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PART NUMBER XXY-48A-52A-66A-13
ITEM NAME MULTI-WAVELENGTH LASER

PRODUCT DATASHEET

DESCRIPTION

A multi-wavelength laser featuring 3 laser diodes integrated within ultra-compact SM (single-mode) fiber-coupled 'Matchbox' housing. Redefine the way you conduct research in life sciences and fluorescence applications with our cutting-edge 4-Wavelength Laser Combiner. Seamlessly integrating four distinct wavelengths into a single housing, this compact powerhouse offers unparalleled convenience without sacrificing performance.

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

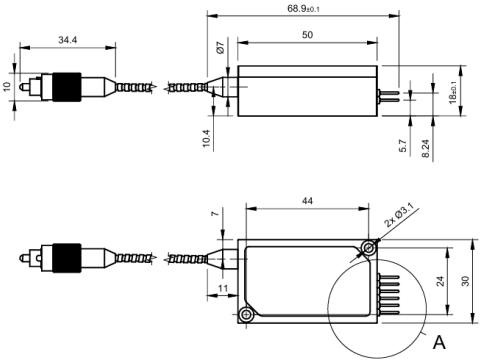
Advantages:
- Space-saving design
- No optics realignment
- Remote PC control

SPECIFICATIONS

Specifications updated: *20 May 2024*

Parameter	Minimum Value	Typical Value	Maximum Value
Output power, mW	-	488 nm - 20 520 nm - 20 660 nm - 40 [1]	-
Wavelength tolerance, nm	480 515 657	488 520 660	495 530 663
Longitudinal modes	-	Multiple	-
Spectral line width FWHM, nm	-	0.7	1.2
Fiber core diameter, µm	-	3.5 µm	-
Power stability, % (RMS, 8 hrs)	-	0.2 [2]	1
Power stability, % (peak-to-peak, 8 hrs)	-	2 [3]	5
Intensity noise, % (RMS, 20 Hz to 20 MHz)	-	0.8 [4]	2
Transversal modes	-	Single	-
Control interface type	-	UART [5]	-
Operation mode	-	ACC (CW)	-
Modulation bandwidth, MHz	-	10 [6]	-
Input voltage, VDC	8	9	12
External power supply requirement	-	+9 V DC, 1.5 A [7]	+12 V DC, 1.5 A
Dimensions (WxDxH), mm	-	50 x 30 x 18 [8]	-
Heat-sinking requirement, °C/W	-	<0.5	-
Optimum heatsink temperature, °C	-	25	-

DRAWING



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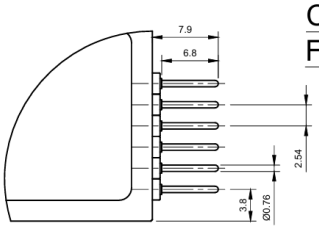

MatchBox Combiner Fiber Coupled

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
Net weight, kg	-	0.2	-
Power consumption, W	-	2 [9]	18
Warranty, months (op. hrs)	-	14 (10000) [10]	-
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)	-

[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] If the break-out-box AM-C9 is used, a PD (Power Delivery) type of power supply can be used.
[8] Excluding control interface pins and an output window/fiber assembly.
[9] For single enabled wavelength.
[10] Whichever occurs first.

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