



PART NUMBER 40A-48A-XXY-XXY-11  
 ITEM NAME MULTI-WAVELENGTH LASER; FREE-SPACE (405 NM, 488 NM)

## PRODUCT DATASHEET



### DESCRIPTION

A widely configurable 2-wavelength dichroic laser featuring precisely co-aligned optical paths in a free-space output configuration. All optics and electronics fitted into the ultra-compact 'Matchbox' housing. This particular configuration combines wavelengths, which are standard for use in Life Sciences, Food, Metrology, and Medical applications. An easy-to-use PC interface and separate TTL inputs allow full control over the individual wavelengths.

#### Features:

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

#### Advantages:

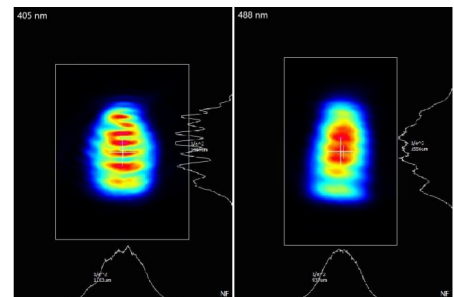
- Space-saving design
- No optics realignment
- Remote PC control

## SPECIFICATIONS

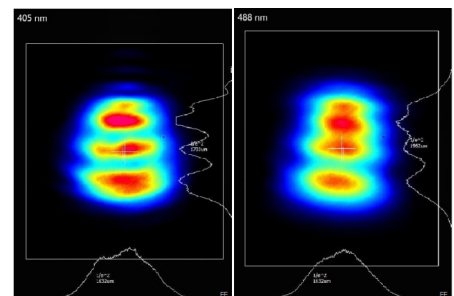
Specifications updated: 25 April 2022

Parameter	Minimum Value	Typical Value	Maximum Value
Output power, mW	-	405 nm - 120 488 nm - 40	-
Wavelength Tolerance	-	+/-3 nm	-
Longitudinal Modes	-	Multiple	-
Spectral line width FWHM, nm	-	1	2
Power stability, % (RMS, 8 hrs) at 20 °C	-	0.2	0.5
Intensity noise, % (RMS, 20 Hz to 20 MHz)	-	0.5 <sup>1</sup>	1
Transversal Mode	-	TEM <sub>00</sub>	-
Polarization direction	-	Horizontal	-
Polarization contrast	405 nm - 50 488 nm - 50	405 nm - 300 488 nm - 400	-
Control Interface	-	UART <sup>2</sup>	-
Operation Mode	-	ACC (CW)	-
Input voltage, VDC	8	9	12
External Power Supply Requirement	-	+9 V DC, 1.5 A <sup>3</sup>	+12 V DC, 1.5 A
Dimensions, mm	-	50 x 30 x 18	-
Beam height from the base, mm	-	10.4	-
Heat-sinking requirement, °C/W	-	<0.5	-

## TYPICAL NEAR FIELD

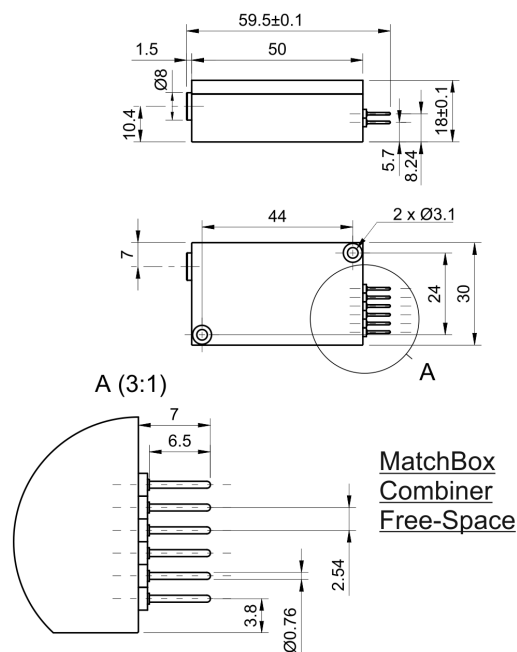


## TYPICAL FAR FIELD



Optimum heatsink temperature, °C	-	20	25
Warm-up Time (Cold Start)	-	< 1	2
Temperature Stabilization	-	Internal TEC	-
Overheat Protection	-	Yes	-
Storage temperature, °C (non-condensing)	-	-	-
Net weight, kg	-	0.3	-
Max. power consumption, W	-	2 <sup>4</sup>	18
Warranty, months (op. hrs)	-	14 (10000) <sup>5</sup>	-
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)	-

## DRAWING



<sup>1</sup> Noise level is measured with a fast photodiode connected to an oscilloscope. The overall system bandwidth is from 2 kHz to 20 MHz.

<sup>2</sup> The break-out-box AM-C9 can be used for conversion of UART communication to USB.

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

<sup>4</sup> For single enabled wavelength.

<sup>5</sup> Whichever occurs first.

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