



PART NUMBER 1310L-15A
 ITEM NAME 1310 NM LASER (DIODE; PM FIBER)

PRODUCT DATASHEET



DESCRIPTION

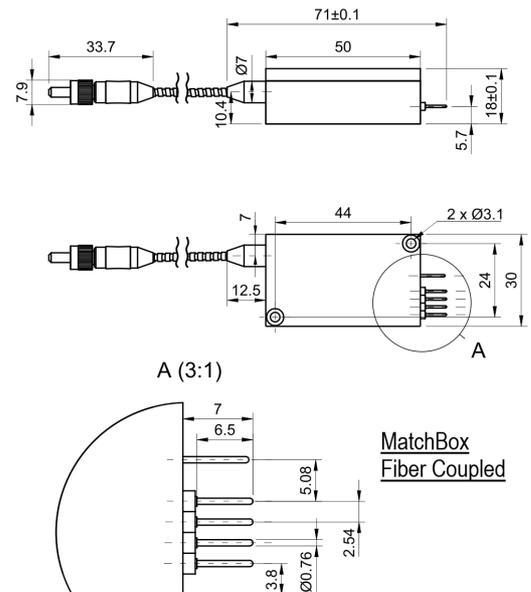
Compact 1310 nm laser is a powerful infrared diode laser module. This wavelength matches one of the water absorption lines and is therefore usable in water detection-related applications, such as food sorting, humidity control, eye-safe illumination and others.

SPECIFICATIONS

Specifications updated: 28 December 2022

Parameter	Minimum Value	Typical Value	Maximum Value
Central Wavelength, nm	1300	1310	1320
Longitudinal modes	-	multimode	-
Spectral line width FWHM, nm	-	10	15
Output power, mW	-	180 ¹	-
Power stability, % (RMS, 8 hrs)	-	1 ²	2
Power stability, % (peak-to-peak, 8 hrs)	-	2 ³	3
Intensity noise, % (RMS, 20 Hz to 20 MHz)	-	0.2 ⁴	1
Transversal modes	-	TEM ₀₀	-
Polarization direction	-	Aligned within the slow axis of the PM fiber and the key position.	-
Polarization extinction ratio (from PM fiber), dB	20	23	30
Control interface type	-	UART ⁵	-
Operation mode	-	APC (CW)	-
Modulation bandwidth, MHz	-	on request ⁶	-
Input voltage, VDC	4.8	5	5.3
External power supply requirement	-	+5 V DC, 5 A	-
Dimensions, mm	-	50 x 30 x 18 ⁷	-
Heat-sinking requirement, °C/W	-	1	-
Optimum heatsink temperature, °C	15	20	30
Warm up time, mins (cold start)	0.2	1	2
Temperature stabilization	-	Internal TEC	-

DRAWING



Overheat protection	-	Yes	-
Storage temperature, °C (non-condensing)	-10	-	50
Net weight, kg	0.1	0.12	0.14
Max. power consumption, W	5	10	20
Warranty, months (op. hrs)	-	14 (10000) ⁸	-
RoHS	-	Yes	-
CE compliance	-	- General Product Safety Directive (GPSD) 2001/95/EC - (EMC) Directive 2004/108/EC	-
Laser Safety Class	-	3B	-
OEM lasers are not compliant with	-	IEC60825-1:2014 (compliant using additional accessories)	-
Country of origin	-	Lithuania	-

¹ The optical power can be tuned from virtually 0% to 100%. However, other specifications, such as central wavelength, power stability, noise, polarization ratio are not guaranteed at power levels other than factory preset power.

² 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.

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⁴ Noise level is measured with a fast photodiode connected to an oscilloscope. The overall system bandwidth is from 2 kHz to 20 MHz.

⁵ Break-out-boxes AM-C8 and AM-C3 can be used for conversion of UART communication to either USB or RS232.

⁶ TTL digital modulation up to 10 MHz could be implemented on request

⁷ Excluding control interface pins and an output window/fiber assembly.

⁸ Whichever occurs first. The laser has an integrated operational hours counter.

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