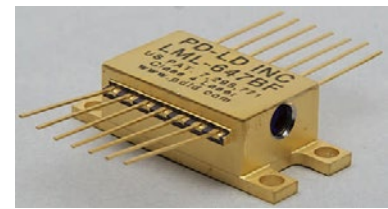




## 647 nm FREE SPACE BUTTERFLY PACKAGE

The LuxxMaster<sup>®</sup> wavelength-stabilized 647nm laser is a free space device packaged in a 14-pin butterfly case. This laser is constructed utilizing PD-LD's patented Volume Bragg Grating<sup>®</sup> (VBG<sup>®</sup>) technology. This award-winning technology is used to stabilize and narrow the emission spectra of high-power laser diodes for numerous applications including Raman Spectroscopy, solid-state laser pumping, fiber laser pumping, and other applications requiring a temperature stabilized narrow linewidth high-power laser diode sources.



**Figure 1: FREE SPACE BUTTERFLY PACKAGE**

### Major Features:

- 647 nm
- $\lambda_c = \pm 0.5$  nm
- Line width < 0.1 nm
- 500mW free space
- Simple to use
- Compact size

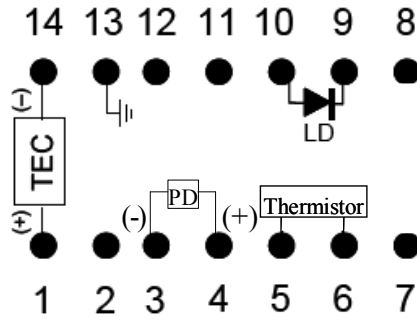
### OPTICAL & ELECTRICAL SPECIFICATIONS

Parameter	Unit	Minimum	Typical	Maximum
Center Wavelength	nm	646.50	647	647.50
Output Power <sup>A</sup>	mW		400	500
Peak to Peak Power Stability <sup>B</sup>	%		5	
Operating Voltage	Volts		2.1	2.5
Operating Current	Amps		1.60	1.90
Threshold Current	A		0.75	
Spectral Line width (FWHM)	nm		0.08	0.10
	cm <sup>-1</sup>		2	2.5
Beam Divergence (Fast Axis)	Degrees		0.5	0.75
Beam Divergence (Slow Axis)	Degrees		3.5	4.5
TEC Current	Amps			2
Side mode suppression ratio	dB	40	45	
TEC Voltage	Volts			4
TEC set temperature <sup>C</sup>	°C	20	25	30
NOTES:	<p>A. Output power can be set to any value up to maximum indicated.            B. At a set TEC temperature. Based on 100 hrs.            C. Package must be run with a <b>SET</b> TEC temperature. This is the TEC inside the package. Value is expected to be within the range specified. Range does not imply that the TEC can be set to any temperature within the range.</p>			

Specifications Subject to Change

10/14/2010

### 647 nm FREE SPACE BUTTERFLY PACKAGE



PIN NO.	ASSIGNMENT	PIN NO.	ASSIGNMENT
1	TEC ANODE (+)	8	OPEN
2	OPEN	9	LASER CATHODE (-)
3	PD CATHODE (-)	10	LASER ANODE (+)
4	PD ANODE (+)	11	OPEN
5	THERMISTOR	12	OPEN
6	THERMISTOR	13	CASE GND
7	OPEN	14	TEC CATHODE (-)

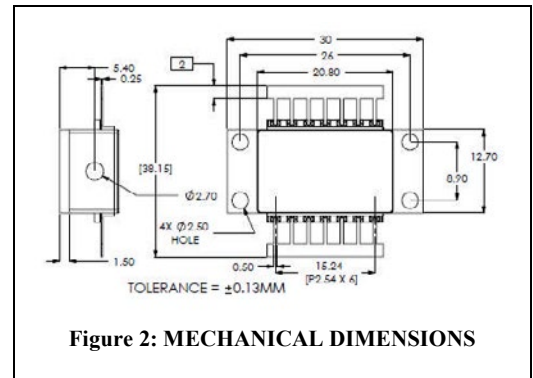
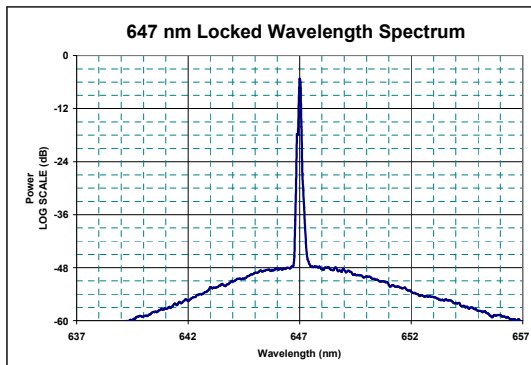


Figure 2: MECHANICAL DIMENSIONS

#### Part Number:

LML-647.0BF-XX

LML refers to Luxmaster  
 647.0 is the wavelength  
 BF refers to Butterfly package  
 XX – Specific customer reference



Specifications Subject to Change

10/14/2010