

1654 nm DFB Laser Specifications

Model Number: NL1654-T

Operating Parameters

Parameter	Units	Min.	Max.
Storage Temperature	°C	-40	50
Case Operating Temperature	°C	-20	50
TEC Current	A		1.4
Laser Diode Forward Current	mA		125
Laser Diode Reverse Voltage	V		2

Laser Characteristics

Parameter	Condition	Units	Typical Value
Threshold Current	25 °C	mA	10
Operating Wavelength	90 mA & 25 °C	nm	1654 ± 1
Operating Power	90 mA & 25 °C	mW	10
Forward Voltage	90 mA & 25 °C	V	1.6
Thermistor Resistance	25 °C	kΩ	10 ± 0.1
Thermistor B constant	25 °C		3890
Temperature Tuning		nm/°C	0.1
Current Tuning	near 1654 nm	nm/mA	0.025
Side Mode Suppression Ratio (SMSR)		dB	> 30

Package:

- TO-39 hermetically sealed
- AR coated Sapphire window, R<0.1%
- Internal TEC and thermistor

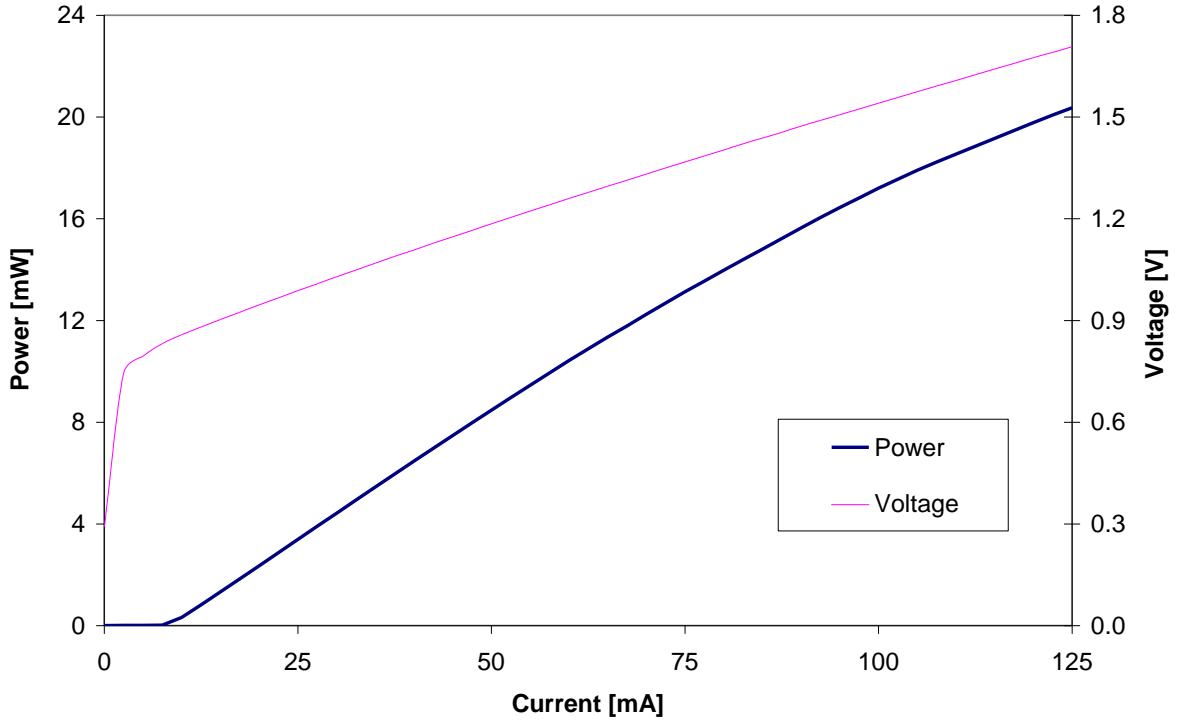
Lens Option:

- Aspheric AR coated Lens
- Beam diameter (1/e²): typically 3 mm
- Beam collimation: typically < 1.0 mrad

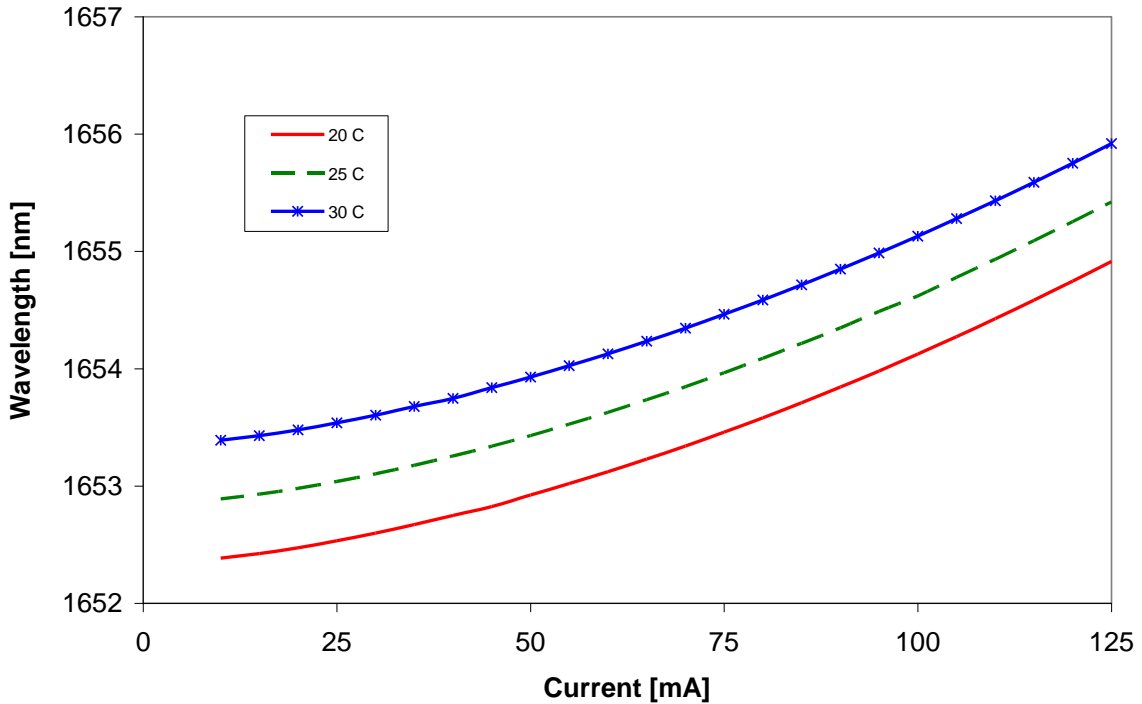


Caution: Laser diode produces invisible radiation during operation and is sensitive to electrostatic surge. Please read handling instruction carefully before working with the laser.

Optical Power & Forward Voltage vs Drive Current at 25°C

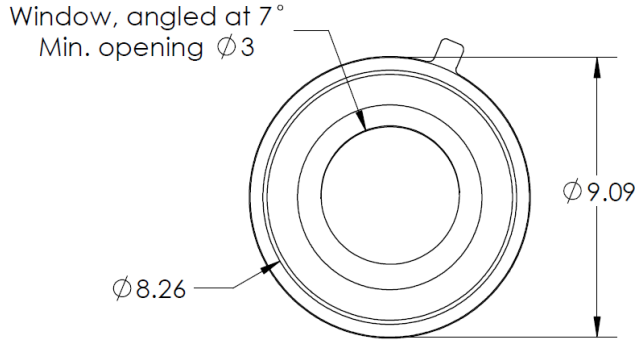


Wavelength vs Drive Current

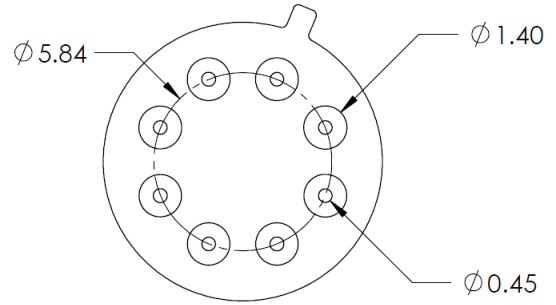


TO39 Package Outline Diagrams

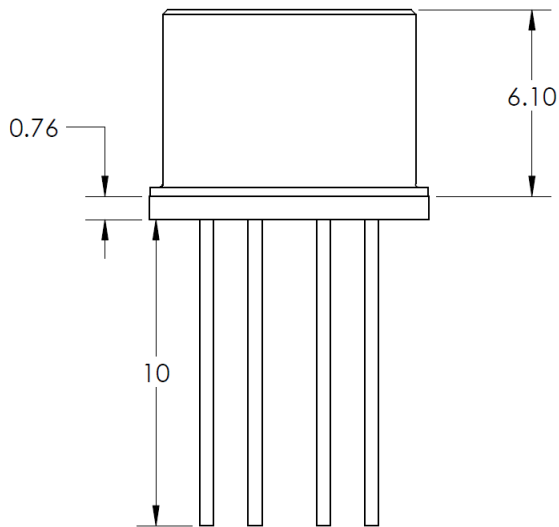
Top View



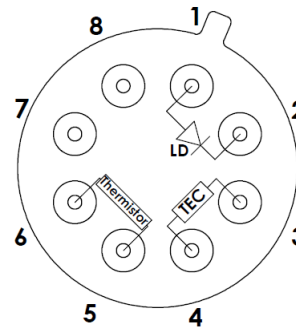
Bottom View



Front View



Schematic Diagram (Bottom View)



All dimensions in mm

Pin Number	Description
1	LD Anode (+)
2	LD Cathode (-)
3	TEC (-)
4	TEC (+)
5	Thermistor
6	Thermistor
7	Not Used
8	Not Used