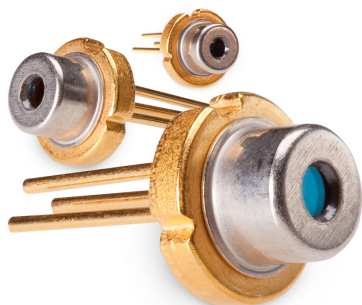


# 658nm, 35mW Wavelength Stabilized Lasers



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

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) <sup>1</sup>	$L_p$	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		$^\circ\text{C}$

## 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

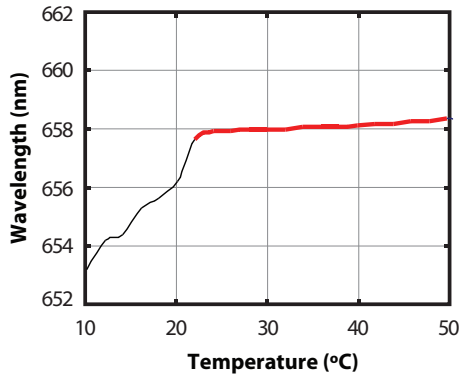
### Operating Specifications

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		$\mu\text{m}$
Differential Efficiency	DE (dp/dI)		1.1		mW/mA
Operating Temperature <sup>2</sup>	$T_{op}$	0		50	$^\circ\text{C}$
Storage Temperature <sup>2</sup>	$T_s$	-10		60	$^\circ\text{C}$
Polarization			100:1		
Polarization Orientation			TE		

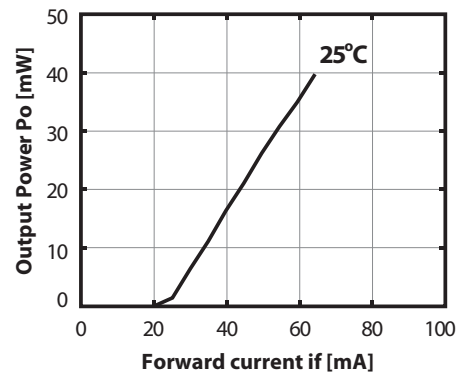
<sup>1</sup>Please specify wavelength at time of ordering    <sup>2</sup>Non-condensing    All specifications are at rated power with a case temperature of  $25^\circ\text{C}$  unless otherwise noted

## 658nm, 35mW Wavelength Stabilized Lasers

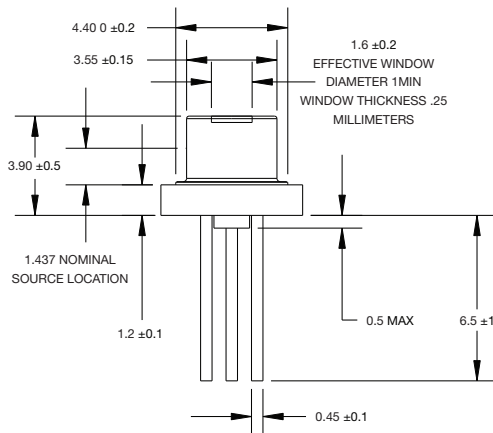
### Stabilized Temperature Range



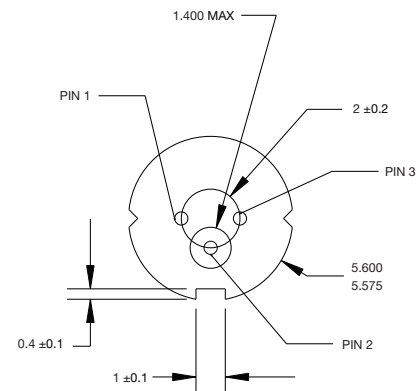
### Output Power vs Forward Current (Typical)



### Side View

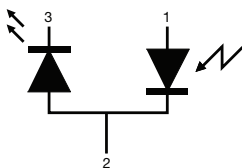


### Bottom View



### Pinout

Pin	Description
1	Photodiode Anode
2	Case
3	Laser Diode Cathode



### Model Numbers

T0-656-PLR35

T0-658-PLR35

T0-660-PLR35

