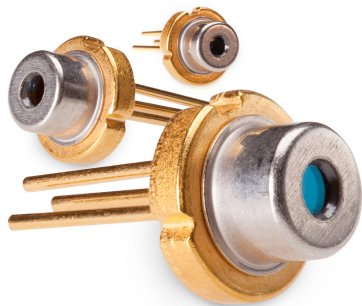


658nm, 35mW Wavelength Stabilized Lasers



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

Features:

- Single frequency performance
- Narrow linewidth 300 MHz
- Wavelength stability across operating range $0.015\text{nm}/^\circ\text{C}$
- Coherence length $>0.3\text{m}$
- 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:

- HeNe Replacement
- Raman Spectroscopy
- Metrology
- Bio-instrumentation
- Graphic Arts
- Sensing
- Analytical Instrumentation

Ondax's 658nm 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			35	mW
Center Wavelength (vacuum) ¹	L_p	655	656	657	nm
	L_p	657	658	659	nm
	L_p	659	660	661	nm
Linewidth (MHz)	$\Delta\lambda$		300		MHz
Central Stabilized Temperature	T_c	15		40	$^\circ\text{C}$
Stabilized Temperature Range	T_r	10	15		$^\circ\text{C}$

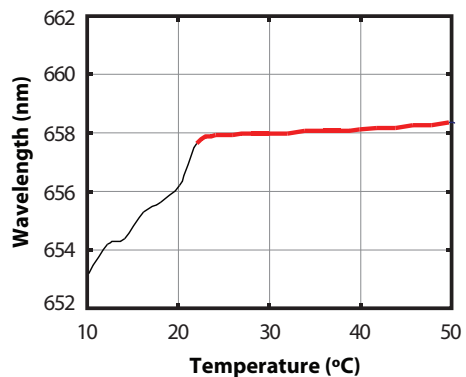
Operating Specifications

Parameter	Symbol	Min	Typ	Max	Unit
Threshold Current (CW)	I_{th}		30	50	mA
Operating Current	I_{op}		65	85	mA
Operating Voltage	V_{op}		2.4	2.8	V
Laser Reverse Voltage	V_{rl}			2	V
Photodiode Reverse Voltage	V_{rp}			30	V
Monitoring Output Current	I_m	0.3	0.5	0.7	mA
Beam Divergence, Perpendicular	Q_v	12	16	20	Degrees
Beam Divergence, Parallel	Q_h	7	10	13	Degrees
Off Axis Angle, Perpendicular	dQ_v	-3		3	Degrees
Off Axis Angle, Parallel	dQ_h	-3		3	Degrees
Emitter Size			1 x 3		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	-10		60	$^\circ\text{C}$
Polarization			100:1		
Polarization Orientation			TE		

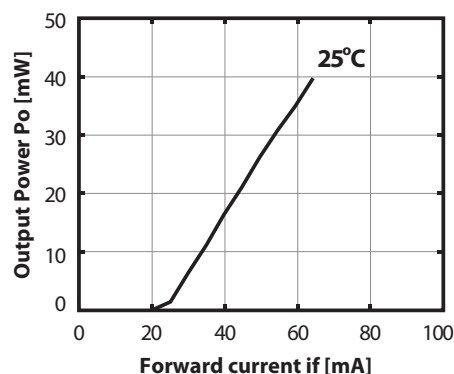
¹Please specify wavelength at time of ordering ²Non-condensing All specifications are at rated power with a case temperature of 25°C unless otherwise noted

658nm, 35mW Wavelength Stabilized Lasers

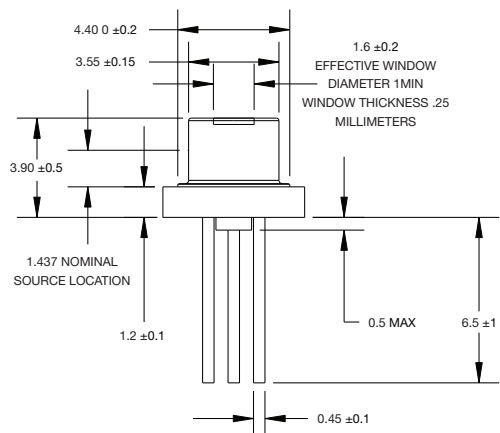
Stabilized Temperature Range



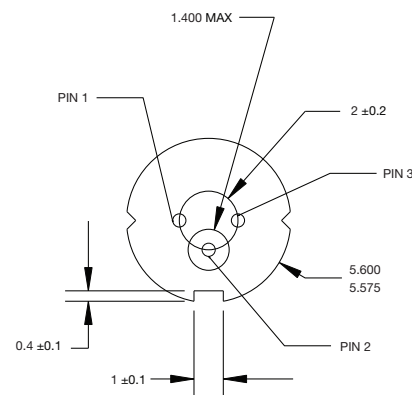
Output Power vs Forward Current (Typical)



Side View

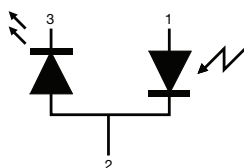


Bottom View



Pinout

Pin	Description
1	Photodiode Anode
2	Case
3	Laser Diode Cathode



Model Numbers

TO-656-PLR35

TO-658-PLR35

TO-660-PLR35

