

Description:

Ondax's 780.25nm Wavelength Stabilized Laser is a single mode, miniature laser in a standard 5.6mm TO package. The stabilization is achieved using the Ondax Volume Holographic Grating (VHG) PowerLocker®.

The laser has a very low temperature dependence and precise center wavelength over the locked region.

The narrow linewidth and long coherence length from a standard TO packaged laser enables many applications.

Features:

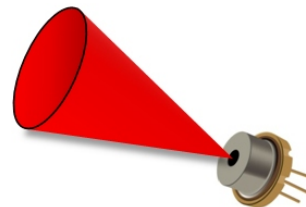
- Wavelength stability (~0.015nm/°C)
- Single frequency
- Coherence length (>2m)
- Hermetically sealed
- Custom wavelengths available

Applications:

Raman spectroscopy, speckle interferometry, bio-medical instrumentation, analytical instrumentation, metrology, and gas sensing.

Single Frequency

Wavelength Stability: ~0.015nm/°C



Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Rated	Unit
Light Output ¹	P _o	80	mW
Laser Reverse Voltage ¹	V _{rl}	2	V
Operating Temperature ²	T _{op}	0 to 40	°C
Storage Temperature ²	T _s	-20 to 70	°C

¹ At a case temperature of 25° C.

² Non-condensing

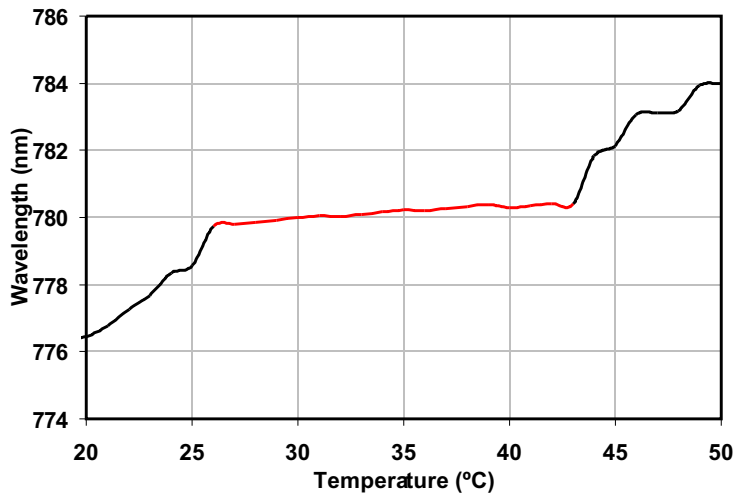
Operating Specifications

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Threshold Current	I _{th}	CW		50		mA
Operating Current	I _{op}	P _o = 80 mW			200	mA
Operating Voltage	V _o	P _o = 80 mW		1.3	2.2	V
Lasing Wavelengths in vacuum	L _p	P _o = 80 mW T=T _c	780.01	780.21	780.41	nm
Linewidth		P _o = 80 mW T=T _c		50	100	MHz
Central Stabilized Temperature	T _c	P _o = 80 mW	15	20	35	°C
Stabilized Temperature Range	T _r	P _o = 80 mW	15			°C
Beam Divergence, Perpendicular	Q _v	P _o = 80 mW		25		deg.
Beam Divergence, Parallel	Q _h	P _o = 80 mW		10		deg.
Emitter Size			3	X	1.5	um
Differential Efficiency	DE (dP/dI)		0.9			mW/mA

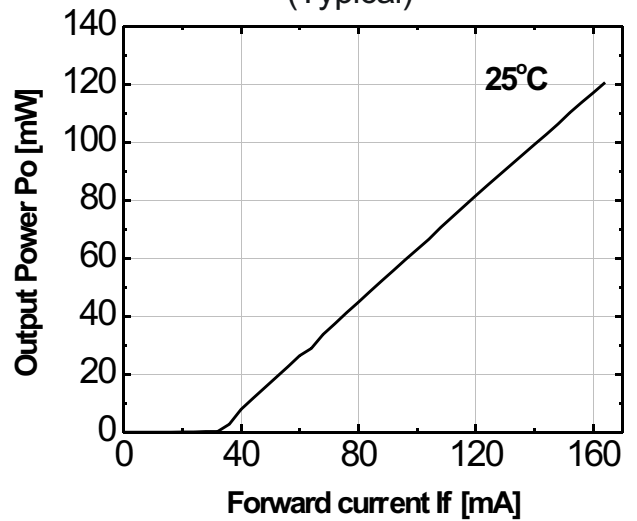
All specifications are with a case temperature of 25° C, unless otherwise noted.

Specifications are subject to change without notice. Each purchased laser is provided with test data. Please refer to this data before using the laser.

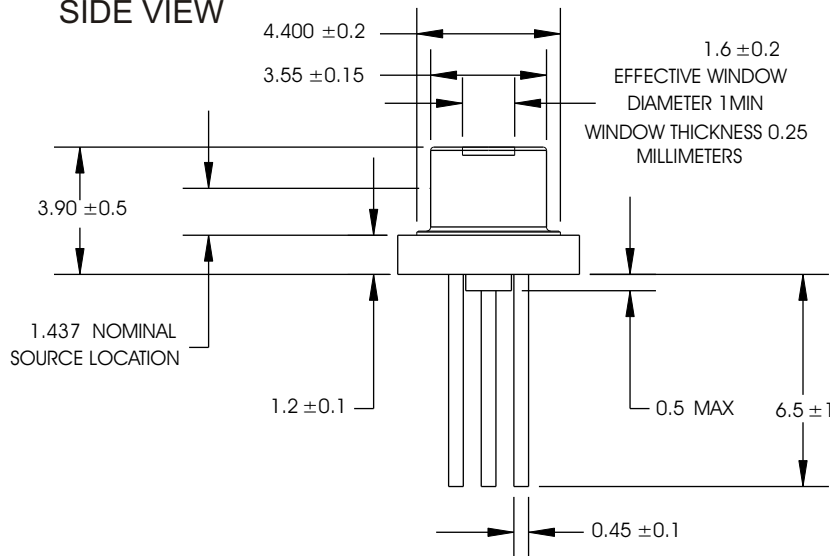
Stabilized Temperature Range



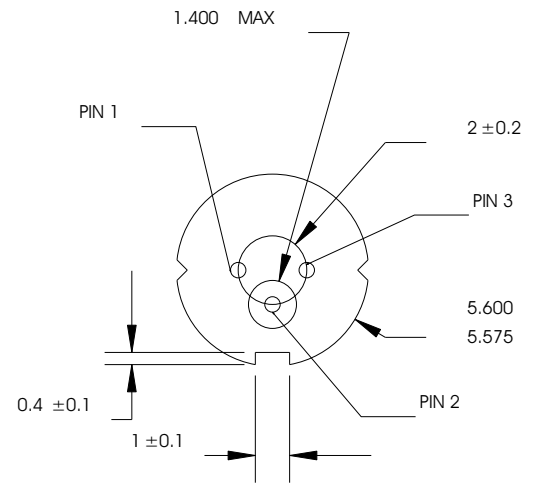
Output Power vs Forward Current (Typical)



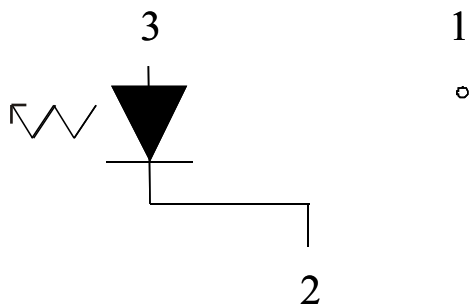
SIDE VIEW



BOTTOM VIEW



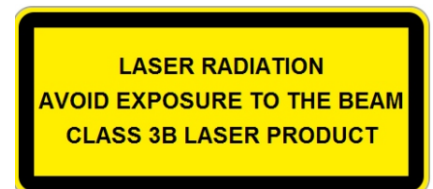
Pinout



Pin	Description
1	Unattached
2	Case
3	Laser Diode Anode

ESD Classification 1B-Human Body Model (HBM)

Model Number:
TO-780.25-PLR80-T



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115-81038-015 Rev. 5