



PART NUMBER 0532L-24B
 ITEM NAME 532 NM SLM LASER

PRODUCT DATASHEET



DESCRIPTION

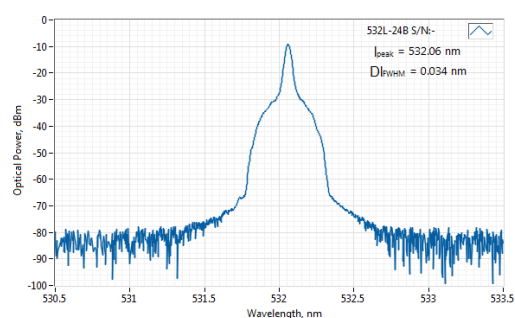
532 nm SLM laser permanently fiber coupled to a multimode fiber. Ultra-stable center wavelength and good immunity to back reflections make this laser perfect for Raman spectroscopy. The small form factor allows easy integration into portable diagnostic devices.

SPECIFICATIONS

Specifications updated: 24 January 2024

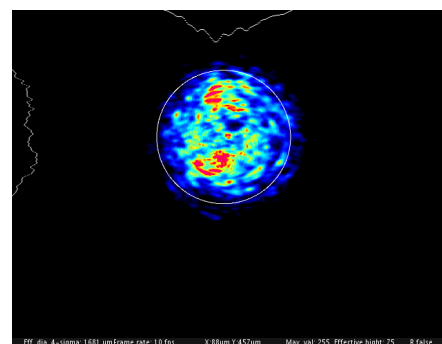
Parameter	Minimum Value	Typical Value	Maximum Value
Central wavelength, nm	531.9	532.0	532.1
Spectral line width FWHM, MHz	-	2 ¹	6
Output power, mW	-	40 ²	-
Power stability, % (RMS, 8 hrs)	0.03	0.1 ³	0.5
Power stability, % (peak-to-peak, 8 hrs)	0.4	1 ⁴	3
Intensity noise, % (RMS, 20 Hz to 20 MHz)	0.3	0.7 ⁵	1
Side-mode suppression ratio (SMSR), dB	-	70	-
Residual IR wavelength contrast, dB	-	20	-
Longitudinal modes	-	Single	-
Transversal modes	-	Multiple	-
Fiber	-	FG105UCA	-
Fiber length, m	0.95	1	1.1
Control interface type	-	UART ⁶	-
Operation mode	-	APC (CW) ⁷	-
Modulation bandwidth, MHz	-	N/A ⁸	-
Input voltage, VDC	4.8	5	5.3
Input current, A	-	5	-
Max. power consumption, W	5	15	25
Heat-sinking requirement, °C/W	-	0.5	-
Optimum heatsink temperature, °C	18	25	32
Warm up time, mins (cold start)	1	3	5
Temperature stabilization	-	Internal TEC	-
Overheat protection	-	Yes	-

TYPICAL SPECTRUM



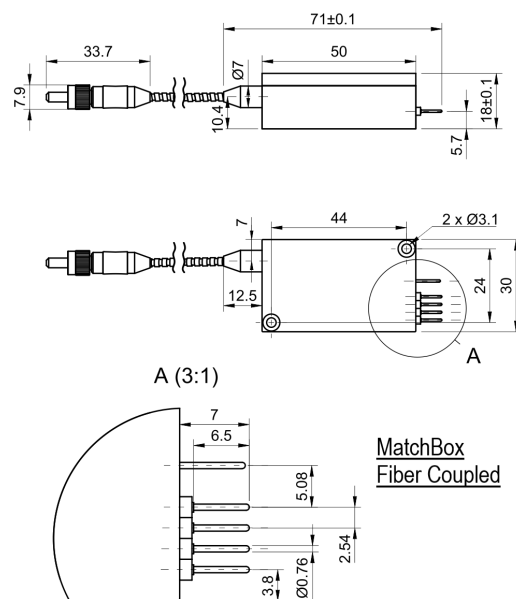
Typical spectrum of 0532 nm DPSS laser. Measured with 20 pm resolution.

TYPICAL NEAR FIELD



External fan control	-	Yes	-
Storage temperature, °C (non-condensing)	-10	-	50
Dimensions (WxDxH), mm	-	50 x 30 x 18 ⁹	-
Net weight, kg	0.1	0.12	0.14
Laser safety class	-	3B	-
RoHS	-	Yes	-
CE compliance	-	- General Product Safety Directive (GPSD) 2001/95/EC - (EMC) Directive 2004/108/EC	-
OEM lasers are not compliant with	-	IEC60825-1:2014 (compliant using additional accessories)	-
Warranty, months (op. hrs)	-	14 (10000) ¹⁰	-
Country of origin	-	Lithuania	-
Spectral line width FWHM, pm	-	0.002 ¹¹	0.005

DRAWING



¹ Measured using HighFinesse LineWidth Analyzer LWA-10k having 10 kHz resolution. Linewidth Analyzer testing is not provided for each laser being manufactured, the standard test is OSA measurement with 20-30 pm resolution instead.

² The output power of SLM lasers shall not be tuned and SLM performance is not guaranteed at power ratings other than factory preset. However, the power setting capability is not disabled. External attenuators are recommended instead.

³ The long term power test is carried out at constant laser body temperature (+/-0.1 °C) using an optical power meter with an input bandwidth of 10 Hz. The actual measurement rate has a period of about 20 seconds to 1 minute.

⁴ The long term power test is carried out at constant laser body temperature (+/-0.1 °C) using an optical power meter with an input bandwidth of 10 Hz. The actual measurement rate has a period of about 20 seconds to 1 minute.

⁵ Noise level is measured with a fast photodiode connected to an oscilloscope. The overall system bandwidth is from 2 kHz to 20 MHz.

⁶ Break-out-boxes AM-C8 and AM-C3 can be used for conversion of UART communication to either USB or RS232.

⁷ APC - Automatic Power Control.

⁸ SLM lasers shall not be modulated - use external modulators instead.

⁹ Excluding control interface pins and an output window/fiber assembly.

¹⁰ Whichever occurs first. The laser has an integrated operational hours counter.

¹¹ Converted from bandwidth value.

Note: Product specifications are subject to change without prior notice to improve reliability, function or design or otherwise.