

Description:

Ondax's 640nm Wavelength Stabilized Laser is a single mode, miniature laser in a standard 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:

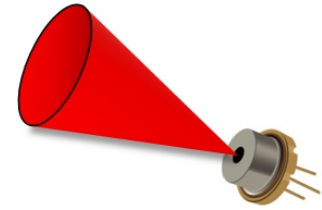
- Wavelength stability (~0.015nm/°C)
- Single frequency
- Coherence length (>2m)
- Hermetically sealed
- Custom wavelengths available

Applications:

HeNe replacement, flow cytometry, metrology, bio instrumentation, graphic arts, Raman spectroscopy, analytical instrumentation, sensing, and data storage.

Single Frequency

Wavelength Stability: ~0.015nm/°C



Specifications:

Absolute Maximum Ratings

Parameter	Symbol	Ratings	Unit
Output Power ¹	P _o	9	mW
Laser Reverse Voltage ¹	V _{rl}	2	V
Photodiode Reverse Voltage ¹	V _{rp}	30	V
Operating Temperature ²	T _{op}	0 to 40	°C
Storage Temperature ²	T _s	-10 to 60	°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		40	60	mA
Operating Current	I _{op}	P _o = 9 mW		60	80	mA
Operating Voltage	V _{op}	P _o = 9 mW		2.3	2.5	V
Monitoring Output Current	I _m	P _o = 9 mW	0.05	0.15	0.4	mA
Lasing Wavelengths	L _p	P _o = 9 mW T=T _c	635	636	637	nm
	L _p	P _o = 9 mW T=T _c	637	638	639	nm
	L _p	P _o = 9 mW T=T _c	639	640	641	nm
Linewidth		P _o = 9 mW T=T _c			50	MHz
Central Stabilized Temperature	T _c	P _o = 9 mW	15	30	40	°C
Stabilized Temperature Range	T _r	P _o = 9 mW	5	10		°C
Beam Divergence, Perpendicular	Q _v	P _o = 9 mW	25	30	35	deg.
Beam Divergence, Parallel	Q _h	P _o = 9 mW	6	8	10	deg.
Off Axis Angle, Perpendicular	dQ _v		-2		2	deg.
Off Axis Angle, Parallel	dQ _h		-2		2	deg.
Differential Efficiency	DE			0.5		mW/mA

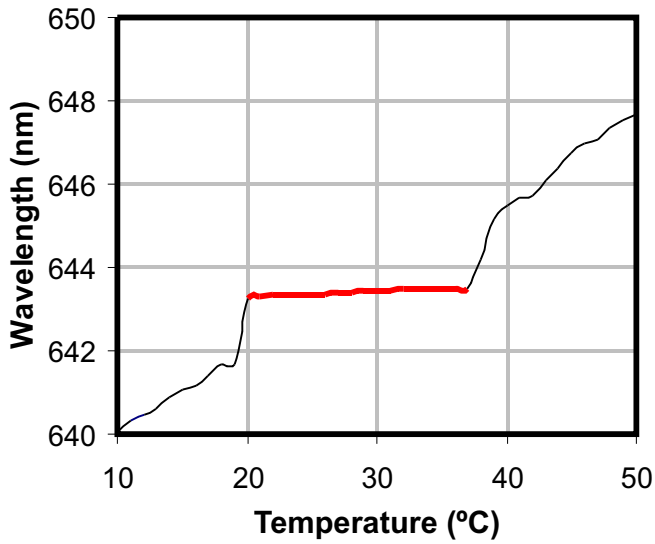
All specifications are with a case temperature of 25 °C, unless otherwise noted.

Specifications are subject to change without notice. Each purchased laser is provided with test data.

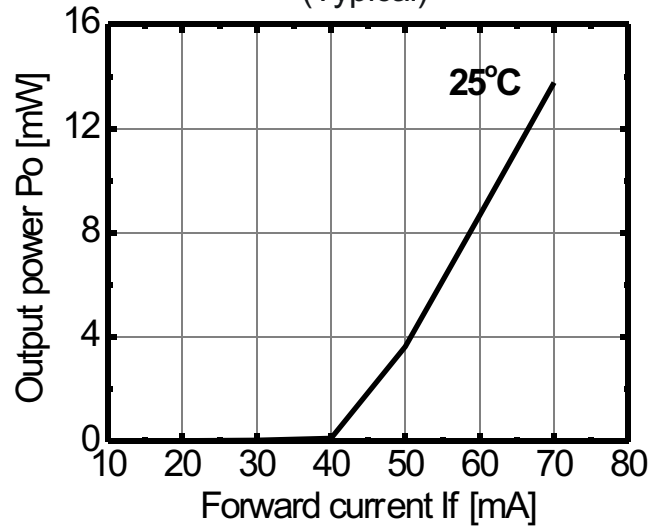
Please refer to this data before using the laser.

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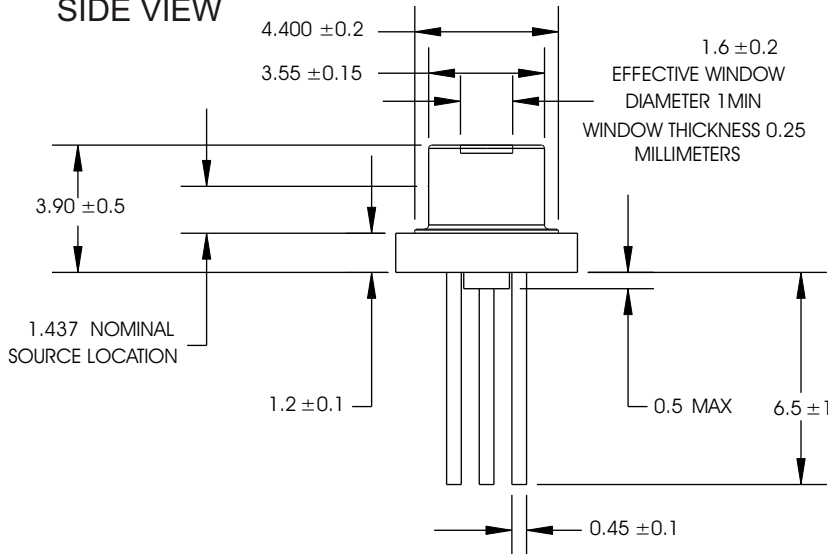
Stabilized Temperature Range



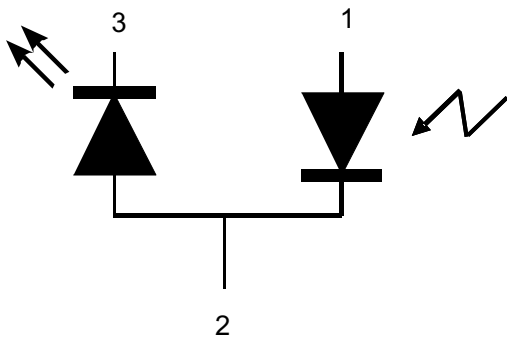
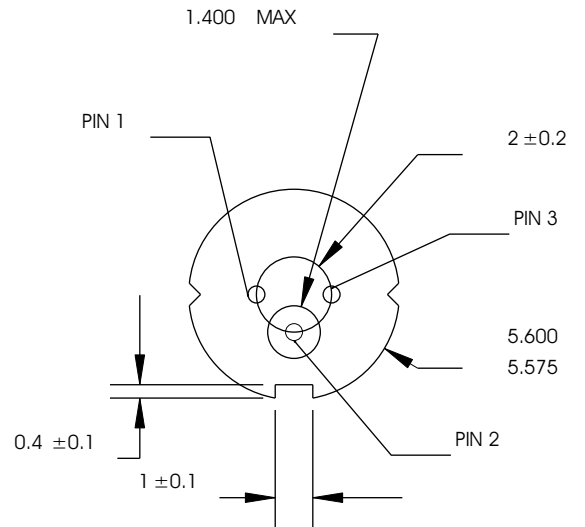
Output Power vs Forward Current (Typical)



SIDE VIEW



BOTTOM VIEW

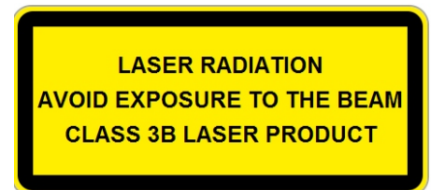


Pinout

Pin	Description
1	Photodiode Anode
2	Case
3	Laser Diode Cathode

Model Numbers:

- TO-636-PLR09
- TO-638-PLR09
- TO-640-PLR09



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