



PART NUMBER 40A-48A-XXY-XXY-14
 ITEM NAME MULTI-WAVELENGTH LASER

PRODUCT DATASHEET



DESCRIPTION

Multi-wavelength laser featuring two laser diodes integrated within an ultra-compact MM (multi-mode) fiber-coupled 'Matchbox' housing. Transform your scientific journey with our highly configurable 2-Wavelength Laser Combiner. Seamlessly integrating four distinct wavelengths into a single housing, this compact powerhouse offers unparalleled convenience without sacrificing performance.

Features:

- Two wavelengths
- Plug-and-play
- Single user interface for both wavelengths

Advantages:

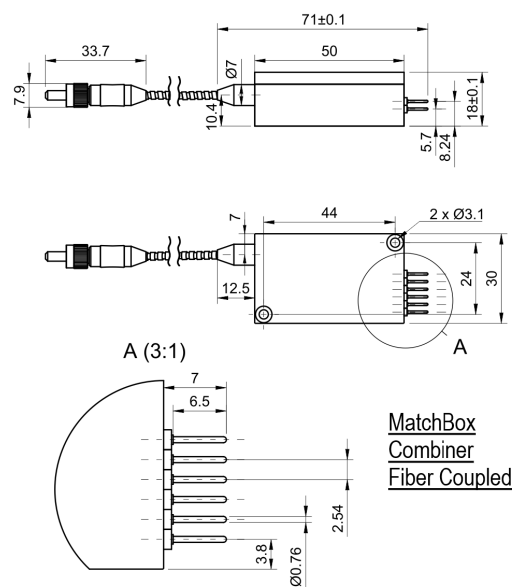
- Space-saving design
- No optics realignment
- Remote PC control

SPECIFICATIONS

Specifications updated: 14 March 2024

Parameter	Minimum Value	Typical Value	Maximum Value
Output power, mW	-	405 nm - 100 488 nm - 40	-
Wavelength tolerance, nm	400 480	405 488	410 495
Power stability, % (RMS, 8 hrs)	-	0.2	-
Longitudinal modes	-	Multiple	-
Spectral line width FWHM, nm	-	<1.5	-
Transversal modes	-	TEM00	-
Control interface type	-	UART ¹	-
Operation mode	-	ACC (CW)	-
Modulation bandwidth, MHz	-	10 ²	-
Input voltage, VDC	-	9	12
External power supply requirement	-	+9 V DC, 1.5 A 3	+12 V DC, 1.5 A
External power supply requirement	-	External Power Supply Requirement	-
Intensity noise, % (RMS, 20 Hz to 20 MHz)	-	<1 ⁴	-
Dimensions (WxDxH), mm	-	50 x 30 x 18	-
Beam height from the base, mm	-	10.4	-
Heat-sinking requirement, °C/W	-	<0.5	-
Optimum heatsink temperature, °C	-	25	-
Warm up time, mins (cold start)	-	< 1 min	-

DRAWING



**MatchBox
Combiner
Fiber Coupled**

Temperature stabilization	-	Internal TEC	-
Overheat protection	-	Yes	-
Storage temperature, °C (non-condensing)	-	-	-
Net weight, kg	-	0.3	-
Max. power consumption, W	-	2	-
Warranty, months (op. hrs)	-	14 (10000) ⁵	-
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	-

¹ The break-out-box AM-C9 can be used for conversion of UART communication to USB.

² TTL digital modulation up to 10 MHz.

³ If the break-out-box AM-C9 is used, a PD (Power Delivery) type of power supply can be used.

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 Whichever occurs first.

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