

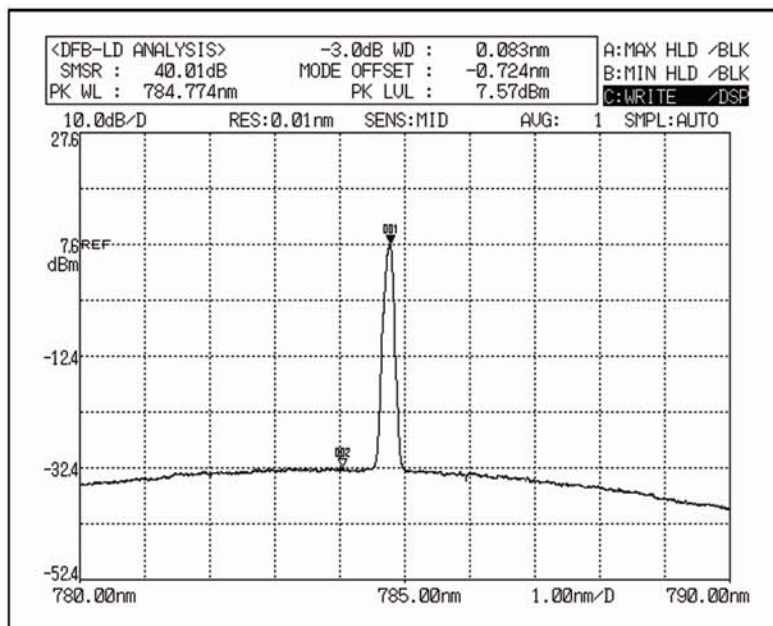
High Power Multi-Mode Spectrum Stabilized Laser Subsystem

- ✓ Up to 400 mW Fiber Coupled Output Power
- ✓ Spectral Linewidth < 0.07 FWHM
- ✓ FC-PC Bulkhead Adapter, Fiber Ready
- ✓ Temperature Stabilized Spectrum (< 0.007 nm/OC)
- ✓ Low Power consumption (< 5.5 W)
- ✓ 40 dB SMSR Typical
- ✓ 3" x 2.5" x 0.69" Package Weighing < 4 oz
- ✓ Turn-key Operation



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 (-10 to +55 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 in a compact package weighing less than 4 oz.

Typical Spectral Plot:



Typical 785 nm SS Laser Spectrum (SMSR >40 dB)



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Optical Performance Specifications:

Parameter	Unit	Min	Typ	Max	Notes
Optical output power	mw	350	375		
Output power stability	%		± 1		
Peak wavelength	nm	784	785	786	
3 dB bandwidth (FWHM)	nm		0.07		
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	5.5	
Photo diode current	uA		30		
Case temperature sensor	Ohm		1000		at 0 deg. C (RTD)
Laser setpoint control (LD SET)	V	0	0.9	1.0	when pin 2 grounded

Physical Specifications:

Parameter	Unit	Value
Optical Fiber	type	100-105/125 micron multimode fiber, 0.22 NA
Connector	type	FC/PC or SMA905
Electical connector	type	10-pin, Molex #53014-0810 (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

Control Development, Inc. reserves the right to change specifications without notice.

Part Number: CDI-785MU0350MF-NLTK



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