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PART NUMBER 40A-48A-52A-XXY-14
ITEM NAME MULTI-WAVELENGTH LASER; MM FIBER (405 NM, 488 NM, 520 NM)

PRODUCT DATASHEET

DESCRIPTION

Multi-wavelength laser featuring three laser diodes integrated within an ultra-compact MM (multi-mode) fiber-coupled 'Matchbox' housing. A classical dichroic mirror combining technique is used in combination with our proprietary micro-optics assembly to make this system both economical and compact. All optics and electronics are fitted into 'Matchbox' housing. This particular configuration combines wavelengths, which are standard for use in Life Sciences, Food sorting, Metrology, and Medical applications. An easy-to-use PC interface and separate TTL inputs allow full control over the individual wavelengths.

Features:

- Three wavelengths
- Plug-and-play
- Single user interface for all 3 wavelengths

Advantages:

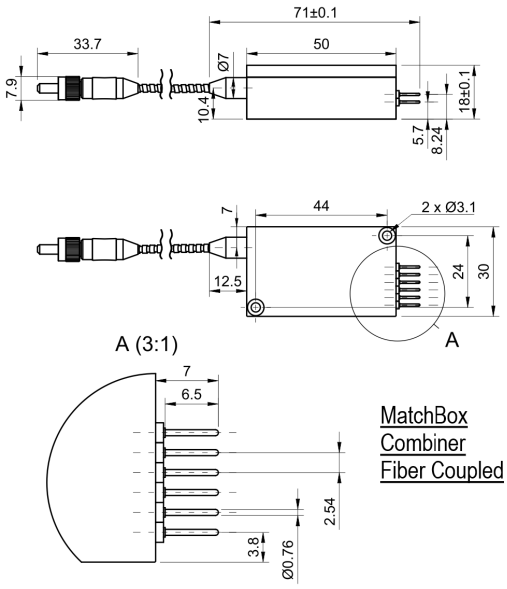
- Space-saving design
- No optics realignment
- Remote PC control

SPECIFICATIONS

Specifications updated: *25 April 2022*

Parameter	Minimum Value	Typical Value	Maximum Value
Output power, mW	-	405 nm - 100 488 nm - 40 520 nm - 70 [1]	-
Wavelength Tolerance	-	+/-5 nm	-
Longitudal Modes	-	Multiple	-
Spectral line width FWHM, nm	-	0.7	1.2
Fiber core diameter	-	105 µm, 200 µm, 400	-
Power stability, % (RMS, 8 hrs)	-	0.2 [2]	1
Power stability, % (peak-to-peak, 8 hrs)	-	0.2 [3]	1
Intensity noise, % (RMS, 20 Hz to 20 MHz)	-	0.8 [4]	2
Transversal Mode	-	multimode (top-hat-like)	-
Control Interface	-	UART [5]	-
Operation Mode	-	ACC (CW)	-
Modulation bandwidth, MHz	-	10 [6]	-
Input voltage, VDC	-	9	12
External Power Supply Requirement	-	+9 V DC, 1.5 A	+12 V DC, 1.5 A
Dimensions, mm	-	50 x 30 x 18 [7]	-

DRAWING



Heat-sinking requirement, °C/W	-	<0.5	-
Optimum heatsink temperature, °C	15	20	30
Warm-up Time, min (Cold Start)	0.1	0.5	1
Temperature Stabilization	-	Internal TEC	-
Overheat Protection	-	Yes	-
Storage temperature, °C (non-condensing)	10	-	50
Net weight, kg	-	0.2	-
Power consumption, W	-	2	-
Warranty, months (op. hrs)	-	14 (10000) [8]	-
RoHS	-	Yes	-
CE Compliance	-	- General Product Safety Directive (GPSD) 2001/95/EC	-
OEM Lasers Are Not Compliant With	-	IEC60825-1:2014	-

[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] The break-out-box AM-C9 can be used for conversion of UART communication to USB.

[6] TTL digital modulation up to 10 MHz.

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

[8] Whichever occurs first.

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