



Tunable MidIR DFB Lasers – 2330 nm Specifications

Model Number: NL2330-T39

Serial Number: 20222

Package Type: TO 39 – Hermetically sealed with a 7° tilted window, AR coated

Lens: No Lens

Operating Parameters

PARAMETER	UNITS	MIN.	MAX.
Storage Temperature	°C	-40	75
Case Operating Temperature	°C	-20	50
TEC Current	A		1.4
TEC Voltage	V		2.1
Laser Diode Forward Current	mA		225
Laser Diode Reverse Voltage	V		2

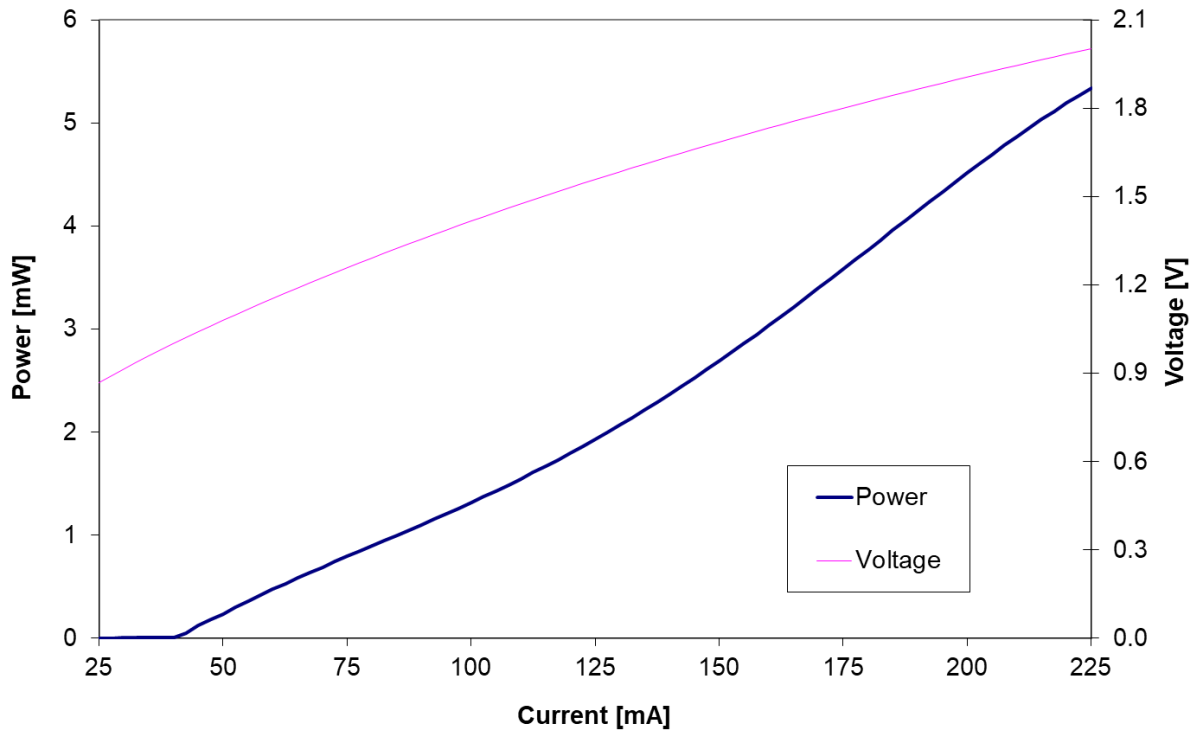
Laser Characteristics

PARAMETER	CONDITION	UNITS	VALUE
Threshold Current	35 °C	mA	40
Operating wavelength	195 mA & 35 °C	nm	2330
Operating Power	195 mA & 35 °C	mW	4.3
Forward Voltage	195 mA & 35 °C	V	1.87
Maximum Power	225 mA & 35 °C	mW	5.3
Thermistor Resistance	25 °C	kΩ	10 ± 0.1
Thermistor B constant	25 °C		3890
Temperature Tuning		nm/°C	0.19
Drive Current Tuning	near 2330 nm	nm/mA	0.057
Side mode suppression ratio (SMSR)		dB	> 30

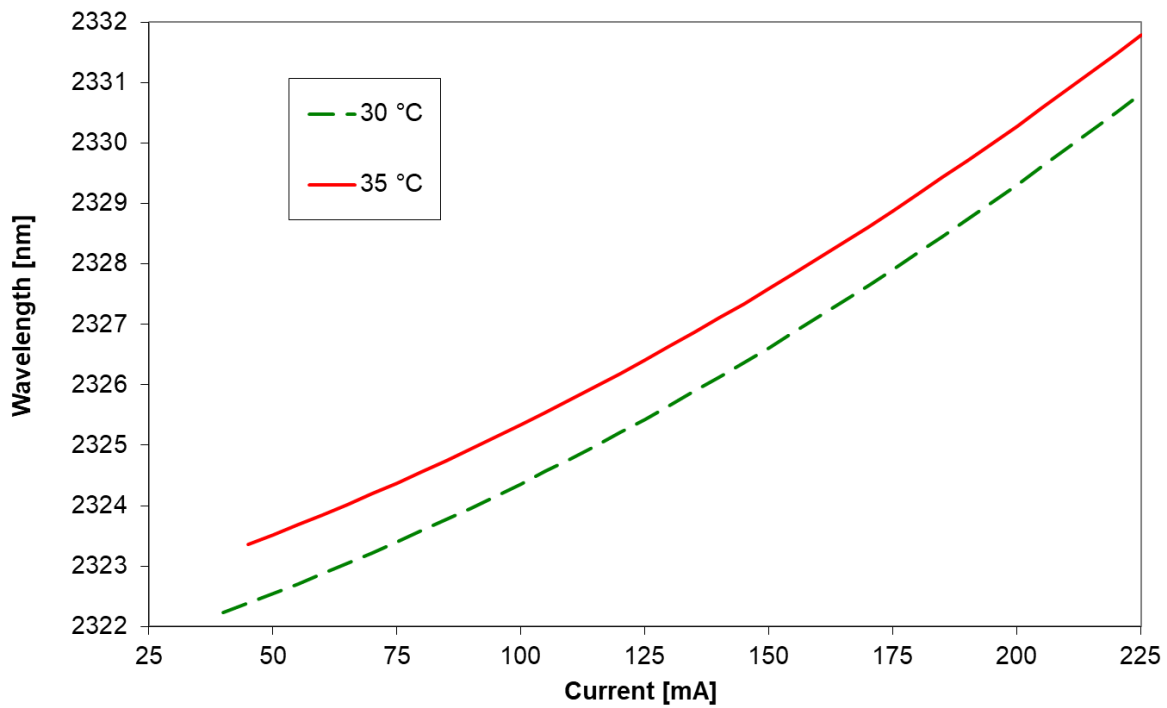
Caution: Electrostatic surge could cause permanent damage to the laser diodes. Always set the output level of the power supply to zero before connecting or disconnecting a laser diode.

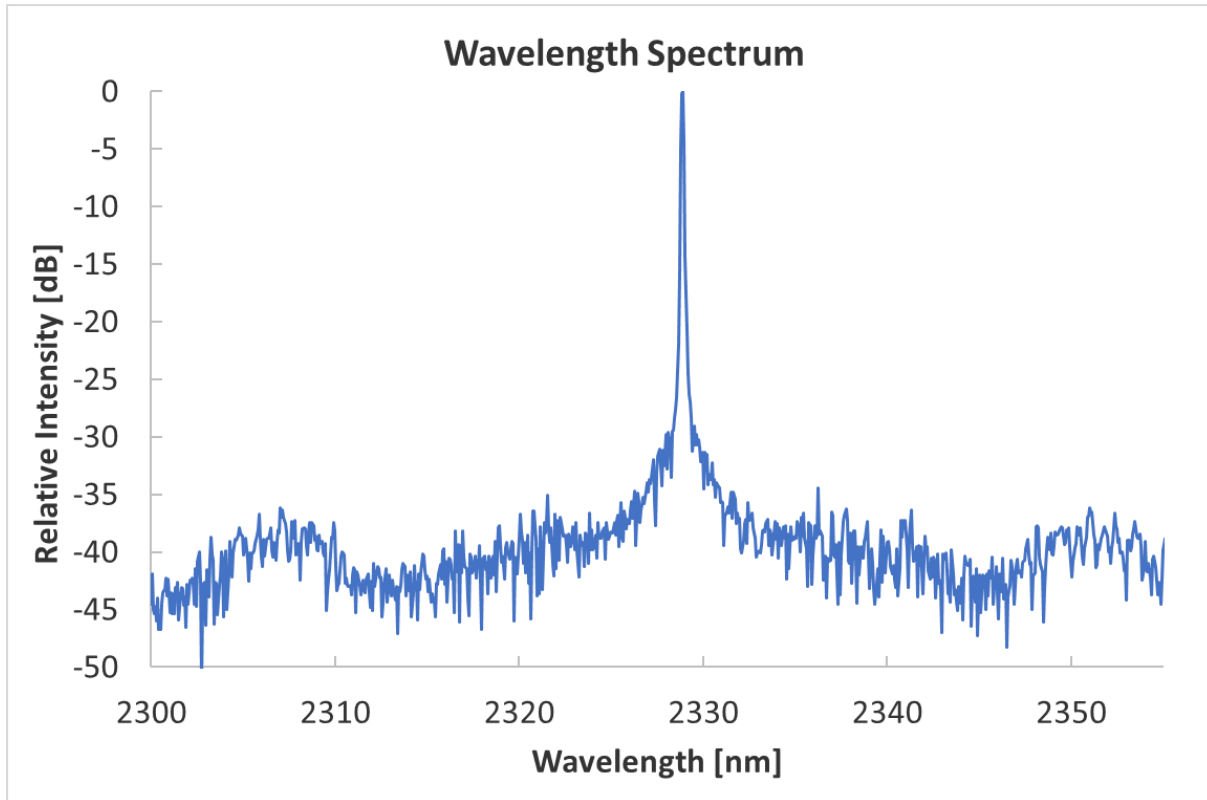
Caution: During operation, this device emits invisible laser radiation. Avoid direct exposure to the beam.

Optical Power & Forward Voltage vs Drive Current at 35 °C



Wavelength vs Drive Current



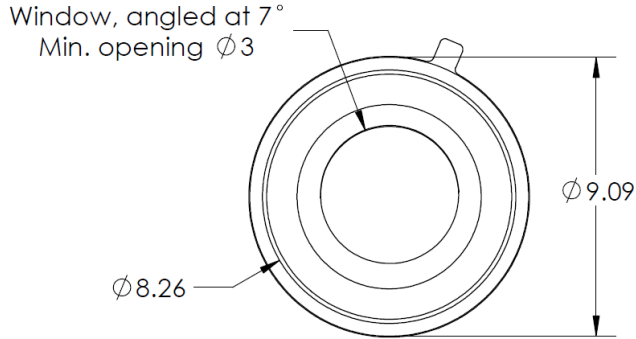


Laser Safety and Handling Precautions

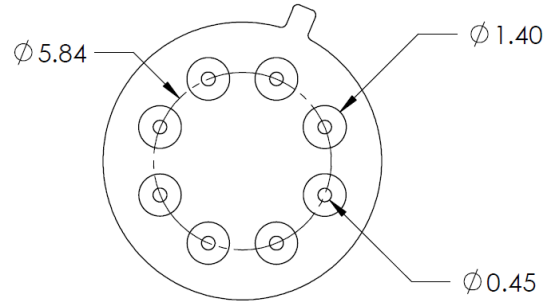
1. *Protect the laser from ESD*
2. *Do not exceed the reversed biased voltage limit given in this document*
3. *Make sure to follow the pin-out diagram in the next page*
4. *Make sure to heat sink the laser, at the base*
5. *Keep the soldering time as short as possible, if the connecting wires need to be soldered directly to the pins*
6. *Make sure to limit the laser current and TEC current to the maximum values given in this report*
7. *Always monitor the thermistor temperature and make sure to shut off laser and TEC if the thermistor temperature keeps rising above the set value (thermal run-away)*
8. *Switch off the power to laser and TEC before connecting or removing the laser*
9. *Wear appropriate protective goggles for the wavelength and power of the laser*
10. *Please read our document on “Laser Safety and Handling Precautions” for detail instructions before handling the laser*
11. *Please contact Norcada if you have any questions or concerns regarding this laser*

TO39 Package Outline Diagrams

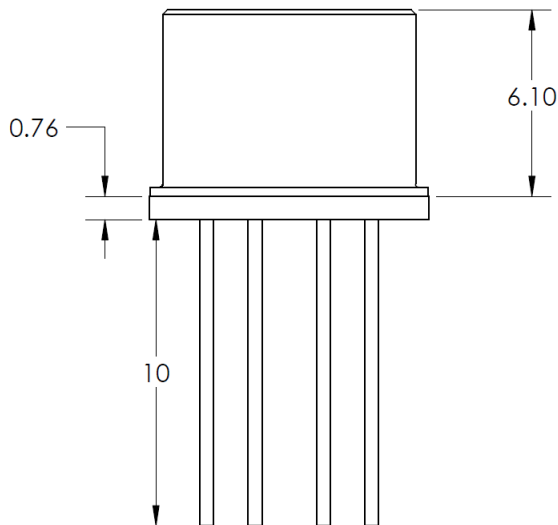
Top View



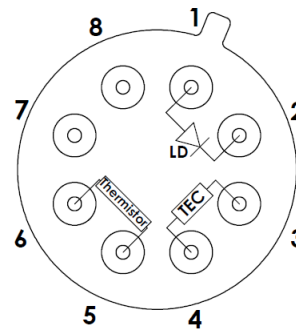
Bottom View



Front View



Schematic Diagram (Bottom View)



TO-39 Header

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