



PART NUMBER 0450L-14A
 ITEM NAME 450 NM LASER (DIODE; MM FIBER)

PRODUCT DATASHEET



DESCRIPTION

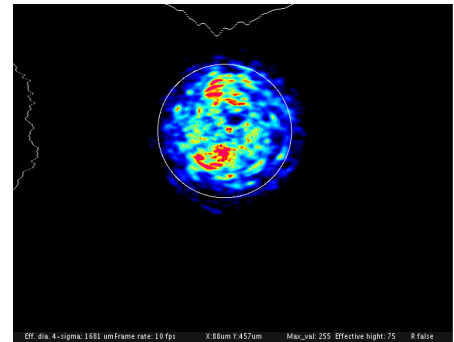
450 nm laser diode module is an excellent choice for flow cytometry, fluorescence and biomedical applications. Small footprint, stable power, low power consumption are only a few advantages of this laser. This particular version of 450 nm laser is fiber coupled to a MM fiber.

SPECIFICATIONS

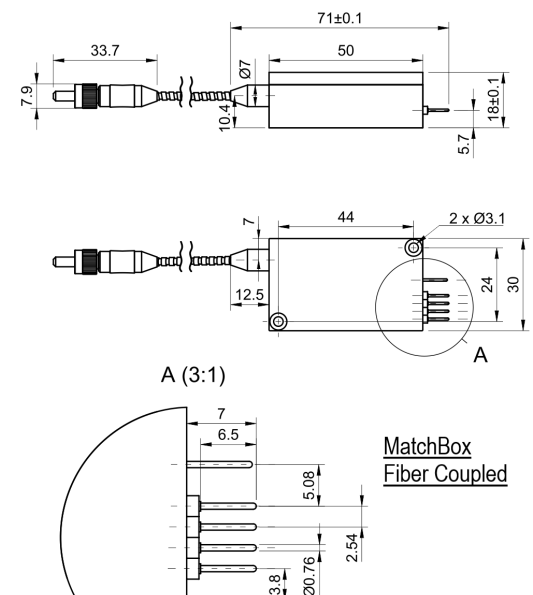
Specifications updated: 22 January 2021

Parameter	Minimum Value	Typical Value	Maximum Value
Central Wavelength, nm	442	450	458
Longitudinal modes	-	Multiple	-
Spectral line width FWHM, nm	-	0.8	1
Output power, mW	-	50 ¹	-
Power stability, % (RMS, 8 hrs)	-	1	2
Power stability, % (peak-to-peak, 8 hrs)	-	2	3
Noise, % (RMS, 20 Hz to 20 MHz)	-	0.4	1
Transversal modes	-	Multiple	-
Control interface type	-	UART ²	-
Operation mode	-	APC (CW)	-
Modulation bandwidth, MHz	-	10	-
Input voltage, VDC	4.8	5	5.3
External power supply requirement	-	+5 V DC, 1.5 A	-
Dimensions, mm	-	50 x 30 x 18	-
Fiber Length, m	0.95	1	1.1
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	-
External fan control	-	No ³	-
Overheat protection	-	Yes	-
Storage temperature, °C (non-condensing)	-10	-	-50
Net weight, kg	0.1	0.12	0.14

TYPICAL NEAR FIELD



DRAWING



Max. power consumption, W	0.4	2	10
Warranty, month	-	14 (10000)	-
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 Break-out-boxes AM-C8 and AM-C3 can be used for conversion of UART communication to either USB or RS232.

³ This function can be enabled in hardware only if the fast modulation option is disabled. The customer must specify this before ordering the laser.

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