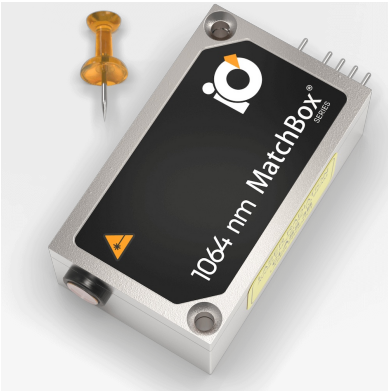
Integrated Optics, UAB
Company code: 302833442
VAT No: LT100007179012
https://integratedoptics.com
info@integratedoptics.com

PART NUMBER 1064L-11B
ITEM NAME 1064 NM LASER

PRODUCT DATASHEET



DESCRIPTION

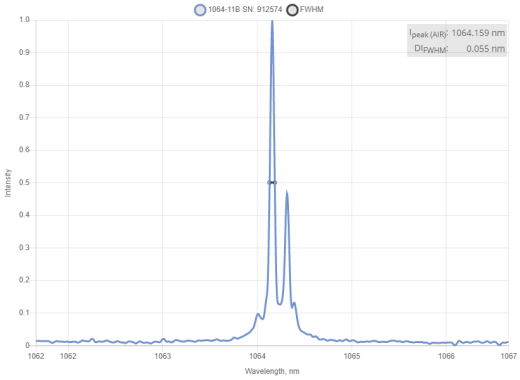
Compact 1064 nm laser is a DPSS module used in numerous applications, such as inspection, optical guiding, infrared absorption. The small size and all-in-one concept of the MatchBox series make the laser ready for integration into portable handheld devices.

SPECIFICATIONS

Specifications updated: *29 August 2023*

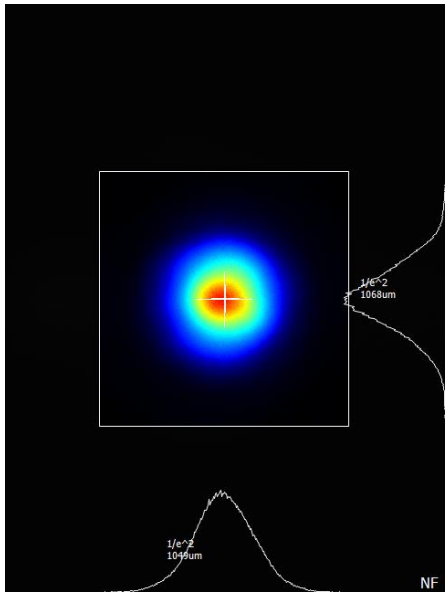
Parameter	Minimum Value	Typical Value	Maximum Value
Central wavelength, nm	1063.8	1064.1	1064.4
Longitudinal modes	-	Multiple	-
Spectral line width FWHM, nm	0.02	0.1	0.5
Output power, mW	-	500 [1]	-
Power stability, % (RMS, 8 hrs)	0.02	0.1 [2]	0.4
Power stability, % (peak-to-peak, 8 hrs)	0.1	0.5 [3]	1.5
Intensity noise, % (RMS, 20 Hz to 20 MHz)	0.5	1.5 [4]	10
Transversal modes	-	TEM00	-
Beam width (1/e2), mm	-	1.1 [5]	-
Beam height (1/e2), mm	-	1.1	-
Horizontal beam divergence, mrad	-	1.2	-
Vertical beam divergence, mrad	-	1	-
M^2 effective	-	1.1	1.3
Polarization direction	-	Vertical [6]	-
Polarization contrast	1000	1500	-
Control interface type	-	UART [7]	-
Operation mode	-	APC (CW)	-
Input voltage, VDC	4.8	5	5.3
External power supply requirement	-	+5 V DC, 5A	-
Dimensions (WxDxH), mm	-	50 x 30 x 18 [8]	-
Beam height from the base, mm	9.9	10.4	10.9
Heat-sinking requirement, °C/W	-	0.5	-
Optimum heatsink temperature, °C	15	20	30

TYPICAL SPECTRUM



Typical spectrum of 1064 nm DPSS laser. Measured with 20 pm resolution.

TYPICAL NEAR FIELD



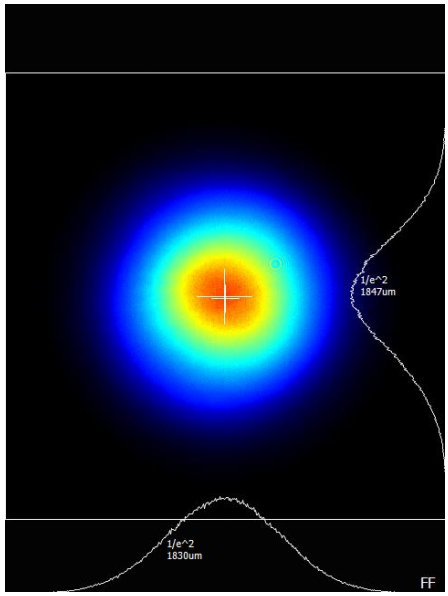
Typical near field (0.45 m from output aperture) beam profile. Circular beam of a 1064 nm DPSS laser.

Warm up time, mins (cold start)	0.2	1	2
Temperature stabilization	-	Internal TEC	-
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) [9]	-
Residual IR wavelength contrast, dB	-	20	-
RoHS	-	Yes	-
CE compliance	-	- General Product Safety Directive (GPSD) 2001/95/EC - (EMC) Directive 2004/108/EC	-
Laser safety class	-	4	-
OEM lasers are not compliant with	-	IEC60825-1:2014 (compliant using additional accessories)	-

[1] The optical power can be tuned from virtually 0% to 100%. However, other specifications, such as central wavelength, power stability, noise, polarization ratio, beam shape, quality and circularity are not guaranteed at power levels other than factory preset power. Significantly worse power stability is to be expected at very low power levels, e.g. <3% from specified nominal 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.
[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] Noise level is measured with a fast photodiode connected to an oscilloscope. The overall system bandwidth is from 2 kHz to 20 MHz.
[5] Beam width and height are measured at 0.4 m from output aperture.
[6] For lasers without integrated optical isolators.
[7] Break-out-boxes AM-C8 and AM-C3 can be used for conversion of UART communication to either USB or RS232.
[8] Excluding control interface pins and an output window/fiber assembly.
[9] 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.

TYPICAL FAR FIELD



Typical far field (1 m from output aperture) beam profile. Circular beam of a 1064 nm DPSS laser.

DRAWING

