

Specifications

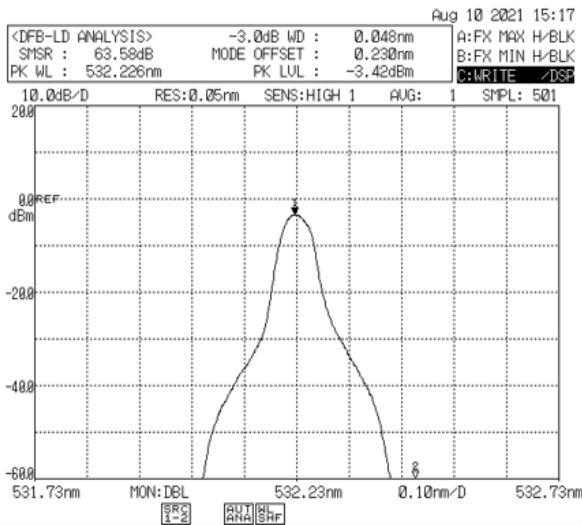
| | |
|---|--------------------------|
| Spectrum Width (FWHM) | 1.0 typical MHz |
| Power mW | 20, 50, & 100 |
| M² x, M² y | ≤ 1.2, ≤ 1.2, |
| Beam Size ta Exit Aperture | ≤0.8 nm |
| Beam Divergence | ≤ 1.5 mrad |
| Beam Ellipticity | ≥ 0.9 |
| Beam Offset Angle | +/- 5 mrad |
| Beam Offset Displacement | ≤ 0.5 (x), ≤ 0.5 (y) mm, |
| Power Stability | ~ 2% (Peak to Peak) |
| Power Noise | ~0.1% (RMS) |
| Residual Longitudinal Mode | Better than 30dB typical |

| λ (nm) | Min. Power (mW) | Part Number |
|---------------|------------------------|--------------------|
| 532 | 20 | IPS-532-20-OEM |
| | 50 | IPS-532-50-OEM |
| | 100 | IPS-532-100-OEM |

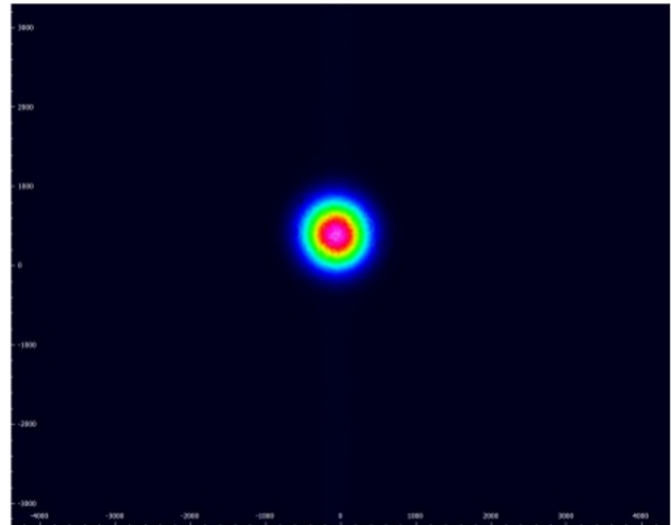
Part Schema



Selected Data



OSA Spectrum



TEM00 Beam Profile

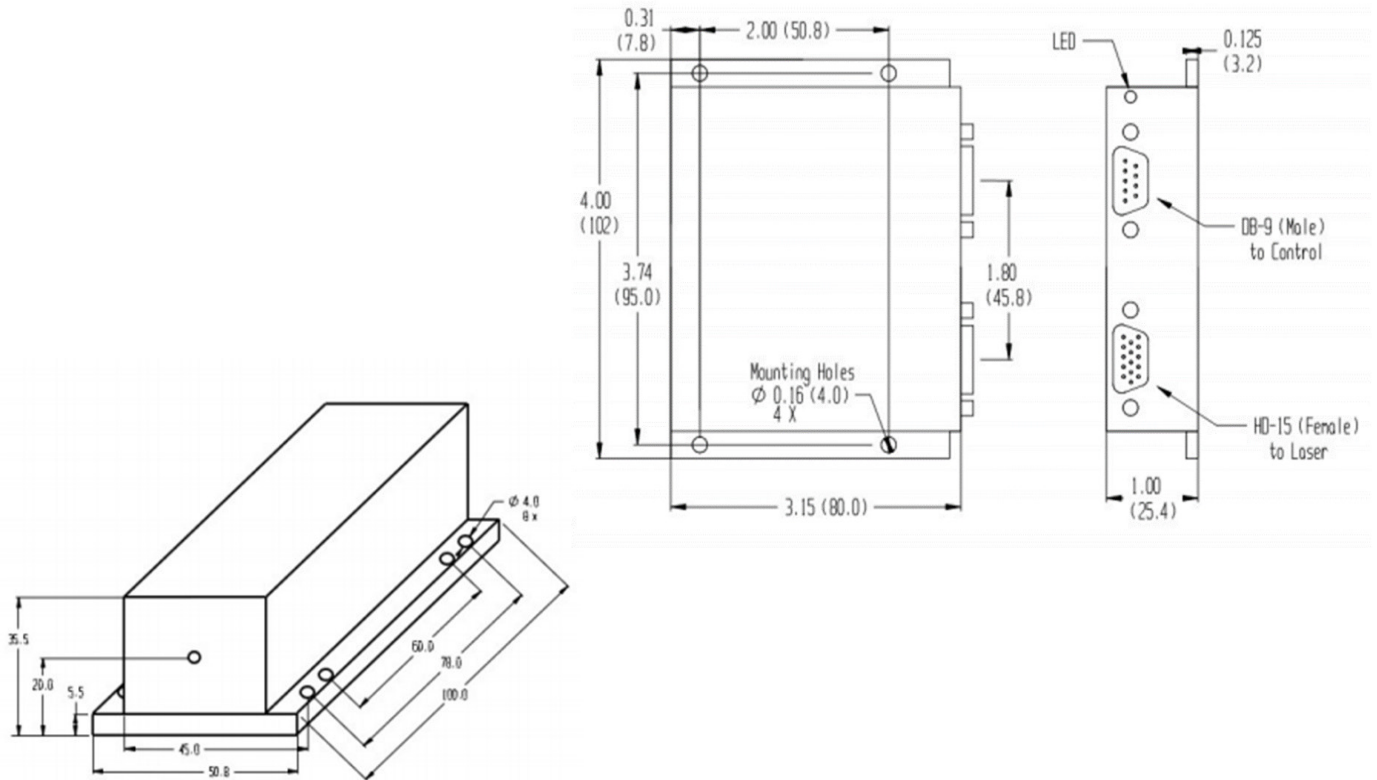
Custom Capability

- Multi-mode and Single-mode Fiber Coupling Available.

Electrical Specs

| Pin | Function |
|-------|--|
| 1,2,6 | Power Supply Negative Terminal (Circuit signal ground, signal return terminals). They must not be grounded to earth. |
| 3 | A digital input terminal to enable / disable laser beam output (TTL modulation). It is a TTL level active (a high, 5V, to enable the laser beam output, a low to disable laser output) Modulation frequency < 10 Hz. Input impedance 1 kOhm. |
| 4,5 | Power supply positive terminals. They must not be connected to chassis (device case). The power supply output range: 4.57 to 5.25 Volts at 5 Amperes, noise ripple: < 50 mV |
| 7 | An input terminal to enable laser beam output. It is a TTL low level active (connected to power negative terminal to turn laser beam on). |
| 8 | An input terminal to set laser beam power output level. Input 0-5V corresponds to 0 to maximum laser beam power output. Specific information shows in the laser test report. Input impedance: 50 kOhm. |
| 9 | Current monitoring. An output terminal to indicate laser beam output power level. The output voltage range is 0-5 V. This is maximum level of power output for a typical 50 mW laser corresponding to a voltage range: 0.4-0.6 VDC. The output impedance is 100 ohm. |

Mechanical Drawings



Laser driver

Operational Notes

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