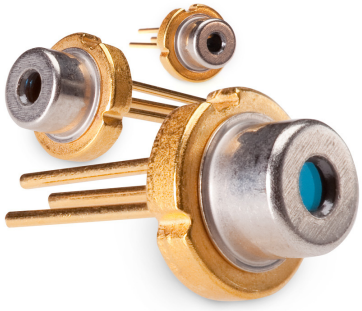
ONDAX

SureLock™

785nm, 80mW Wavelength Stabilized Lasers



Single Frequency
Wavelength Stability: ~0.015nm/°C

Ondax's 785nm Wavelength Stabilized Laser is a single mode, single frequency laser packaged in an ultra-compact, TO-can footprint. The extremely narrow linewidth, broad temperature operating characteristics, and low power consumption deliver affordable, portable instrument-quality performance for a broad range of instrumentation applications.

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:

- Single frequency performance
- Narrow linewidth <50 MHz
- Wavelength stability across operating range 0.015nm/°C
- Coherence length >2m
- Compact, hermetically sealed TO footprint
- NoiseBlock™ narrow-band ASE suppression filters and beamsplitters available in matching wavelengths to further reduce linewidth and ASE noise

Applications:

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

Specifications:

Specification Summary

Parameter	Symbol	Min	Typ	Max	Unit
Output Power	P_o			80	mW
Center Wavelength (vacuum)[1]	L_p	784	785	786	nm
	L_p	786	787	788	nm
Linewidth (MHz)	$\Delta\lambda$		50		MHz
Central Stabilized Temperature	T_c	15		40	°C
Stabilized Temperature Range	T_r	10	15		°C

Operating Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Threshold Current (CW)	I_{th}		35	55	mA
Operating Current	I_{op}		115	160	mA
Operating Voltage	V_{op}	1.5	2	2.2	V
Laser Reverse Voltage	V_{rl}			2	V
Monitoring Output Current	I_m	0.1	0.5	0.7	mA
Beam Divergence, Perpendicular	Q_v	15	17	19	Degrees
Beam Divergence, Parallel	Q_h	8	9	10	Degrees
Off Axis Angle, Perpendicular	dQ_v	-2		2	Degrees
Off Axis Angle, Parallel	dQ_h	-2		2	Degrees
Emitter Size			0.9 x 2.1		µm
Differential Efficiency	DE (dP/dI)		1.1		mW/mA
Operating Temperature[2]	T_{op}	0		50	°C
Storage Temperature[2]	T_s	-20		70	°C
Polarization			100:1		
Polarization Orientation			TE		

[1]Please specify wavelength at time of ordering [2]Non-condensing All specifications are at rated power with a case temperature of 25°C unless otherwise noted

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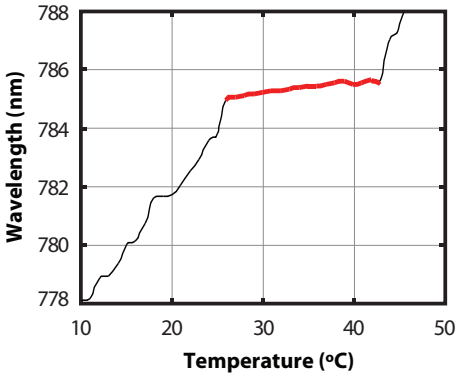
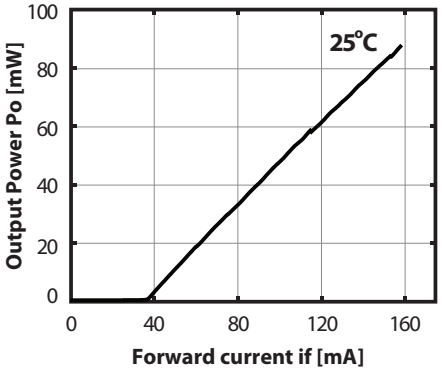
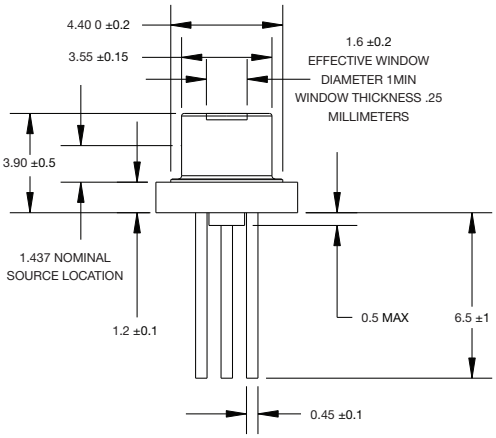
Stabilized Temperature Range



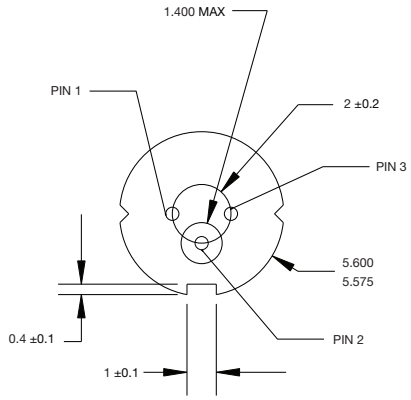
Output Power vs Forward Current (Typical)



Side View

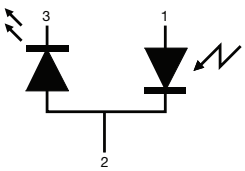


Bottom View



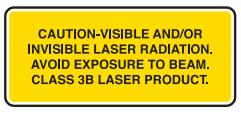
Pinout

Pin	Description
1	Photodiode Anode
2	Case
3	Laser Diode Cathode



Model Numbers

TO-785-PLR80
TO-787-PLR80



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. Please refer to this data before using the laser.