

# LM Series

## 120mW 643nm Compact Laser Module



High Power, Narrowed Linewidth

### 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

Ondax's new LM Series High Power 643nm 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.

### Specifications:

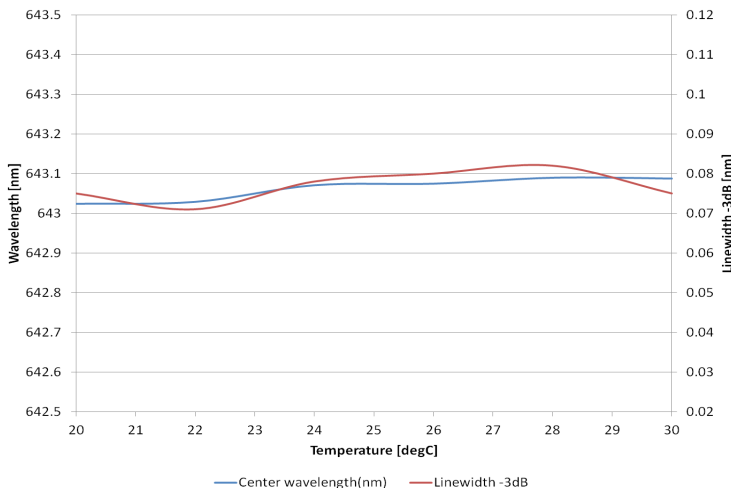
Parameter	Symbol	Value
Center Wavelength (vacuum)	$\lambda_p$ /nm	643
Center Wavelength Tolerances	nm	±0.5
Output Power	$P_o$ /mW	120
Beam Size	mm	0.8 x 0.4
Linewidth (typical)	nm	0.075

### Operating Specifications

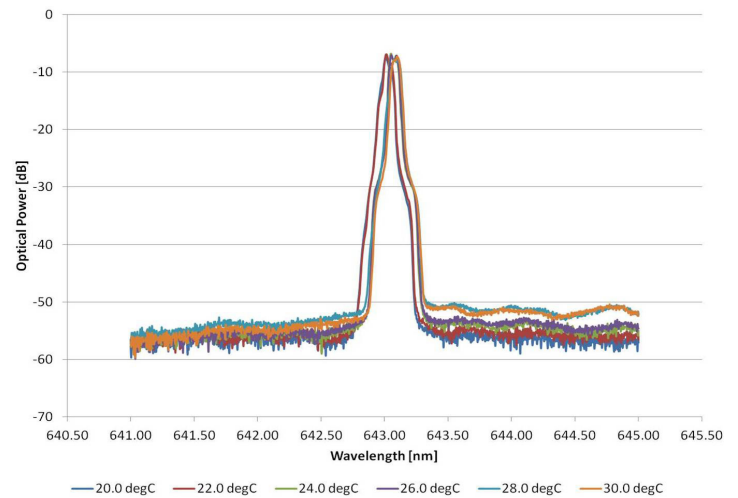
Optical	Min	Typ	Max	Unit
Spatial Mode	Single Mode			
Polarization	100:1			
Beam Divergence, Perpendicular (FWHM)	<2			mrad
Beam Divergence, Parallel (FWHM)	<2			mrad
Pointing Stability	± 25			μrad
Noise (RMS, 0-20 MHz)	0.25		0.5	%
Power Stability (1 hr)	0.10		0.5	%
Electrical	Min	Typ	Max	Unit
Operating 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

# LM Series 120mW 643nm Compact Laser Modules

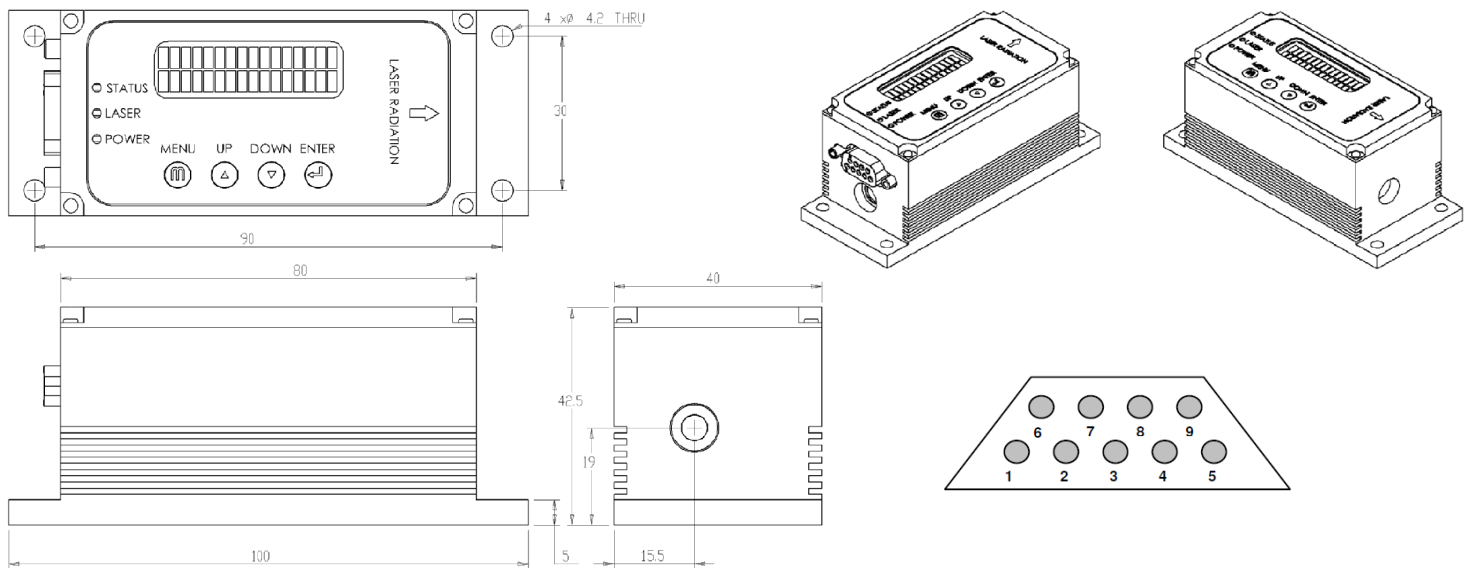
## Wavelength Stability



## Optical Spectrum



## Outline Drawing



## Model Numbers

LM-643-PLR-120      LM-643-PLR-120-1K (Includes Keypad)

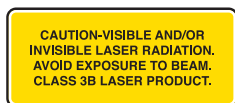
## Power Requirements

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



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For more information about Ondax products and the name of a local representative or distributor, visit [www.ondax.com](http://www.ondax.com), email [sales@ondax.com](mailto: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.