

Multimode Digital M-Type Module



Our proprietary Wavelength Stabilized Laser Diode features high output power with narrow spectral bandwidth. The laser's stabilized peak wavelength remains "locked" regardless of case temperature (10 to 35 °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.

Standard Wavelengths

All specified wavelengths are measured "in-vacuum"

Applications

This laser package is designed for turn-key operation and is ideal for:

- High Resolution Raman Spectroscopy
 - Portable Raman
 - Process Raman
- Direct-Diode Frequency Doubling
- Fiber Laser Pumping
- Remote Sensing
- Gas Sensing

Key Features

- Wavelength Stabilized Spectrum
- High Power Multimode Fiber Coupled Output
- Power adjustable
- UL/CE and IEC Certified
- Turn-Key Operation
- Narrow Spectral Linewidth (< 0.1nm FWHM)
- USB Connectivity with dual port USB hub
- 40 dB SMSR Typical
- Side panel can be opened, and the "guts" of the laser (U-Type module) can be removed to allow for different wavelengths to be "dropped-in"
- External patch cord sold separately

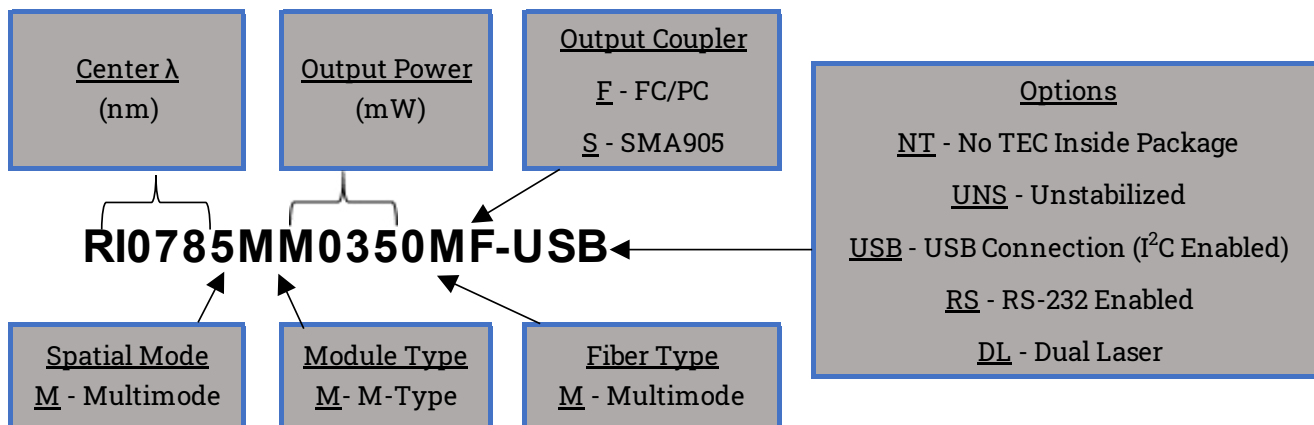
638nm	785nm	860nm
660nm	808nm	976nm
680nm	830nm	1064nm

Specifications

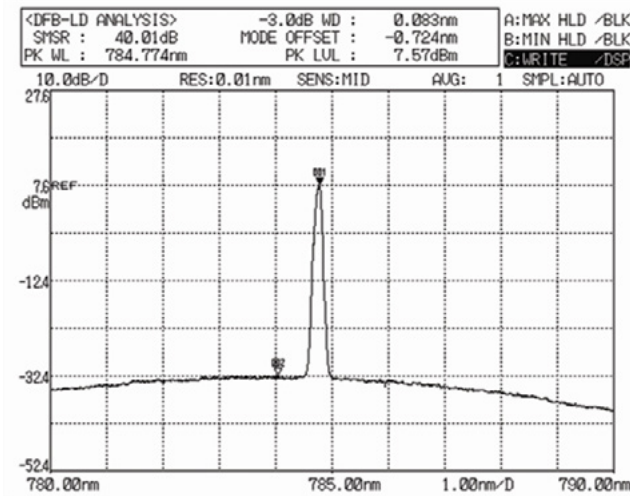
Wavelength Tolerance	+/- 0.5nm
Spectral Linewidth	<0.1nm (0.08nm typical)
SMRS	35dB - 45dB
Wavelength Stability Range	10 - 35 °C
Output Power Stability	<1% at constant Tcase (sample rate of 1 per 1 second.)
Modulation Rate	CW to 10KHz at 50% duty cycle or CW to 1kHz at 10% - 100% duty cycle.
Warm-Up Time	10 seconds from cold start
	1.5 seconds from warm start

λ (nm)	Output Power (mW)	Base Part Number
638	350	RI0638MM0350MF-USB
660	250	RI0660MM0250MF-USB
680	300	RI0680MM0300MF-USB
785	350	RI0785MM0350MF-USB
	500	RI0785MM0500MF-USB
	800	RI0785MM0800MF-USB
	1500	RI0785MM1500MF-USB-DL
808	350	RI0808MM0350MF-USB
	500	RI0808MM0500MF-USB
	800	RI0808MM0800MF-USB
	1500	RI0808MM1500MF-USB-DL
830	350	RI0830MM0350MF-USB
	500	RI0830MM0500MF-USB
	800	RI0830MM0800MF-USB
	1500	RI0830MM1500MF-USB-DL
860	350	RI0860MM0350MF-USB
	500	RI0860MM0500MF-USB
	1000	RI0860MM1000MF-USB-DL
976	800	RI0976MM0800MF-USB
	1500	RI0976MM1500MF-USB-DL
1064	350	RI1064MM0350MF-USB
	500	RI1064MM0500MF-USB
	800	RI1064MM0800MF-USB
	1500	RI1064MM1500MF-USB-DL

Part Schema



Selected Data



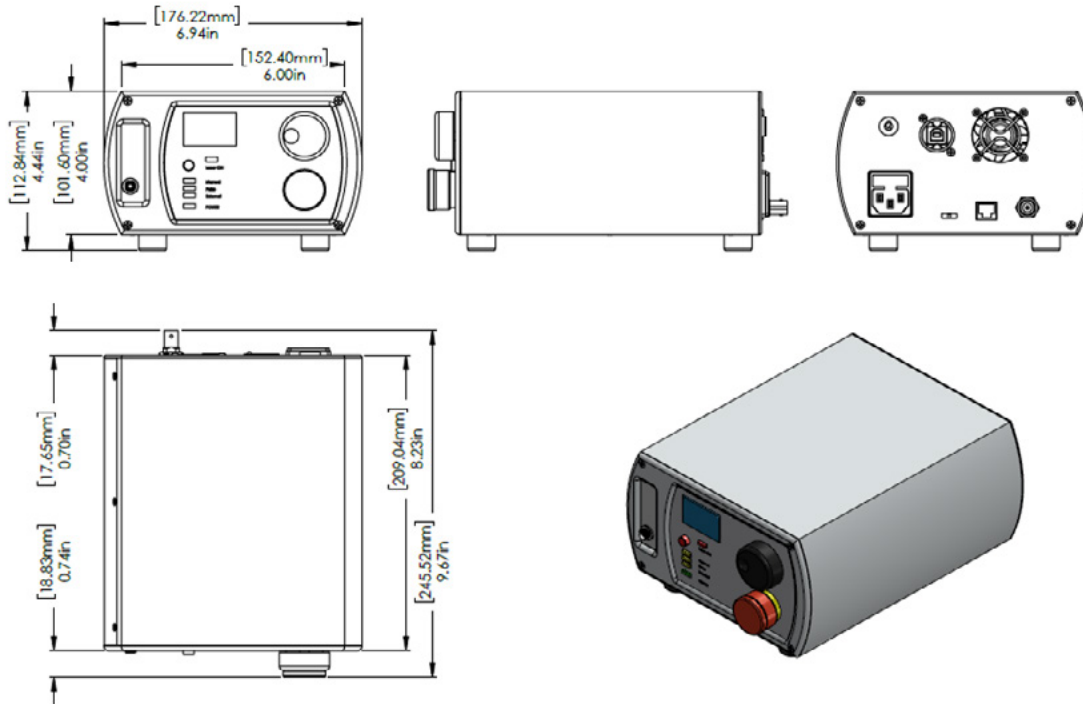
Standard Optical Fiber Single Laser Module	105/125 micron multimode fiber, 0.22NA
Standard Optical Fiber Dual Laser Module	200 micron multimode 0.22NA
Connector	FC/PC or SMA905
Module Dimensions	9.48in. (240.79mm) x 6.94in. (176.28mm) x 4.14in. (105.16mm)
Module Weight	48oz. (1361g)
Case Material	Anodized Aluminum
Environment	0-80% Humidity, non-condensing
Storage Temperature	-50 to 90 °C

Custom Capability

- Custom wavelengths available upon request
- FC/PC or SMA output coupler
- Various diameter output fibers available
- External TEC (e.g. No TEC inside of package optional)
- For more information on dual wavelength lasers, see our Multimode Digital Dual Laser M-Type Module
- Our turn-key system comes standard with a US outlet plug. Europe, UK, and Australia outlet plugs are available as accessories upon request

Electrical Specs

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



Operational Notes

1. Knob on front controls power output by adjusting drive current.
2. Module includes 2-port USB hub to allow connection to additional USB devices
3. 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.
4. If locked power is required, see L-type module data sheet.
5. See the [user guide](#) for full operating and safety instructions. This document is meant to offer a product overview.



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