

515nm 150mW

PRODUCT SPECIFICATION SHEET



SPECIFICATIONS

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| Module series: | Monolith |
| Model Nr.: | M-515LM-150 |
| Optical power: | 150 mW |
| Laser class according to IEC 60825-1 standard: | 3B |
| Center wavelength: | 515 nm |
| Center wavelength tolerance: | ± 5 nm |
| Spectral width: | < 1 nm |
| Center wavelength thermal drift: | 0.8 nm per 10 °C |
| Beam size (1/e²): | 2.2 ± 0.5 mm (f~2.7 mm for 95% energy) |
| Beam divergence (full angle): | 0.1 mrad |
| Linear polarization: | Y |
| Polarization ratio: | 100:1 |
| Polarization azimuth tolerance: | ± 5 degree |
| Mode structure: | Single transversal, multi-longitudinal mode |
| M² (horizontal/vertical): | ~ 1.2 |
| Power stability (over 1 hour, CW operation, after warm-up and ±3°C): | < 0.5 % |
| Pointing stability (over 1 hour, CW operation, after warm-up and ±3°C): | < ±100 μrad |

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| Output window beam centering: | < ±1 mm |
| Beam perpendicularity: | < ±1 degree |
| Warm-up time: | < 5 minute |
| Laser power control modes: | Analog, TTL, USB, potentiometer |
| Analog input signal: | 0 - 5V (0.5 - 4.5 V with TCCO* on) |
| TTL input signal: | 0 - 0.8 V: low 2 - 5 V: high |
| Bandwidth (analog input, 3 dB cut-off frequency): | 240 kHz (252 kHz with TCCO* off) |
| Rise time (10% - 90%): | 700 - 900 ns (signal dependent) |
| Fall time (90% - 10%): | 1 - 2 μs (signal dependent) |
| Phase shift: | 0.6 - 4 μs (signal dependent) |
| Analog/TTL input impedance: | 5 kΩ |
| Connection cable (laser head to control box): | HDMI 1.4 or higher, max. length 1m |
| Communication with PC: | USB-C (control box port only) |
| USB interface protocol | |
| Interlock: | Shorted: emission enabled (3.3V, 10 kΩ) Opened: emission disabled |
| Operating base plate temperature range: | < 50 °C |
| Operating ambient temperature range: | 5 - 40 °C (heat sink dependent) |
| Storage temperature range: | (-10) - 80°C |
| Ingress protection (laser head only): | IP64 |
| Power consumption: | typ. 20W max. 50W |
| Input voltage (Type PD): | min. 20V |
| Input voltage connector type: | USB-C (laser head) |

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| | port only) |
| Laser head dimensions (LxWxH): | 70(84) x 120 x 46 mm |
| Laser head weight: | 0.7 kg |
| Control box dimensions (LxWxH): | 53 x 29 x 36 mm (without connectors) |
| Control box weight: | 40 g |
| Expected lifetime: | > 10 000 hours |