

## 1555 nm, 130 mW (Min) DFB TO-56 Diode Laser



**DFB1550T**

### Description

Thorlabs' DFB1550T Distributed Feedback (DFB) laser is a 1555 nm, 130 mW (min) single-frequency laser. The DFB1550T laser is packaged in a TO-56 package with E-pin configuration, and is designed for high power, single-frequency operation at multiple temperatures. It is a low-noise pump source for near infrared spectroscopy (NIRS), telecommunication, LIDAR, and general sensing.

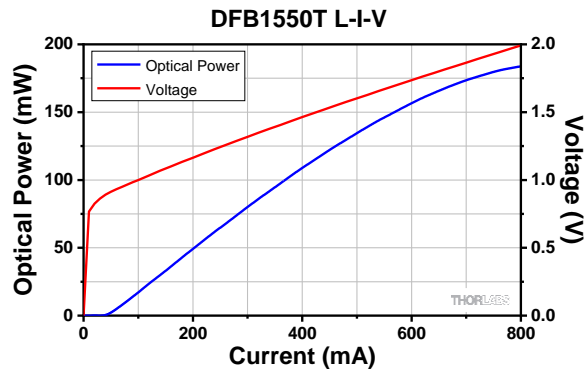
### Specifications

DFB1550T; T <sub>Case</sub> = 25 °C				
	Symbol	Min	Typical	Max
Center Wavelength	$\lambda_c$	1552 nm	1555 nm	1558 nm
Laser Linewidth	$\Delta\nu$	-	150 kHz	-
Output Power CW @ I <sub>OP</sub>	P <sub>OP</sub>	130 mW	150 mW	-
Operating Current	I <sub>OP</sub>	-	500 mA	800 mA
Mode-Hop-Free Operating Current <sup>a</sup>	$\Delta I_{\text{Mode-Hop-Free}}$	350 mA	-	-
SMSR in Mode-Hop-Free Range <sup>b</sup>	SMSR	30 dB	50 dB	-
Threshold Current	I <sub>TH</sub>	-	45 mA	-
Forward Voltage	V <sub>F</sub>	-	1.7 V	1.9 V
Slope Efficiency	$\Delta P / \Delta I$	-	0.26 W/A	-
Current Tuning	$\Delta \lambda / \Delta I$	-	0.007 nm/mA	-
Temperature Tuning	$\Delta \lambda / \Delta T$	-	0.10 nm/°C	-

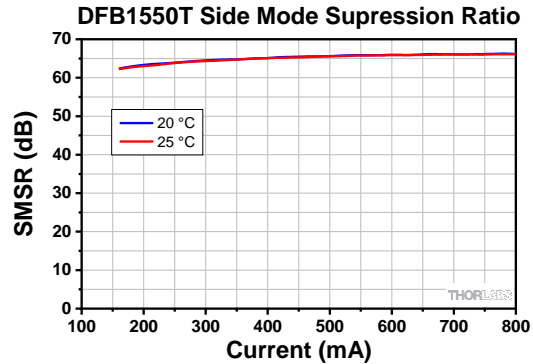
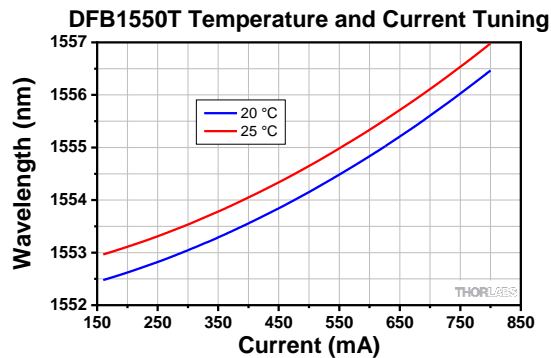
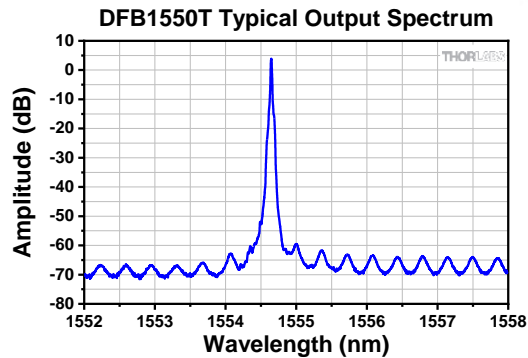
- Continuous tuning range above this value where mode-hops are not observed.
- As measured with an optical spectrum analyzer (OSA) with spectral resolution of 0.02 nm to empirically determine single frequency range. Laser 30 dB bandwidth and SMSR are subject to monochromator settings and OSA internal algorithms and will differ from instrument to instrument.



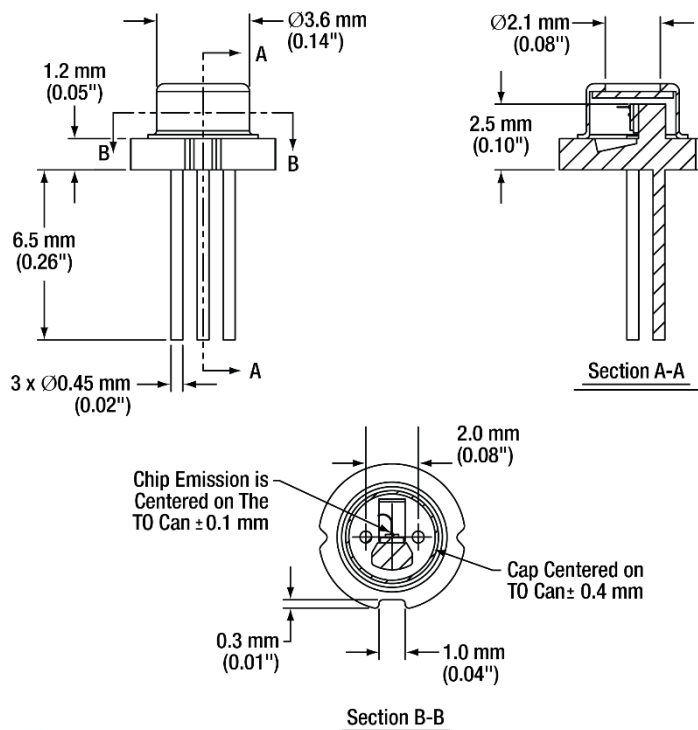
## Typical Performance Plots



Measured at 25 °C



## Drawings



March 17, 2025

DOC-101787, Rev A