

760 nm, 0.5 mW VCSEL Laser Diode

L760VH1



Description

L760VH1 is a 760 nm, 0.5 mW AlGaAs VCSEL diode designed to meet the characteristics of a single longitudinal wavelength, a single spatial mode and a circular beam profile. It is packaged into a TO-46 package with an H pin configuration. It is designed as a spectral stability light source with low power dissipation and linear polarization. It is widely used in time-resolved fluorescence spectroscopy and O₂ gas sensing applications.

Specifications

Absolute Maximum Ratings ^a	
LD Reverse Voltage (Max)	2 V
Absolute Max Output Power	1.0 mW
Absolute Max Current	3 mA
Absolute Max Voltage	2.5 V
Storage Temperature	-10 to 65 °C
Pin Code	H



a. Absolute maximum rating specifications should never be exceeded. Operating at or beyond these conditions can permanently damage the laser.

L760VH1 ^a				
	Symbol	Min	Typical	Max
Center Wavelength	λ_c	759 nm	760 nm	761.8 nm
Output Power	P_{CW}	-	0.5 mW	-
Threshold Current	I_{th}	-	1 mA	-
Operating Current	I_{OP}	-	-	3 mA
Slope Efficiency	$\Delta P / \Delta I$	-	0.3 W/A	-
Forward Voltage	V_F	-	2.2 V	2.5 V
Beam Divergence (Full Width 1/e ² @ I_{OP})	θ	-	12°	-
Operating Case Temperature ^b	T_{case}	20 °C	-	50 °C

a. $T_{chip} = 25\text{ °C}$

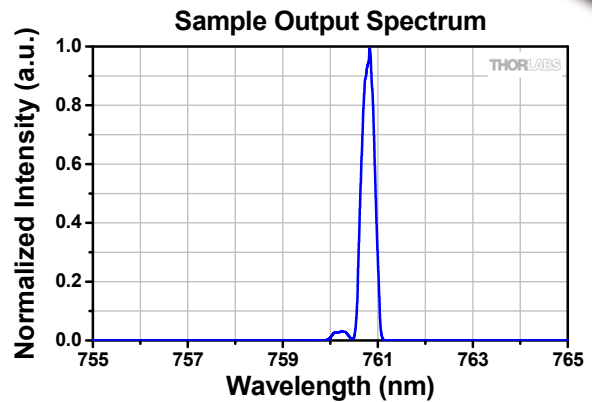
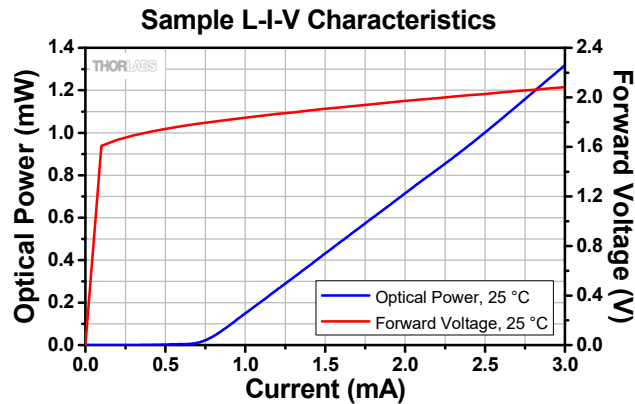
b. The Operating Case Temperature should remain in this range to provide wavelength stability at the chosen operating wavelength.

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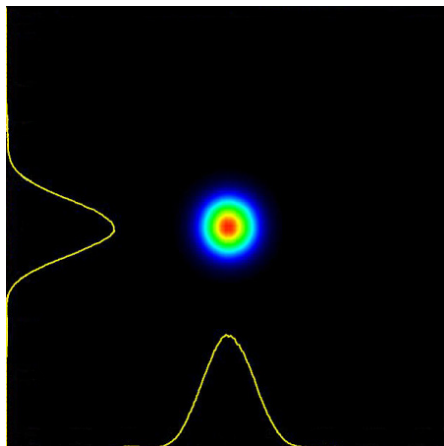
Typical Performance Plots

The data below was measured at 25 °C.

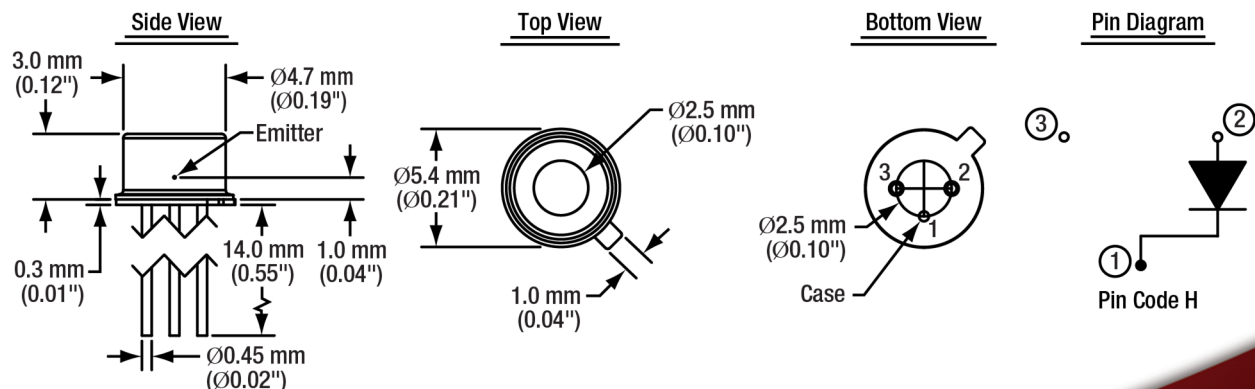


To preserve long-term reliability, do not exceed a Current of 3.0 mA or an Optical Power of 1.0 mW, whichever is reached first.

Beam Profile at 2.5 mA



Drawing



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