808 nm Fabry-Perot Laser Diode, 300 mW

L808H1

Description

The L808H1 808 nm Fabry-Perot single spatial mode laser diode is based on quantum well epitaxial layer growth and a highly reliable ridge waveguide structure. This diode features high optical output power and slope efficiency. The L808H1 Ø9 mm TO-can package discrete laser diode is a compact light source suited to many applications.

Specifications

Absolute Maximum Ratings[a]	
LD Reverse Voltage (Max)	2 V
Absolute Max Current	450 mA
Absolute Max Power	310 mW
Operating Case Temperature	20 to 50 °C
Storage Temperature	-10 to 65 °C
Pin Code	H

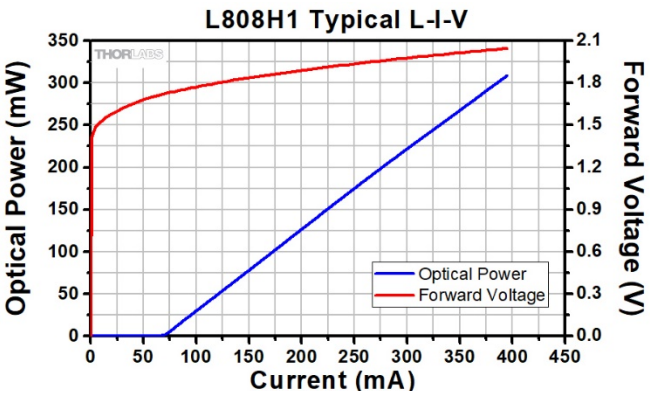
a. Please note that exceeding the absolute maximum ratings above may cause damage to the device.

L808H1[a]				
	Symbol	**Min**	**Typical**	**Max**
Center Wavelength	λ_C	798 nm	808 nm	818 nm
Spectral Bandwidth (RMS)	$\Delta\lambda$	-	0.5 nm	3 nm
Output Power CW @ I_{OP}	P_{CW}	-	300 mW	-
Threshold Current	I_{TH}	-	90 mA	130 mA
Operating Current CW	I_{OP}	-	400 mA	450 mA
Slope Efficiency	$\Delta P/\Delta I$	-	0.90 W/A	-
Forward Voltage	V_F	-	2.1 V	2.5 V
Vertical Beam Divergence Angle (FWHM)[b]	θ_V	-	14°	18°
Lateral Beam Divergence Angle (FWHM)[b]	θ_L	-	6°	8°

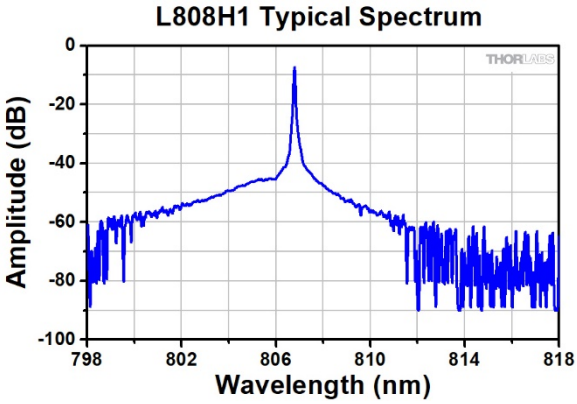
a. T_{case} = 25°C

b. CW at 400 mA

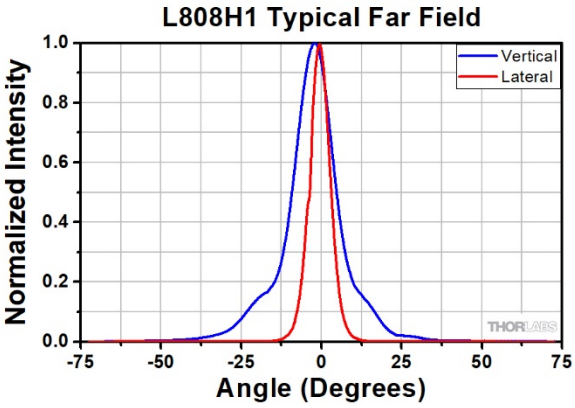
Typical Performance Plots



Typical L-I-V at 25 °C

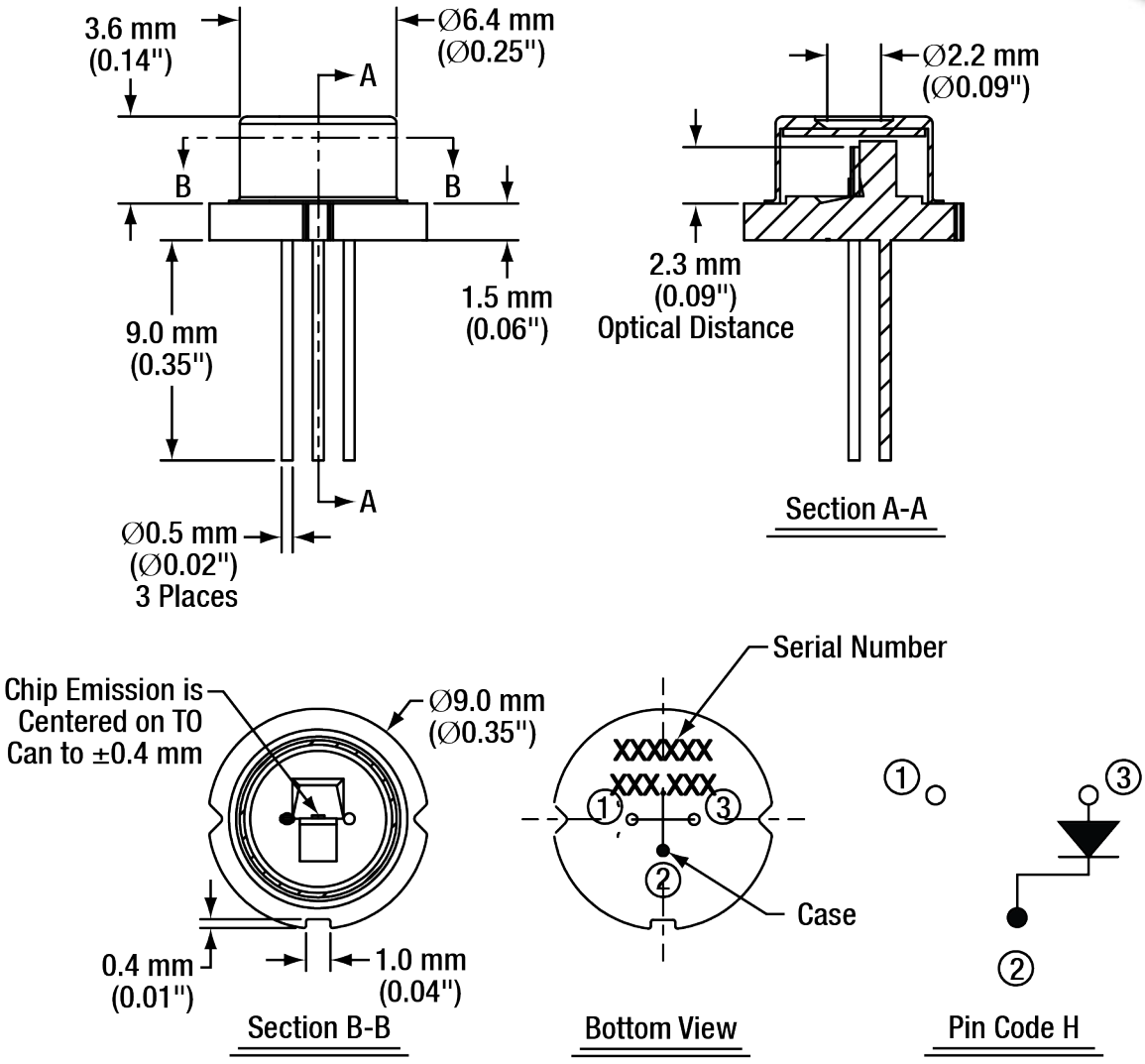


Typical Optical Spectrum at I = 400 mA



L808H1 Typical Far Field Pattern

Drawing


3.6 mm
(0.14")
Ø6.4 mm
(Ø0.25")
A
B
B
1.5 mm
(0.06")
9.0 mm
(0.35")
A
Ø0.5 mm
(Ø0.02")
3 Places
Ø2.2 mm
(Ø0.09")
2.3 mm
(0.09")
Optical Distance
Section A-A
Chip Emission is
Centered on TO
Can to ±0.4 mm
Ø9.0 mm
(Ø0.35")
0.4 mm
(0.01")
1.0 mm
(0.04")
Section B-B
Serial Number
XXXXX
XXX.XXX
1
3
2
Case
Bottom View
1
3
2
Pin Code H