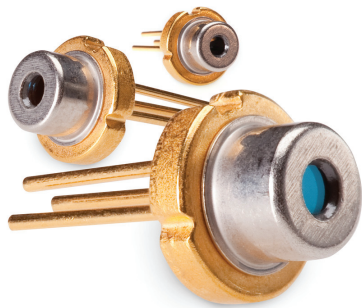


785nm, 80mW Wavelength Stabilized Lasers



Single Frequency
Wavelength Stability: $\sim 0.015\text{nm}/^\circ\text{C}$

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.

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	$^\circ\text{C}$
Stabilized Temperature Range	T_r	10	15		$^\circ\text{C}$

Features:

- Single frequency performance
- Narrow linewidth < 50 MHz
- Wavelength stability across operating range $0.015\text{nm}/^\circ\text{C}$
- Coherence length $> 2\text{m}$
- Compact, hermetically sealed TO footprint

Applications:

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

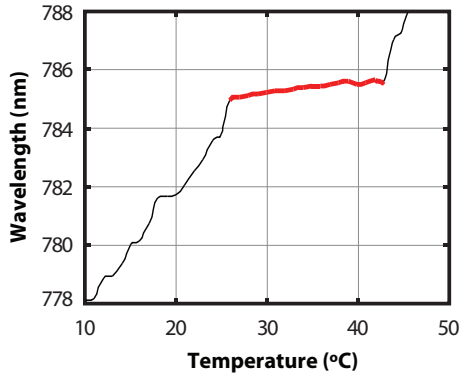
Operating Specifications

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	$^\circ\text{C}$
Storage Temperature ²	T_s	-20		70	$^\circ\text{C}$
Polarization			100:1		
Polarization Orientation			TE		

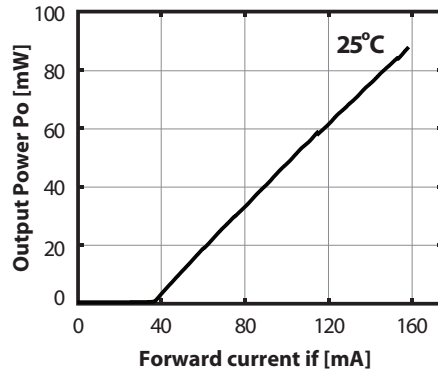
¹Please specify wavelength at time of ordering ²Non-condensing All specifications are at rated power with a case temperature of 25°C unless otherwise noted

785nm, 80mW Wavelength Stabilized Lasers

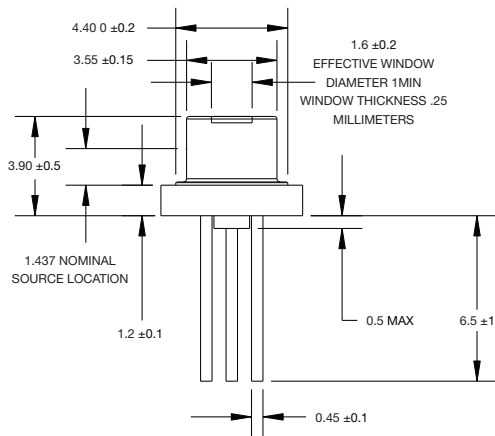
Stabilized Temperature Range



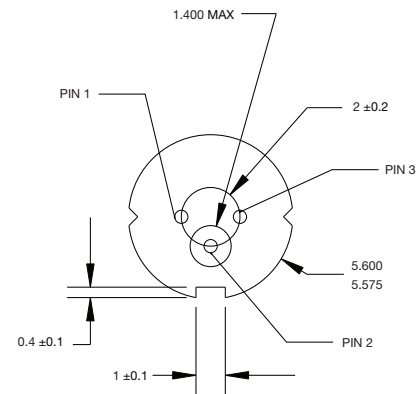
Output Power vs Forward Current (Typical)



Side View

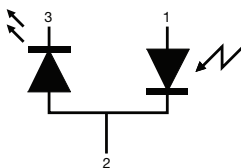


Bottom View



Pinout

Pin	Description
1	Photodiode Anode
2	Case
3	Laser Diode Cathode



Model Numbers

TO-785-PLR80
TO-787-PLR80

