Multimode Digital Dual Wavelength Module

The Innovative Photonic Solutions' (IPS) Digital Dual Wavelength M-Type Spectrum Stabilized Laser Module provides the user with a powerful and extremely stable laser source that is ideal for scientific applications. The dual laser source coupled with a suitable Raman probe and spectrometer enables examination of the entire Raman spectrum from 0 - 4000 cm^{-1} (e.g., Raman Concatenation) or enables flourescence suppression (e.g., Shifted Excitation Raman Difference Spectroscopy or Sequentially Shifted Excitation Raman Spectroscopy).

Applications

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

- Raman Concatenation
- Shifted Excitation Raman Difference Spectroscopy (SERDS)
- Sequentially Shifted Excitation Raman Spectroscopy (SSERS)
- Spectroscopy
- Illumination

Key Features

- Dual wavelength in single fiber coupled output
- 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
- External fiber patch cord sold separately

Standard Wavelengths

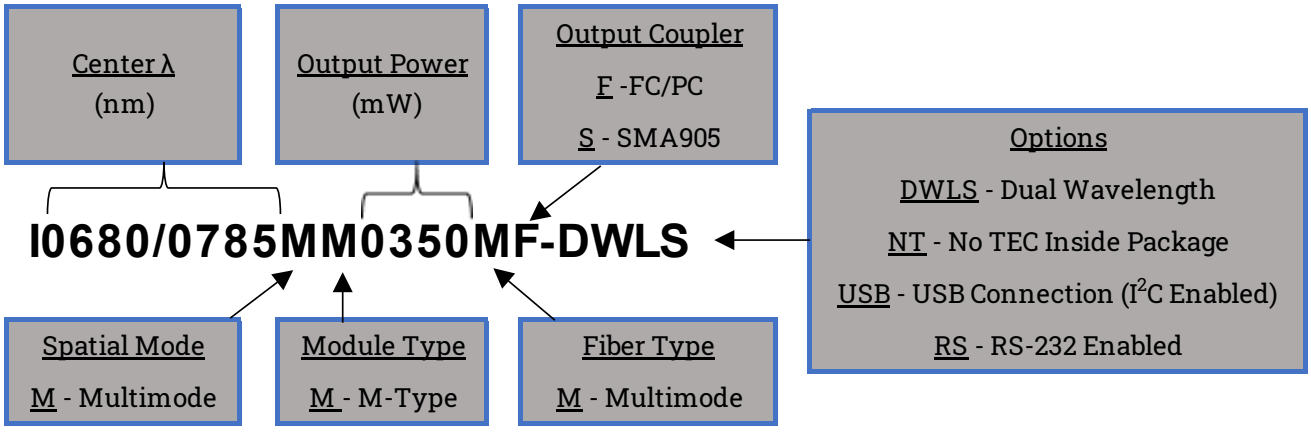
680/785nm 730/830nm 860/1064nm

All specified wavelengths are measured "in-vacuum"

Specifications

Standard Wavelength	680/785nm, 730/830nm, 860/1064nm,
Custom Wavelength	785/78x nm, 830/83x nm, 1064nm/106x nm
Wavelength Tolerance	+/- 0.5nm
Standard Output Power Levels	350mW & 500mW
Spectral Linewidth	< 0.1nm (0.08nm typical)
SMSR	35 dB - 45 dB
Wavelength Stability Temperature Range	15 °C - 45 °C
Output Power Stability	< 1% at constant case temperature

Part Schema



Selected Data

Standard Optical Fiber	105/125 micron multimode fiber, 0.22 NA
Connector	FC/PC or SMA905
Module Dimensions	9.48in (241mm) x 6.94in (177mm) x 4.14in. (106mm)
Module Weight	48oz (1360g)
Case Material	Anodized Aluminum
Environment	0% - 80% humidity, Non-Condensing
Storage Temperature	-50°C - 90°C

Custom Capability

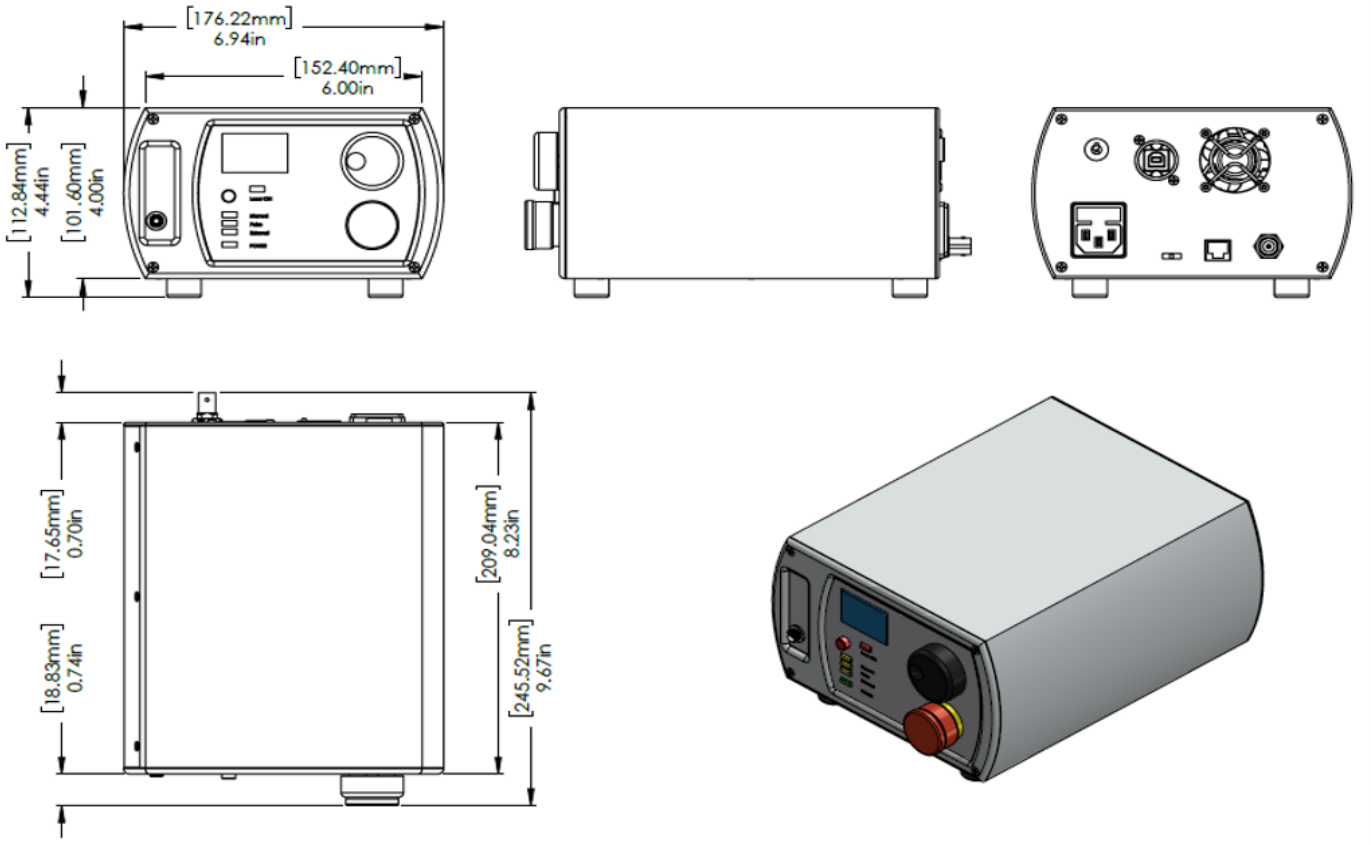
- Custom wavelengths available upon request
- FC/PC or SMA output coupler
- Various diameter output fibers available
- External TEC (e.g. No TEC inside of package optional)
- IPS' turn-key system comes standard with a US outlet plug. Europe, UK, and Australia outlet plugs are available as accessories upon request

Configuration Options	Front Panel Operation	USB Operation/ Software GUI Available	Both lasers can be simultaneously engaged
Original Analog Control	Yes	No	No
Digital Control and Front Panel	Yes	Yes	Yes

Electrical Specs

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

Mechanical Drawings



Operational Notes

1. Knob on front controls power output by adjusting drive current. LED readout is in amperes.
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. See the user guide for full operating and safety instructions. This document is meant to offer a product overview.

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