



## Tunable IR DFB Lasers – 1580 nm Specifications

Model Number: NL1580-B

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

### Operating Parameters

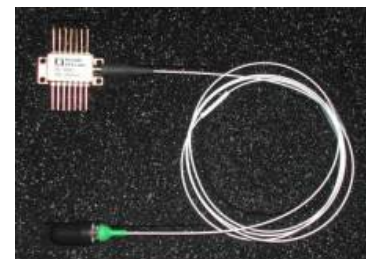
PARAMETER	UNITS	MIN.	MAX.
Storage Temperature	°C	-40	80
Case Operating Temperature	°C	-20	50
TEC Current	A		1.2
Laser Diode Forward Current	mA		125
Laser Diode Reverse Voltage	V		2

### Laser Characteristics

PARAMETER	CONDITION	UNITS	TYPICAL VALUE
Threshold Current	25 °C	mA	12
Operating wavelength	100 mA & 35°C	nm	1580 ± 1
Operating Power	100 mA & 35°C	mW	10
Forward Voltage	100 mA & 35°C	V	1.5
Maximum Power	35 °C	mW	12
Thermistor Resistance	25 °C	kΩ	10 ± 10%
Thermistor B constant	25 °C		3890
Temperature Tuning		nm/°C	0.1
Drive Current Tuning	near 1578 nm	nm/mA	0.02
Side mode suppression ratio (SMSR)		dB	> 30

### Package:

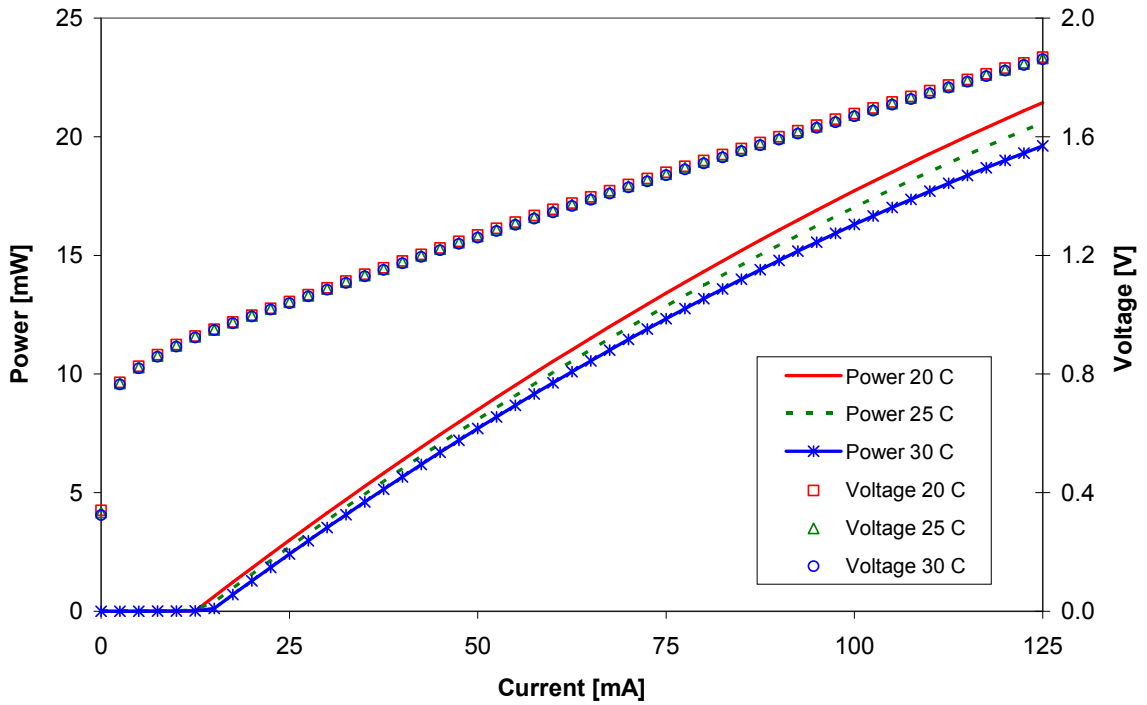
- 14-pin Butterfly package, hermetically sealed
- AR coated Sapphire window, R<0.1%
- Internal TEC and thermistor
- Internal optical isolator
- 1.2 m long single mode fiber with FC/APC connecto



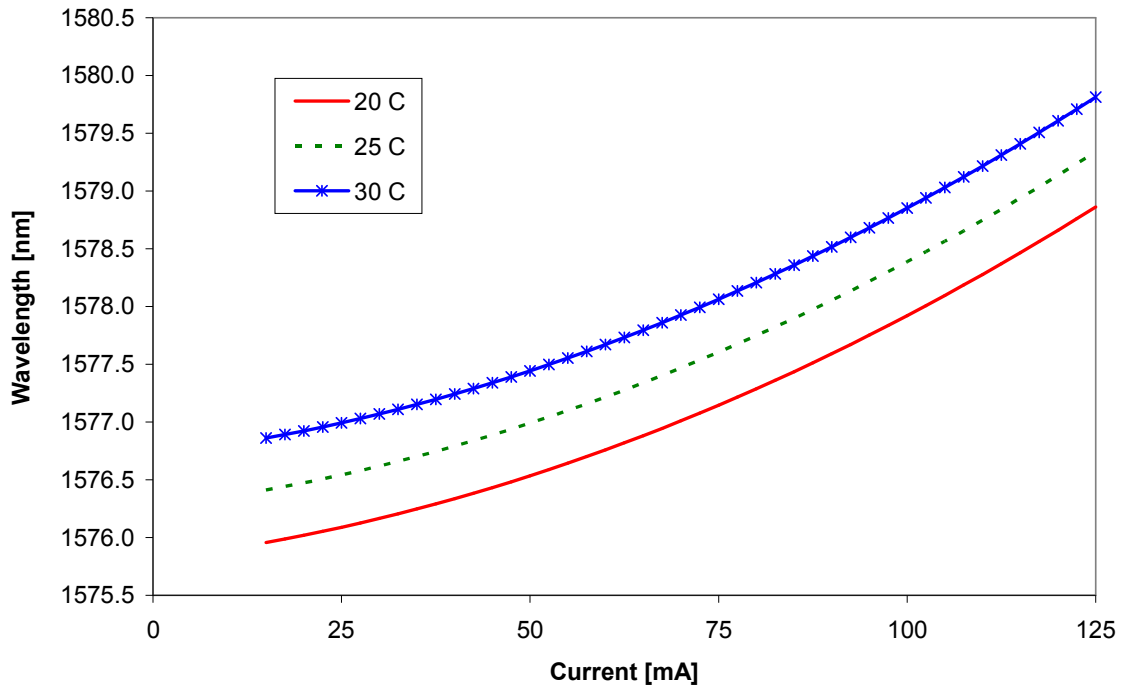
**Caution:** Electrostatic surge could cause permanent damage to the laser diodes. Always set the output level of the power supply to zero before connecting or disconnecting a laser diode.

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

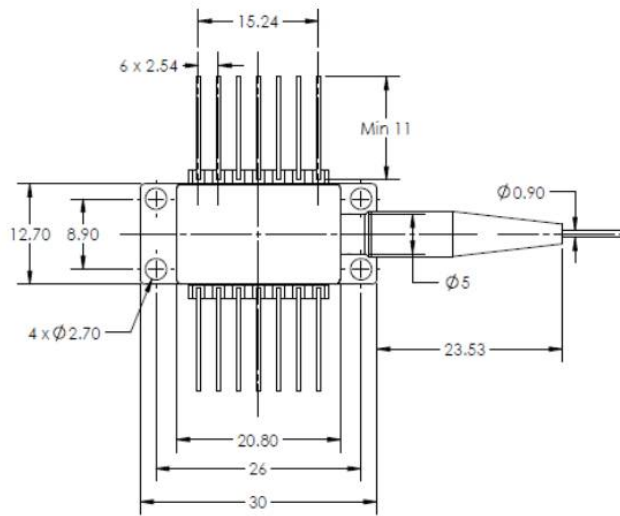
Optical Power & Forward Voltage vs Drive Current



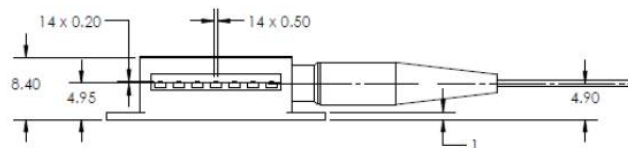
Wavelength vs Drive Current



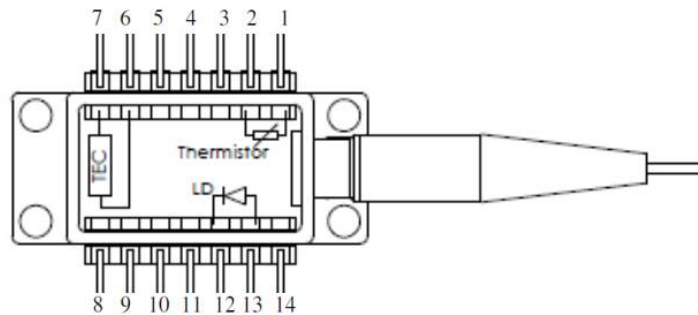
## Outline Diagrams:



All dimensions are in mm



## Schematic Diagram:



Pin #	Function	Pin #	Function
1	Thermistor	8	Not Used
2	Thermistor	9	Not Used
3	Not Used	10	Not Used
4	Not Used	11	Not Used
5	Not Used	12	Laser Diode Cathode (-)
6	TEC (+)	13	Laser Diode Anode (+)
7	TEC (-)	14	Not Used