

WAVELENGTH STABILIZED COMPACT RAMAN SOURCE

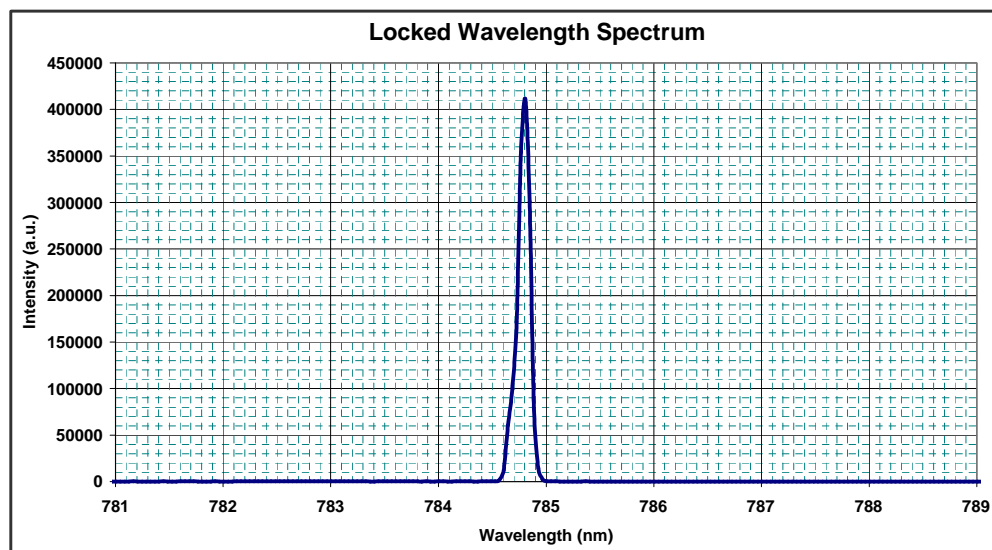
The LuxxMaster[®] LML series Compact Raman Boxx[®] packages PD-LD's award winning LuxxMaster[®] Volume Bragg Grating[®] (VBG[®]) in a rugged box ideally suited for Raman spectroscopy and other narrow line width applications. Designed for CW operation, its small size and simple interface makes the Raman Boxx[®] ideal for industrial, military and security applications.



Figure 1: LuxxMaster[®] Compact Raman Boxx[®]

Major Features:

- Performance:
 - Custom Wavelengths (785 nm is standard, 532 nm and other wavelengths available)
 - $\Delta_c = \pm 0.5$ nm
 - Line Width 1.3 cm^{-1} typical;
 - CW operation
 - USB interface
 - Programmable with supplied software
 - Built-in Thermo Electric Cooler for Laser Temperature Control
 - Automatic Power/Current Control
 - Optical Power 500 mW
- Simple in Operation and Compact in Size
- Programmable Output Power
- Economical



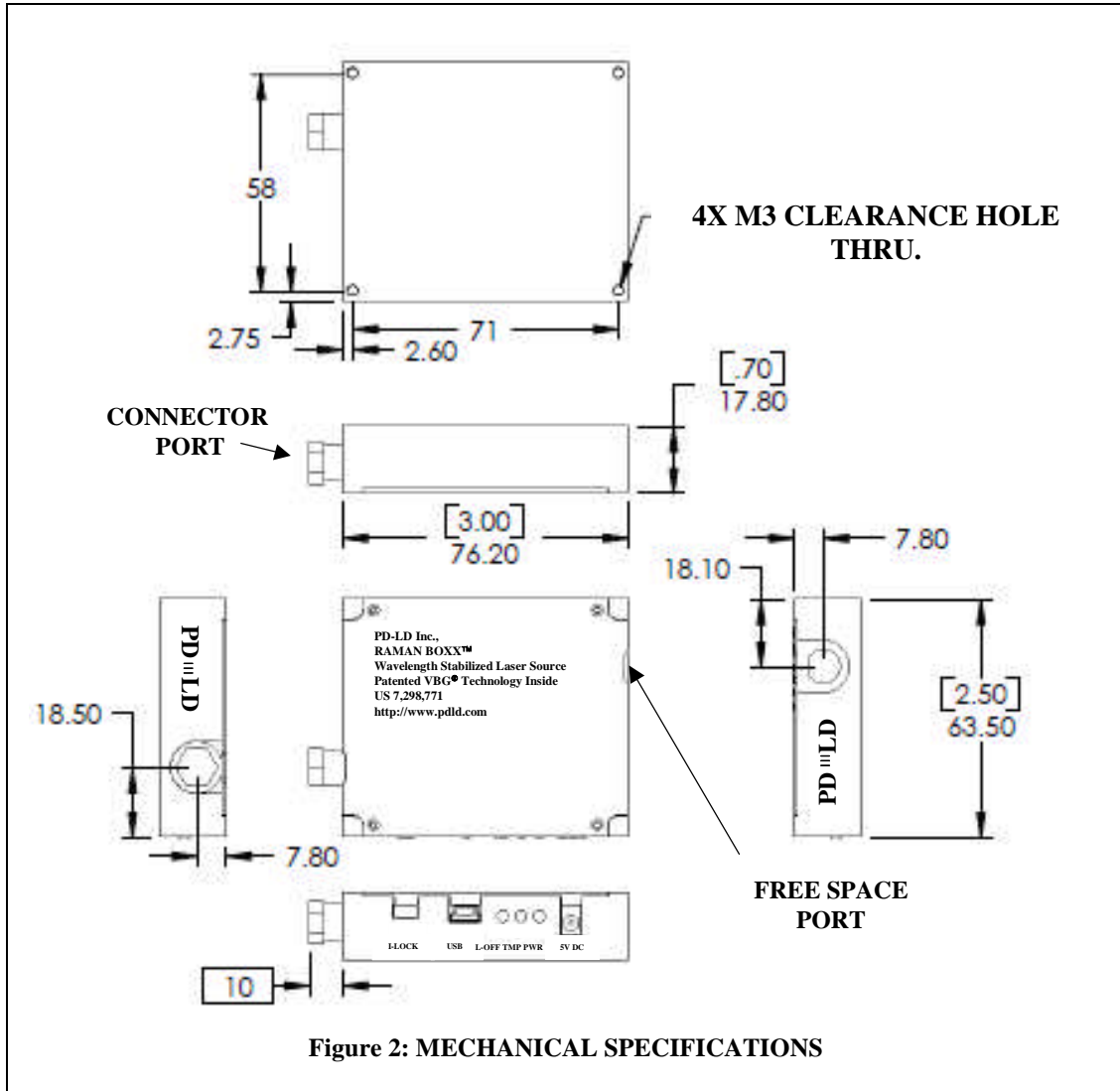


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785 nm COMPACT RAMAN BOXX[®] SPECIFICATIONS

	Other	Min.	Typical	Max.	Units
Electrical Specifications					
DC Input				2A @ 5V	
Warm up Time (from cold start)			5	10	Seconds
Power consumption			6	9	W
Optical Specifications					
Output Power ^A		100	500	600	mW
Threshold Current		300	400	500	mA
Center Wavelength		784.50	785.00	785.50	nm
Light Mode	Multimode				
Spectral Line Width			0.08	0.14	nm
			39	66	GHz
			1.3	2.2	cm ⁻¹
Wavelength Stability ^B			± 5		pm
Wavelength Stability ^C			± 5		pm
ASE Suppression (Optical SNR)			40		dB
Optical Power Variations ^D			<1		%pk-pk
Noise			<0.25		%rms
Expected Lifetime			>10000		hrs
<i>Note A</i>	<i>Connector Port Power</i>				
<i>Note B</i>	<i>Over 24 hours with properly stabilized laser</i>				
<i>Note C</i>	<i>Maximum drift due to temperature range and over device lifetime</i>				
<i>Note D</i>	<i>8 hours of continuous operation</i>				
Mechanical Specifications					
Physical Dimensions (Length x Width x Height)	3 x 2.5 x 0.7				inch
Thermal Management	Must be operated on a heat sink				
Fiber Type	105 /125/900 μm; 0.15NA OR 0.22NA;				
Connector Type	FC/APC; FC/PC; SMA905;				
Weight			134		grams
Environmental Specifications					
Case Temperature*		-20		50	°C
Humidity (non-condensing)		5		95	%

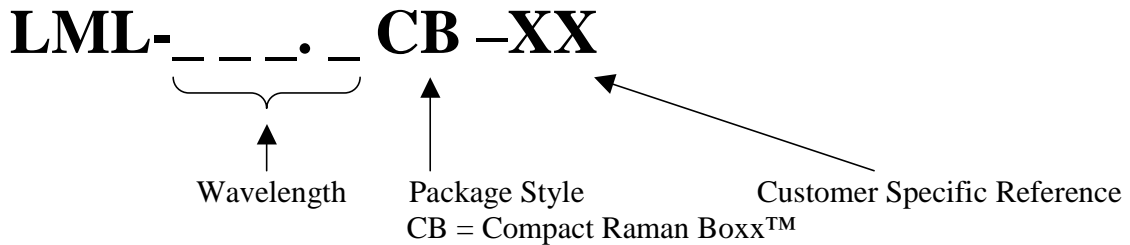
* Must be operated on a heat sink.





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Part Number System



Example: LML-785.0CB-XX

This is a LuxxMaster® Raman Boxx™ with a center wavelength of 785nm.
A 5V DC output, 110 - 220V/50 - 60Hz wall plug power supply is provided.

EXISTING PART NUMBERS:

	Power (mW)	λ (nm)	λ Tolerance (nm)	Line width (nm)	Fiber Type*	NA of fiber	Connector
LML-785.0CB-02	500	785.00	± 0.50	0.14	A	0.22	FC/PC
LML-785.0CB-03	500	785.00	± 0.50	MAX.	A	0.22	SMA905

* Fiber Types:

- A. 105/125/250 0.22NA fiber with 900 μ m loose buffer.
- B. 50/125/900 0.20NA fiber.
- C. 105/125/250 0.15NA fiber with 900 μ m loose buffer.
- D. 62.5/125/900 0.29NA fiber