ONDAX

SureLock™

LMFC Series
Fiber Coupled Single Frequency Laser Modules

Single Frequency
Fiber Coupled

Ondax's LMFC Series Fiber Coupled Single Frequency Laser Module couples an Ondax SureLock™ VHG-stabilized laser diode to a single-mode, polarization-maintaining fiber, delivering steady, single frequency performance in an ultra-compact footprint. Offering both computer and integrated user controls, the LMFC Series includes precision temperature and current controls to deliver better than 1m coherence length and 1% power stability with less than 1 minute warm-up. This tightly integrated package makes it the ideal choice for both OEM instrumentation and laboratory applications.

The LMFC Module is available in wavelengths from 405nm to 830nm.

Features:

- Single frequency with long coherence length (~1m)
- Single Mode Fiber Coupled output - PM (standard) or SM (optional) w/ FC/APC connector, minimum 1m length
- Remote computer and onboard user controls with integral LCD Display
- Precision temperature and current stabilization
- Ultra-compact footprint 40mm x 42.5mm x 100mm
- Plug and play operation
- NoiseBlock™narrow-band ASE suppression filters and beamsplitters available in matching wavelengths to further reduce linewidth and ASE noise

Applications:

- Raman Spectroscopy
- Interfereometry
- Metrology
- HeNe replacement
- Bio-instrumentation
- Particle Counting
- LIDAR
- Graphic Arts

Specifications:

Parameter	Sym-	Wavelength									
Center Wavelength (vaccuum)	L_p/nm	405/406	633	640	658	685	690	780.25	785	808	830
Center Wavelength Tolerances	nm	±1	±0.5	±1	±1	±1	±1	±0.2	±1	±1	±1
Output Power	P_o/mW	6	30	15	12	16	15	25	30	40	50
Linewidth, maximum (MHz)	Δλ	160[1]	150	300	300	300	100	50	50	50	250
Polarization Ratio		100:1	100:1	60:1	100:1	100:1	100:1	100:1	100:1	100:1	100:1

[1]For 405nm diode only

Operating Specifications

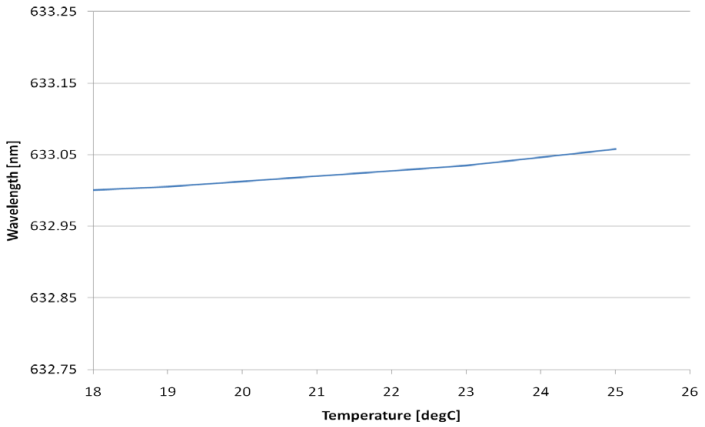
Optical	Min	Typ	Max	Unit
Spatial Mode			Single Mode	
Polarization		100:1		
Fiber Type (PM)[2]	3/125	4/125	5/125	µm
Connector		FC/APC		
Noise (RMS, 0-20 MHz)		0.25	0.5	%
Power Stability (1 hr)		0.10	0.5	%
Electrical	**Min**	**Typ**	**Max**	**Unit**
Operating Current			1.5	A
Operating Voltage		3.3		VDC
Modulation Input (TTL)	0		5	VDC
Modulation Speed			3	kHz
Environmental	**Min**	**Typ**	**Max**	**Unit**
Storage Temperature	-10		60	°C
Operating Temperature	10	25	40	°C
Operation Humidity		Non-condensing		
Dimensions (D x L)		100 x 80		mm

[2]Core dia. depends on wavelength. SM fiber (non-PM) also available by request.

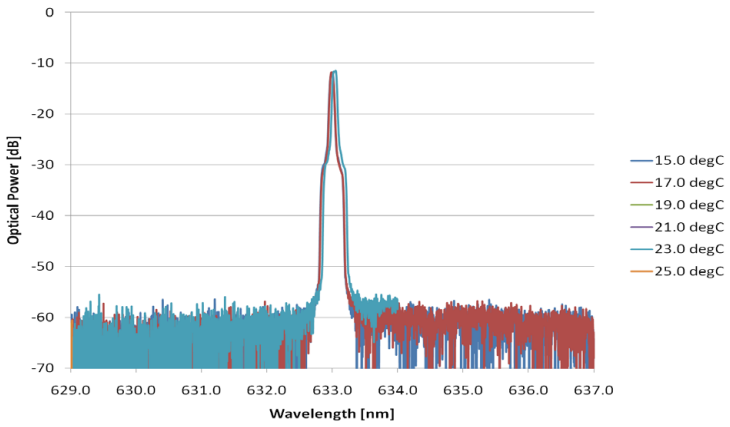
SureLock™

LMFC Series Fiber Coupled Single Frequency Laser Modules

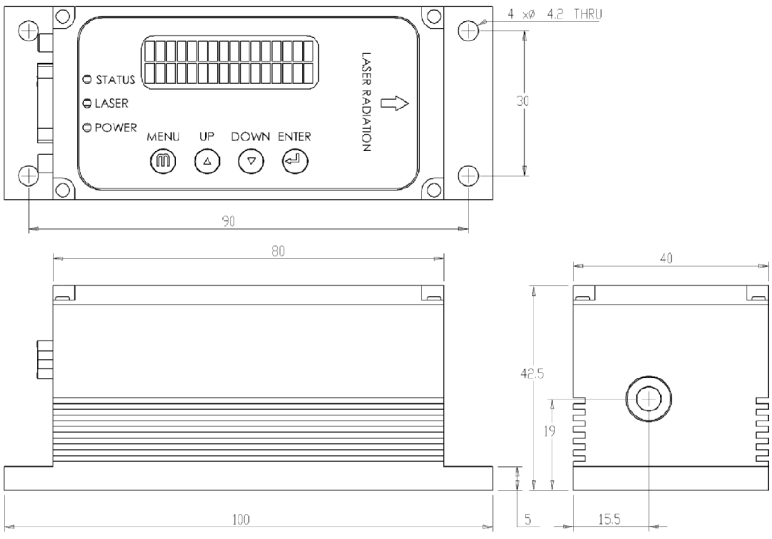
Wavelength Stability (633nm example)

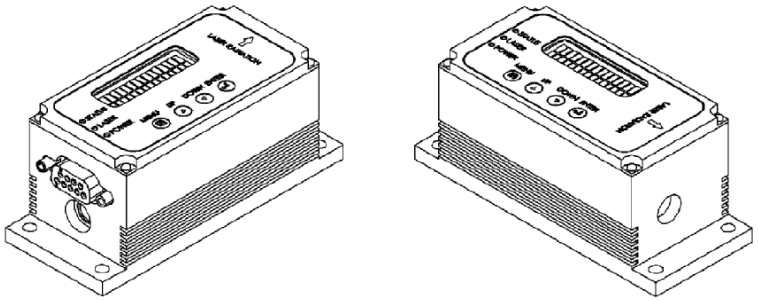


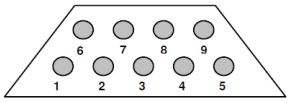
Optical Spectrum (633nm example)



Outline Drawing and Connector Pinout





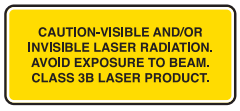


Model Numbers

LMFC-λλλ-PLR-Power-PM or LMFC-λλλ-PLR-Power-SM
LMFC-λλλ-PLR-Power-PM -1K or LMFC-λλλ-PLR-Power-SM-1K (includes keyswitch)

Power Requirements

100-240V AC, 50-60Hz, Connector: +3.3VDC, 2.1mm dia.



CE

Pinout

Pin	Definition	Description
1	VCC	Positive Power Pin +3.3V
2	TXD	Send data to computer (RS232)
3	RXD	Receive data from computer (RS232)
4		Not used
5	GND	GND for power and RS232 communication
6	TTL	Outside TTL modulation
7		Not used
8		Not used
9	GND	GND for power and RS232 communication

Note: Pinout is compatible with standard RS232 cable for interfacing with computer port or USB-RS232 adapter

ONDAX

850 E. Duarte Rd. Monrovia, CA 91016
626-357-9600 (Tel)
626-513-7494 (Sales Fax)

For more information about Ondax products and the name of a local representative or distributor, visit www.ondax.com, email sales@ondax.com, or call (626) 357-9600. Specifications subject to change without notice. Each purchased laser is provided with test data and manual. Please refer to this data before using the laser.