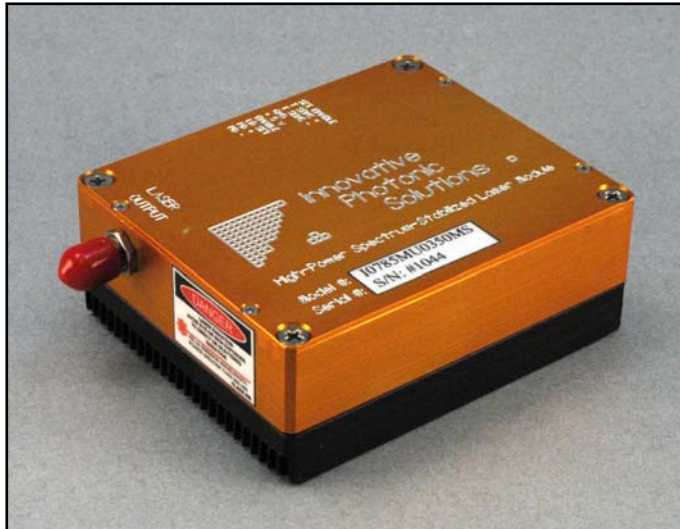


High Performance Spectrum Stabilized Laser Subsystem Model # I1064SU0300PA

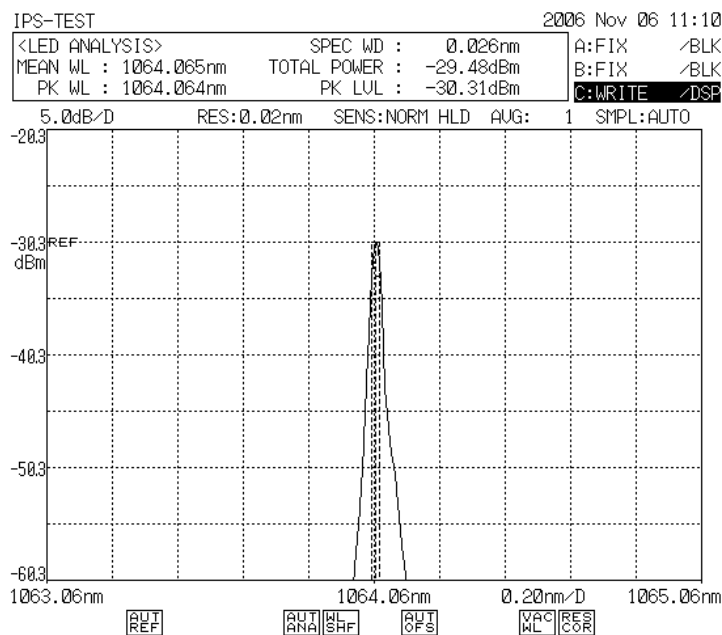


Features:

- Over 300 mW Fiber Coupled Output Power
- Ultra-Narrow Spectral Linewidth
- Temperature Stabilized Spectrum ($< 0.007 \text{ nm}/^\circ\text{C}$)
- Low Power consumption
- 40 dB SMSR Typical
- 3" x 2.5" x 0.69" Package Weighing $< 4 \text{ oz}$

Innovative Photonic Solution's proprietary Spectrum Stabilized Laser features high output power with narrow spectral bandwidth. The laser's stabilized peak wavelength remains "locked" regardless of case temperature (+15 to +45 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, Metrology and Interferometry. The laser is integrated with high performance laser drive and temperature control electronics in a compact package weighing less than 4 oz. Open beam units have integral laser line filters and a collimated circular output.

Typical Spectral Plot:



Typical 1064 nm SS Laser Spectrum (SMSR > 40 dB)

Optical Performance Specifications:

Parameter	Unit	Min	Typ	Max	Notes
Optical output power	mw	300	350		
Output power stability	%		± 1		
Peak wavelength	nm	-0.05		0.05	
3 dB bandwidth (FWHM)	nm			100 MHz	
Peak wavelength drift	nm			± 0.10	over life
Optical signal-to-noise ratio (SMSR)	dB	35	45		
Warm-up time	sec			10	from cold start
	sec			1.5	from warm start

Electrical Performance Specifications:

Parameter	Unit	Min	Typ	Max	Notes
Supply voltage	V	4.9	5	5.1	
Power consumption	W		3.5	5	
Photo diode current	uA		30		
Case temperature sensor	Ohm		NA		
Laser setpoint control (LD SET)	V	0		0.75	when pin 2 grounded

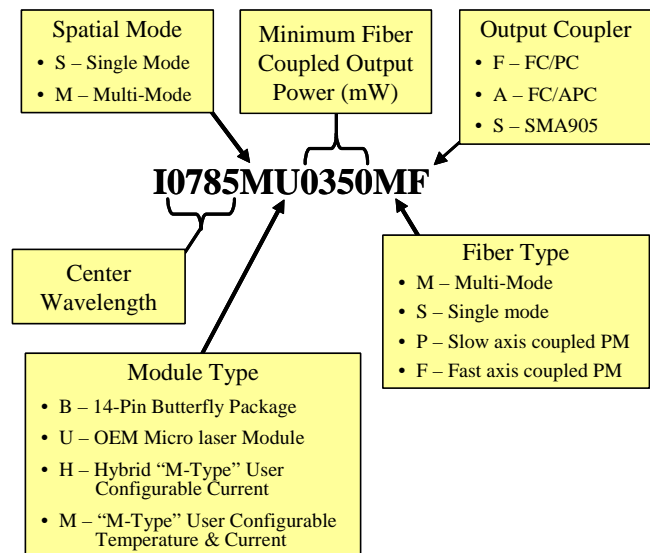
Physical Specifications:

Parameter	Unit	Value
Optical Fiber	type	Polarization Maintaining
Connector	type	FC/APC
Electical connector	type	10-pin, Molex #53014-1010 (mating connector: 51004-1000)
Module dimensions	inch	3.0 x 2.5 x 0.69
Module weight	g (oz)	100 (3.5)
Case material	type	Anodized aluminum
Operating temperature	deg. C	-10 to +55 deg case temperature
Cooling air flow	LFM	100 LFM with attached heatsink
Storage temperature range	deg. C	-20 to +80

Module Pin-Out:

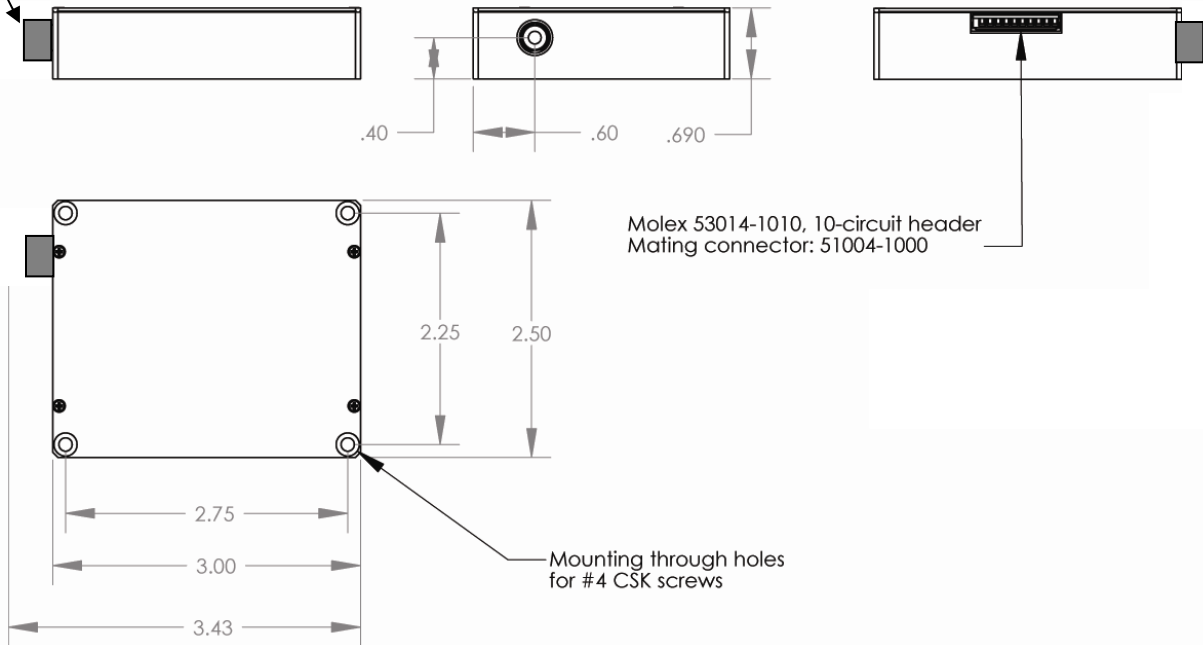
Pin #	Symbol	Description
1	NC	Not Connected
2	Vset ENABLE	Enables 'LD SET' on pin 8 when connected to ground. If left open or set to 3-5 Volt, output power defaults to internally pre-set value.
3	NC	Not Connected
4	NC	Not Connected
5	GND	Ground
6	+ 5V	4.9 to 5.1 Volt; 1 Ampere
7	ENABLE	Leave not connected or apply 3-5 Volt to enable optical output.
8	LD SET	Apply 0 to 0.75 Volt to control optical output power. Pin 2 needs to be grounded to enable this option.
9	PD +	Photodiode anode
10	PD -	Photodiode cathode

Module Part Numbering Schema:



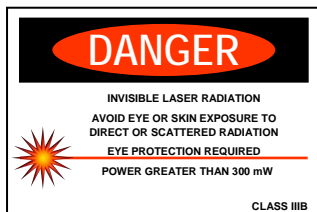
Mechanical Specifications:

FC/APC Laser Output Port



Molex 53014-1010, 10-circuit header
Mating connector: 51004-1000

Mounting through holes
for #4 CSK screws



OEM Laser Product

This laser module is designed for use as a component (or replacement) part and is thereby exempt from 21 CFR1040.10 and 1040.11 provisions.