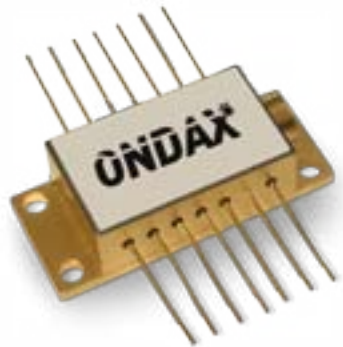


# 785nm/808nm/830nm/976nm/1064nm, 800mW Free-Space Collimated Butterfly Lasers



High Power, Narrow Linewidth  
Free-Space Collimated Output

Ondax's 785nm and 1064nm Raman Free-Space Butterfly Lasers are wavelength-stabilized, high-power lasers with free-space, collimated beam output, designed specifically for Raman applications. Offering standard output powers of 800mW, the narrowed linewidth, low power consumption, and broad stabilized temperature operating characteristics deliver affordable, portable instrument-quality performance.

All SureLock™ Series lasers are stabilized using the Ondax PowerLocker® Volume Holographic Grating (VHG), ensuring precise, ultra-stable center wavelengths, low temperature dependence, and consistent optical performance over the locked region.

## Features:

- Compact 14-pin butterfly footprint
- Narrow spectral linewidth - 0.15nm
- Wavelength stability across operating range 0.01nm/°C
- Free-space, collimated beam output
- Higher powers available by request
- NoiseBlock™ narrow-band ASE suppression filters and beamsplitters available in matching wavelengths to further reduce linewidth and ASE noise

## Applications:

- Raman Spectroscopy
- Metrology
- Bio-instrumentation
- Sensing
- Analytical Instrumentation

## Specifications:

### Specification Summary

Parameter	Symbol	Min	Typ	Max	Unit
Output Power	P <sub>o</sub>			800	mW
Center Wavelength (vacuum)	L <sub>p</sub>	784.5	785	785.5	nm
		807.5	808	808.5	
		829.5	830	830.5	
		977.5	976	976.5	
		1063.75	1064.25	1064.75	
Linewidth	Δλ	0.06	0.10	0.20	nm
Side Mode Suppression Ratio	SMSR			-40	dB
Central Stabilized Temperature <sup>1</sup>	T <sub>c</sub>	20		40	°C
Stabilized Temperature Range <sup>1</sup>	T <sub>r</sub>	14			°C

### Operating Specifications

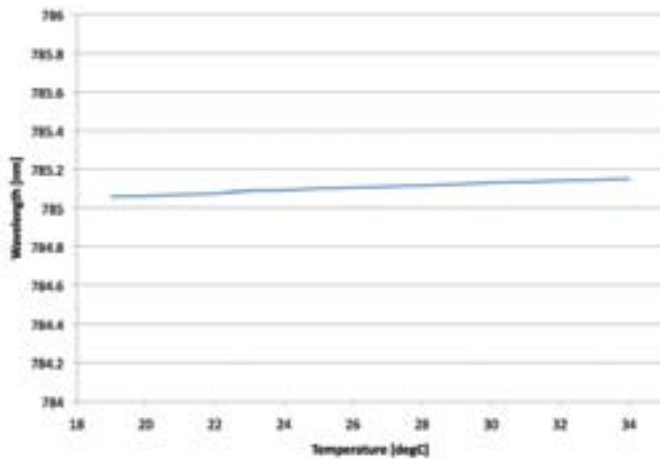
Parameter	Symbol	Min	Typ	Max	Unit
Threshold Current	I <sub>th</sub>	785-976nm 1064nm	325 250		mA
Operating Current	I <sub>op</sub>	785-976nm 1064nm	1100 1200	1500 1600	mA
Operating Voltage	V <sub>op</sub> ( <sub>c</sub> )	785-976nm 1064nm	1.9 2.1	2.2 2.5	V
TEC Current				2	A
TEC Voltage				4	V
Beam Size at Exit (FWHM)			0.2 (V) x 1.0 (H)		mm
Beam Divergence	Q <sub>v</sub>		5 x 25		mrاد
Emitter Size			1 x 100		μm
Operating Temperature <sup>2</sup>	T <sub>op</sub>	0	25	50	°C
Storage Temperature <sup>2</sup>	T <sub>s</sub>	-20		80	°C

<sup>1</sup> Temperature set point is internal TEC set point. R-T thermistor data is available to determine actual thermistor setting. All specifications are at rated power with a case temperature of 25°C unless otherwise noted.

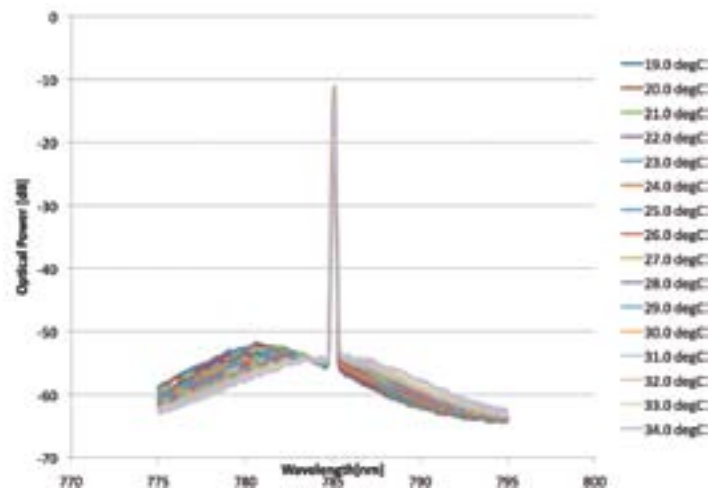
<sup>2</sup> Non-condensing

## 785nm-1064nm, 800mW Collimated Butterfly Lasers

### Wavelength Stability (785nm Example)

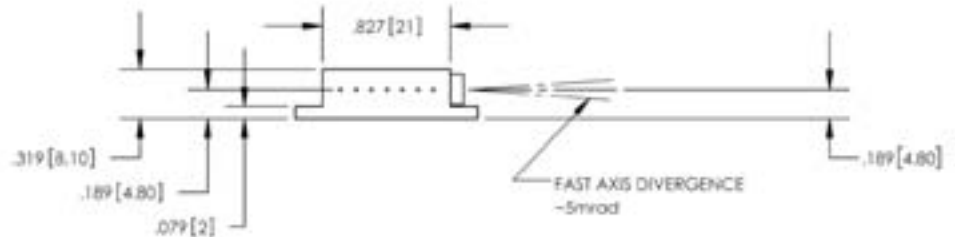
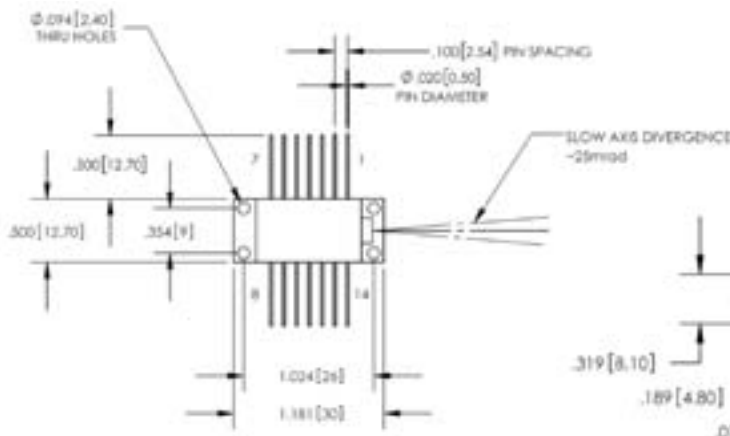


### Optical Spectrum (785nm Example)



### Top View

### Side View



### Pinout

Pin	Description	Pin	Description
1	TEC +	8	Not Connected
2	Thermistor	9	Laser Cathode
3	PD Anode	10	Laser Anode
4	PD Cathode	11	Laser Cathode
5	Thermistor <sup>1</sup>	12	Not Connected
6	Not Connected	13	Case Ground
7	Not Connected	14	TEC

1. For a complete Thermistor resistance-temperature table, contact Ondax

### Model Numbers

- BFFS-785-PLR800
- BFFS-808-PLR800
- BFFS-830-PLR800
- BFFS-976-PLR800
- BFFS-1064-PLR800



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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. Please refer to this data before using the laser.