



## Tunable IR DFB Lasers – 1854 nm Specifications

Model Number: NL1854-B

Package Type: 14-pin Butterfly package, hermetically sealed

### Operating Parameters

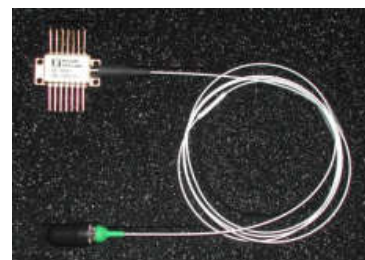
Parameter	Units	Min.	Max.
Storage Temperature	°C	-40	50
Case Operating Temperature	°C	-20	50
TEC Current	A	1.4	
Laser Diode Forward Current	mA	125	
Laser Diode Reverse Voltage	V	2	

### Laser Characteristics

Parameter	Condition	Units	Typical Value
Threshold Current	25 °C	mA	70
Operating Wavelength	185 mA & 25 °C	nm	1854 ± 1
Operating Power	185 mA & 25 °C	mW	5
Forward Voltage	185 mA & 25 °C	V	1.65
Thermistor Resistance	25 °C	kΩ	10 ± 0.1
Thermistor B constant	25 °C	3890	
Temperature Tuning	nm/°C	0.18	
Current Tuning	near 1854 nm	nm/mA	0.042
Side Mode Suppression Ratio (SMSR)	dB	> 25	

### Package:

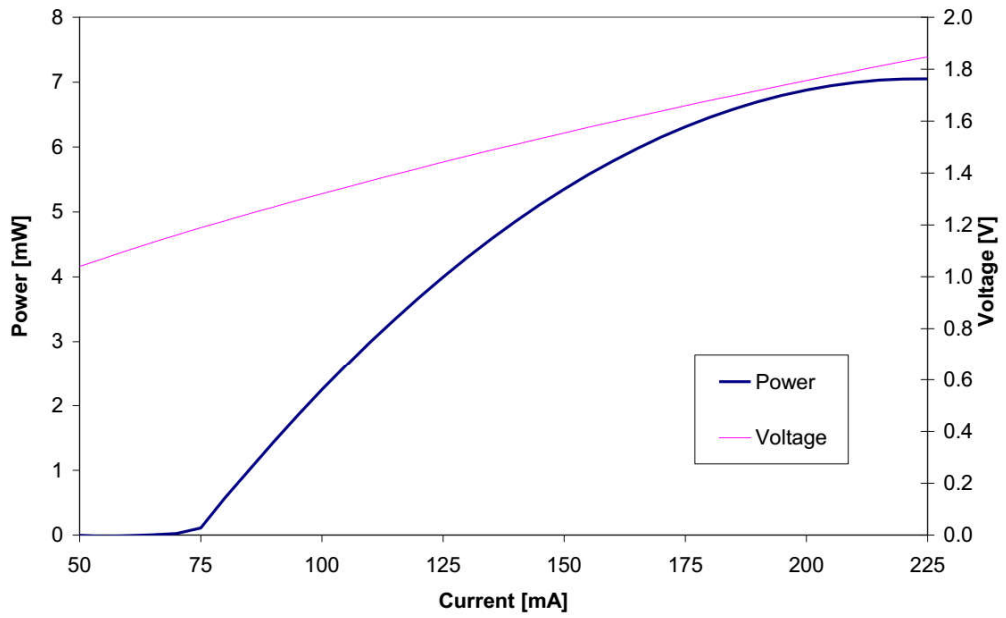
- 14-pin Butterfly package, hermetically sealed
- AR coated Sapphire window, R<0.1%
- Internal TEC and thermistor
- Internal optical isolator
- 1.2 m long single mode fiber with FC/APC connecto



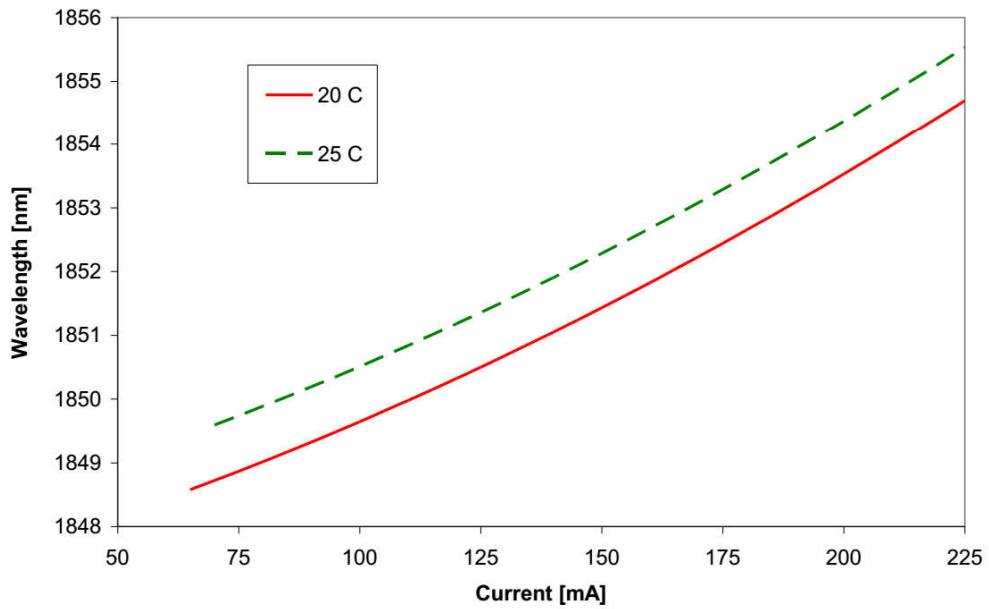
**Caution:** Electrostatic surge could cause permanent damage to the laser diodes. Always set the output level of the power supply to zero before connecting or disconnecting a laser diode.

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

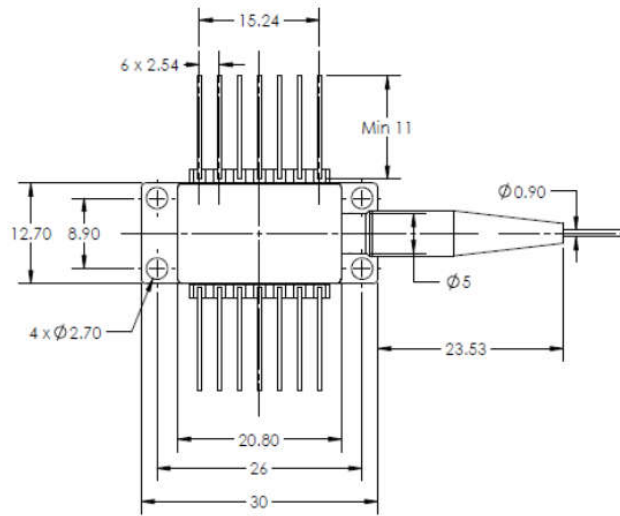
Optical Power & Forward Voltage vs Drive Current at 25 °C



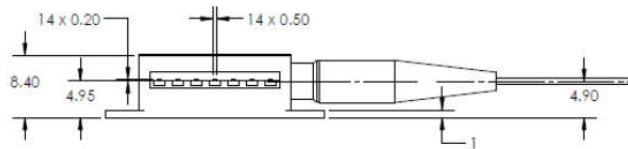
Peak Wavelength vs Drive Current



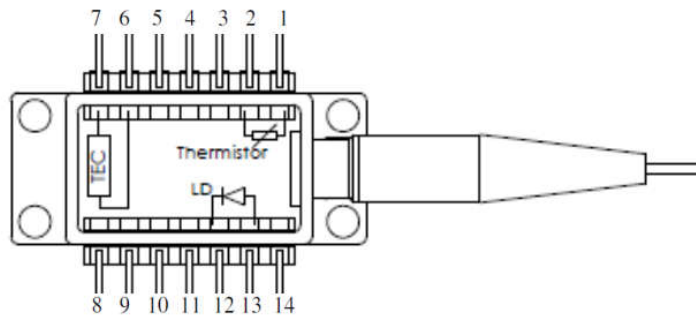
## Outline Diagrams:



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