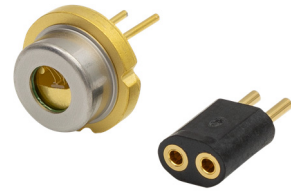


L637G1



### Description

This 637 nm, 1.2 W GaAs laser diode is a compact light source suited for a variety of applications. It comes in a  $\varnothing 9$  mm TO package with a G pin configuration. We recommend having the base of the laser diode in sufficient thermal contact with a heat sink. A socket is included with the purchase of the product to assist with soldering. The leads on this diode have a larger 0.6 mm diameter than the typical 0.45 mm diameter for a  $\varnothing 9$  mm package. This makes it incompatible with mounts and sockets that are designed to fit a standard  $\varnothing 9$  mm TO can package.

This laser diode emits high intensity visible light which can be hazardous to the human eye. Products which incorporate these devices have to follow the safety precautions found in IEC 60825-1 "Safety of laser products".

### Specifications

Absolute Maximum Ratings <sup>a</sup>		
	Symbol	Maximum
Operating Current	$I_F$	1.6 A
Optical Power	$P_o$	1.3 W
LD Reverse Voltage	$V_R$	2 V
Operating Case Temperature	$T_{op}$	-10 to 45 °C
Storage Temperature	$T_{stor}$	-40 to 85 °C

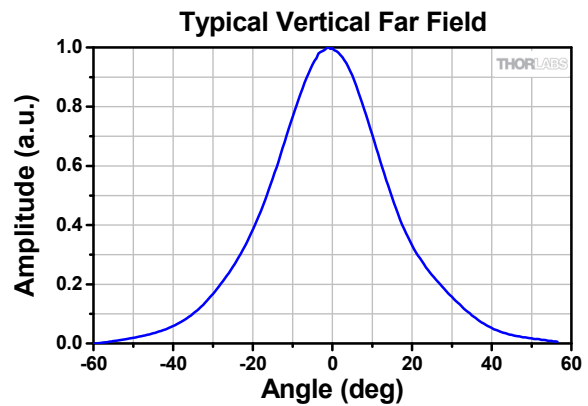
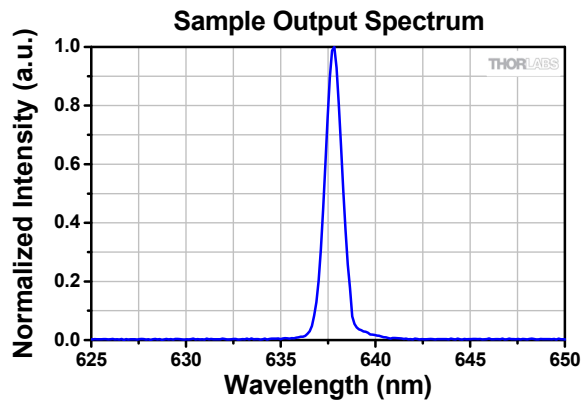
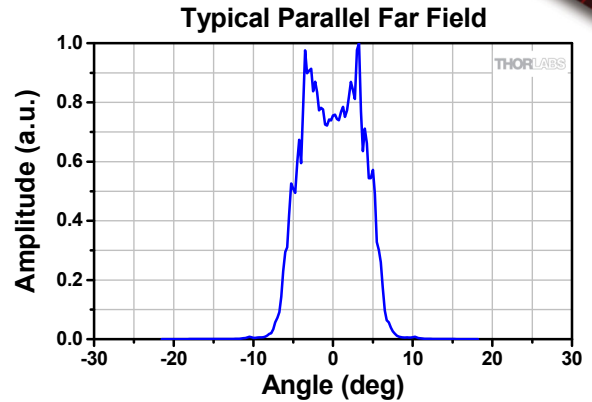
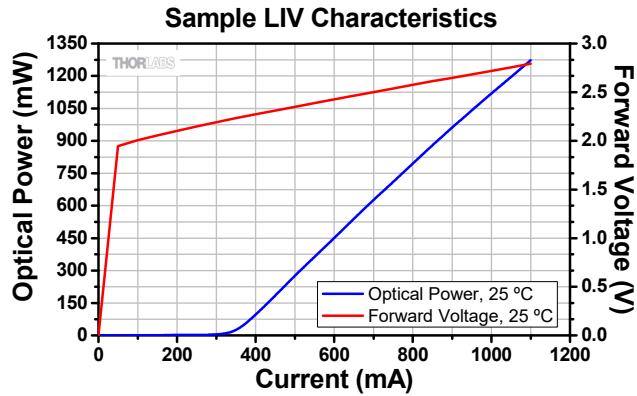


- a. Absolute maximum rating specifications should never be exceeded. Operating at or beyond these conditions can permanently damage the laser.

L637G1 Specifications <sup>b</sup>					
Specification	Symbol	Min	Typical	Max	
Center Wavelength @ $P_{op}$	$\lambda_o$	632 nm	637 nm	641 nm	
Output Power, CW	$P_{op}$	-	1.2 W	-	
Threshold Current	$I_{TH}$	-	350 mA	450 mA	
Operating Current CW @ $P_{op}$	$I_{op}$	-	1.1 A	1.5 A	
Operating Voltage @ $P_{op}$	$V_{op}$	-	2.5 V	2.9 V	
Slope Efficiency	$\eta$	-	1.6 W/A	-	
Polarization Extinction Ratio	Per	-	18 dB	-	
Emitter Width	L	-	80 $\mu$ m		
Beam Divergence (FWHM) @ $P_{op}$	Parallel	$\theta_{  }$	-	10°	-
	Perpendicular	$\theta_{\perp}$	-	32°	-

- b.  $T_{CASE} = 25$  °C, CW Current Operation

## Performance Plots



## Drawing

