

Multi-Mode Fiber Coupled Turnkey M-Type

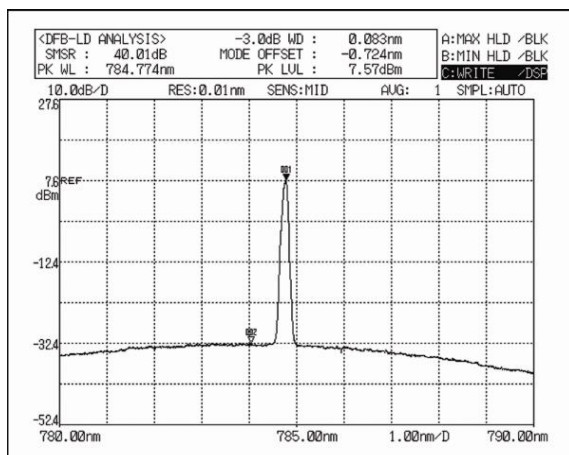


Innovative Photonic Solution's proprietary Wavelength Stabilized Laser features high output power with narrow spectral bandwidth. The laser's stabilized peak wavelength remains "locked" regardless of case temperature (10 to 35 deg. C).

Devices can be spectrally tailored to suit application needs and offer side mode suppression ratios (SMSRs) better than 40 dB, thereby providing extremely high signal to noise ratio and making these sources ideal for Raman spectroscopy and pump laser applications.

The laser is integrated with high performance laser drive and temperature control electronics and integrated into a fully turn-key UL/CE and IEC certified system with all safety features.

In addition to benchtop functionality, the side panel can be opened and the "guts" of the laser (the U-type engine inside) can be removed so that a different wavelength can "drop in," or the U-type can be integrated as an OEM component into a user system once testing is done.



Typical 785 nm Stabilized Laser Spectrum

Features

- Wavelength Stabilized Spectrum
- High Power Multi-Mode Fiber Coupled Output
- UL/CE and IEC Certified
- Turn-Key Operation
- Narrow Spectral Linewidth (< 0.15 FWHM)
- Narrowed Spectral Linewidth available upon request (< 0.07 nm FWHM). Add – NL to part number
- Temperature Stabilized Spectrum (< 0.007 nm/°C)
- 40 dB SMSR Typical

Standard Wavelengths

- 647 nm
- 785 nm
- 808 nm
- 830 nm
- 1064 nm

Additional wavelengths available upon request

General Optical Specifications

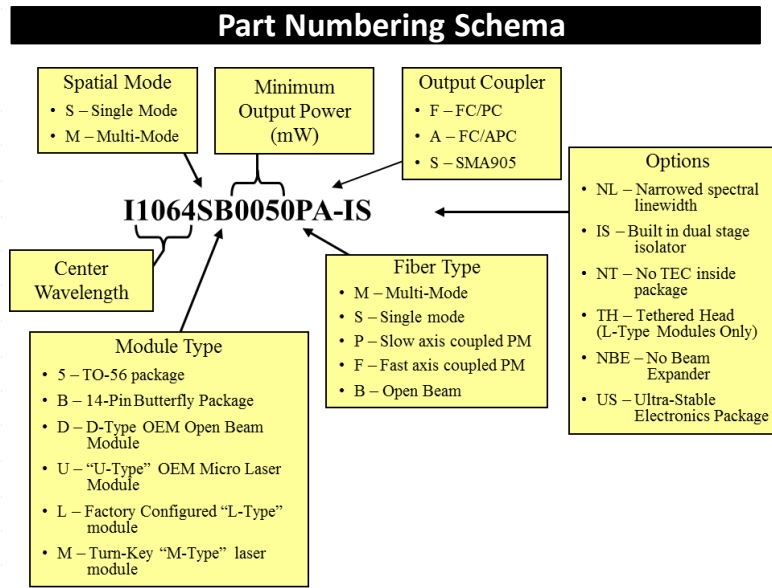
Wavelength Tolerance	+/- 0.5 nm
Spectral Linewidth ($\Delta\lambda$)	< 0.15 nm
Narrowed Linewidth (-NL) Spectral Linewidth ($\Delta\lambda$)	< 0.07 nm
Wavelength Stability Range	10 C - 35 C
SMSR	35 -45 dB
Output Power Stability	1% typical
Peak Wavelength Drift	+/- 7pm assuming TEC control +/- 0.1 degree C
Modulation Rate	CW to 1KHz for 10% to 100% power, 10kHz at 50% duty cycle
Warm-up time	10 seconds from cold start
	1.5 seconds from warm start

Physical Specifications

Optical Fiber	100-105/125 micron multimode fiber, 0.22 NA
Connector	FC/PC or SMA905
Module Dimensions	9.48 x 6.94 x 4.14 inches
Module weight	48 ounces
Case Material	Anodized Aluminum
Operating Temperature	10 to 35 degrees C
Environment	0-80% Humidity, non condensing
Storage Temperature	-10 to + 55 degrees C



Wavelength (nm)	Min. Power (mW)	Part Number ¹	Connector
647	150	I0647MM0150MF	FC/PC
		I0647MM0150MS	SMA
785	350	I0785MM0350MF	FC/PC
		I0785MM0350MS	SMA
	500	I0785MM0500MF	FC/PC
		I0785MM0500MS	SMA
808	350	I0808MM0350MF	FC/PC
		I0808MM0350MS	SMA
	500	I0808MM0500MF	FC/PC
		I0808MM0500MS	SMA
830	350	I0830MM0350MF	FC/PC
		I0830MM0350MS	SMA
	500	I0830MM0500MF	FC/PC
		I0830MM0500MS	SMA
1064	500	I1064MM0500MF	FC/PC
		I1064MM0500MS	SMA



Electrical Requirements

Input Power	100 – 240 VAC, 50 – 60 Hz, 0.4 A
Fuse Rating	250 V, 1 A, Fast Blow, 5 mm x 20 mm, 2 each

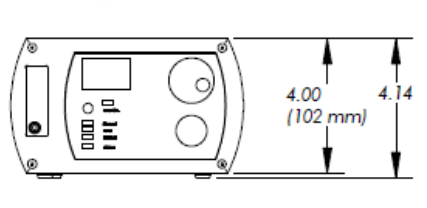
- ### Operational Notes
- Do not retro-reflect beam! This can cause Catastrophic Optical Damage (COD) and is not covered under warranty.
 - Knob on front adjust power by adjusting drive current. LED readout is in amperes.
 - IPS can supply our Laser Control Unit (LCU-M) for USB control. It comes standard with pulse width modulation (PWM) software. Ask about this product.
 - 100-105 micron core fiber is standard. 62.5 micron core fiber available upon request but will affect output power. Please ask for part number.
 - Add “-NL” to standard part number for narrowed spectral linewidth <0.07 nm.
 - See Operation Manual for full operating and safety instructions. This document is meant to offer a product overview.

1 – For narrowed spectral linewidth <0.07 nm, add “-NL” to part number

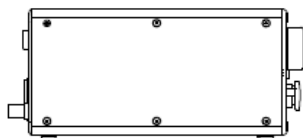
Mechanical Specifications



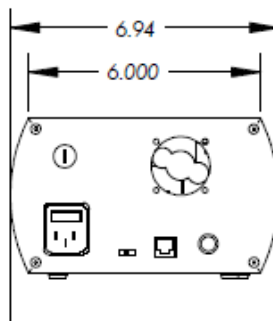
Front View



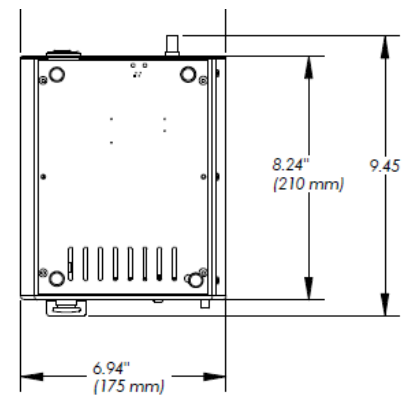
Side View



Back



Bottom View



VISIBLE LASER RADIATION
 AVOID EXPOSURE TO BEAM
 CLASS 3B LASER PRODUCT
 647 nm, 300 mW CW
 EN/IEC 60825-1:2007

INVISIBLE LASER RADIATION
 AVOID EXPOSURE TO BEAM
 CLASS 3B LASER PRODUCT
 785nm, 808 nm, 830 nm,
 499 mW CW
 EN/IEC 60825-1:2007

INVISIBLE LASER RADIATION
 AVOID EYE OR SKIN EXPOSURE TO
 DIRECT OR SCATTERED RADIATION
 CLASS 4 LASER PRODUCT
 785 nm, 808 nm, 830 nm,
 1064 nm, 1 W CW
 EN/IEC 60825-1:2007