



PART NUMBER 0375L-11A
 ITEM NAME 375 nm LASER (DIODE; FREE-SPACE)

PRODUCT DATASHEET



DESCRIPTION

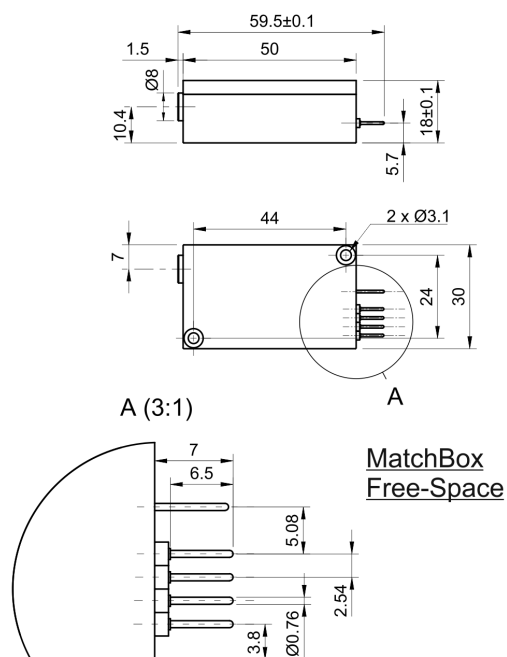
375 nm Matchbox offers the shortest wavelength available from direct diode lasers. It is extremely efficient if fluorescence applications and has good focusability, thus is often used in microscopy or particle analysis applications.



Specifications updated: 20 September 2023

Parameter	Minimum Value	Typical Value	Maximum Value
Central wavelength, nm	370	375	380
Spectral line width FWHM, nm	-	0.5	1
Output power, mW	-	30 ¹	-
Power stability, % (RMS, 8 hrs)	-	1 ²	2
Power stability, % (peak-to-peak, 8 hrs)	-	1 ³	3
Intensity noise, % (RMS, 20 Hz to 20 MHz)	-	0.25 ⁴	0.6
Longitudinal modes	-	Multiple	-
Transversal modes	-	TEM ₀₀	-
Beam diameter at aperture (1/e ²), mm	-	1	-
Beam divergence (full angle), mrad	-	1.1	-
M ² horizontal axis	-	1.1	1.4
M ² vertical axis	-	1.2	1.5
M ² effective	-	1.2	1.5
Polarization direction	-	Horizontal ⁵	-
Polarization contrast	1000	2000	5000
Control interface type	-	UART ⁶	-
Operation mode	-	APC (CW)	-
Modulation bandwidth, MHz	-	10 ⁷	-
Input voltage, VDC	4.8	5	5.3
External power supply requirement	-	+5 V DC, 1.5 A	-
Max. power consumption, W	0.5	2	10
Dimensions (WxDxH), mm	-	50 x 30 x 18 ⁸	-
Beam height from the base, mm	9.9	10.4	10.9

DRAWING



Net weight, kg	0.1	0.2	0.14
Heat-sinking requirement, °C/W	-	1	-
Optimum heatsink temperature, °C	15	20	30
Warm up time, mins (cold start)	0.1	0.5	1
Temperature stabilization	-	Internal TEC	-
Overheat protection	-	Yes	-
Storage temperature, °C (non-condensing)	-10	-	50
Warranty, months (op. hrs)	-	14 (10000) ⁹	-
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, 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.

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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 For lasers without integrated optical isolators.

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

⁷ TTL digital modulation up to 10 MHz.

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.