ONDAX

SureLock™

LM Series
120mW 638nm Compact Laser Module

High Power, Narrowed Linewidth

Ondax's new LM Series High Power 638nm Laser Module sets a new standard for power and performance. Incorporating an Ondax SureLock™ VHG-stabilized laser diode, the LM delivers steady, high-power, spectrum-narrowed performance in an ultra-compact footprint With both computer and integrated user controls, the LM Series includes precision temperature and current controls to deliver better than 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.

Features:

- Spectrum narrowed, collimated output
- 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:

- HeNe Replacement
- Raman Spectroscopy
- Metrology
- Bio-instrumentation
- Graphic Arts
- Sensing
- Analytical Instrumentation

Specifications:

Parameter	Symbol	Value
Center Wavelength (vaccuum)	L_p/nm	638
Center Wavelength Tolerances	nm	±0.5
Output Power	P_o/mW	120
Beam Size	mm	0.6x 0.9
Linewidth (maximum)	nm	0.06

Operating Specifications

Optical	Min	Typ	Max	Unit
Spatial Mode		Single Mode		
Polarization		100:1		
Beam Divergence, Perpendicular (FWHM)		<2		mrad
Beam Divergence, Parallel (FWHM)		<2		mrad
Pointing Stability			± 25	µrad
Noise (RMS, 0-20 MHz)		0.25	0.5	%
Power Stability (1 hr)			3	%
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

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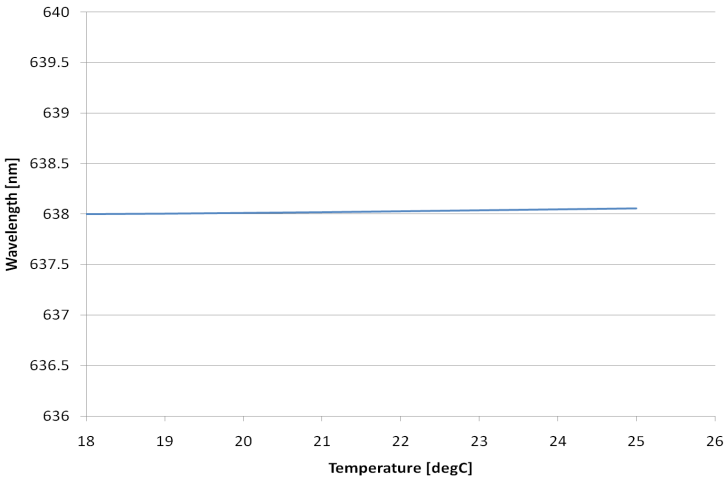
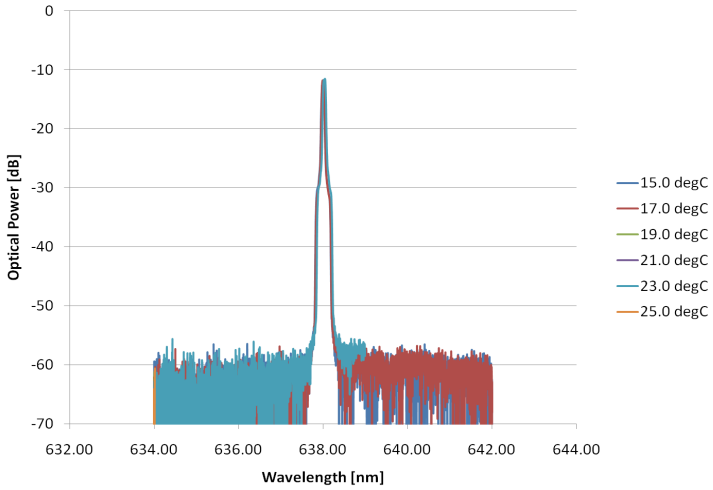
LM Series 120mW 638nm Compact Laser Modules

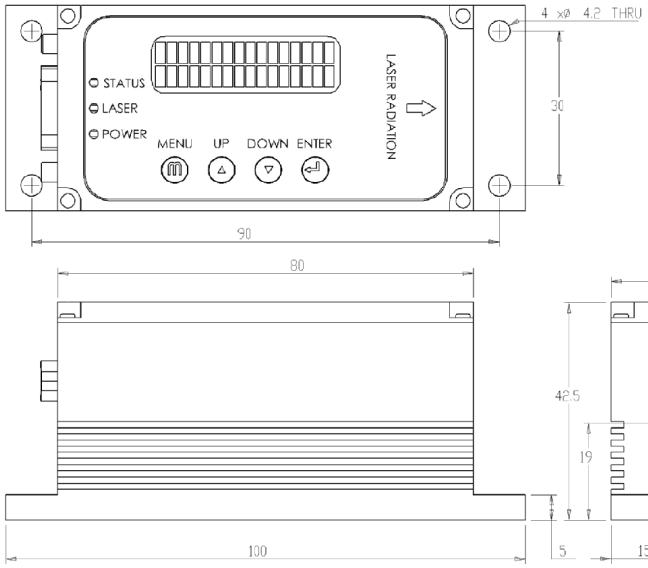
Wavelength Stability

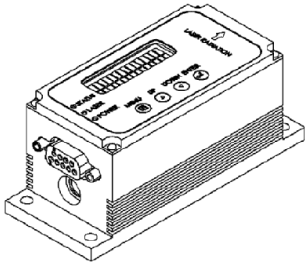


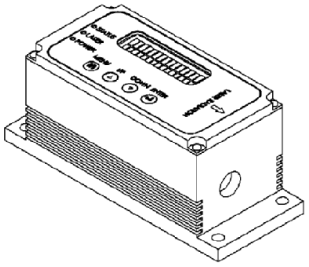
Optical Spectrum

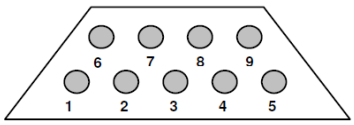


Outline Drawing







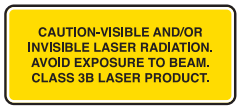


Model Numbers

LM-638-PLR-120	LM-638-PLR-120-1K (Includes Keyswitch)

Power Requirements

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



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

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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.

Revised 01/15