642 nm Laser Diode, 80 mW

HL6366DG

Description

This 642 nm, 80 mW TO packaged laser diode is a compact light source that outputs a single transverse mode and is suited for a variety of applications such as a laser display, laser module, or a light source for optical equipment. It is packaged in a standard Ø5.6 mm TO can package and has an A pin configuration. This laser diode is compatible with our line of laser diode and TEC controllers as well as our selection of collimation solutions and TO can laser diode mounts.

Specifications

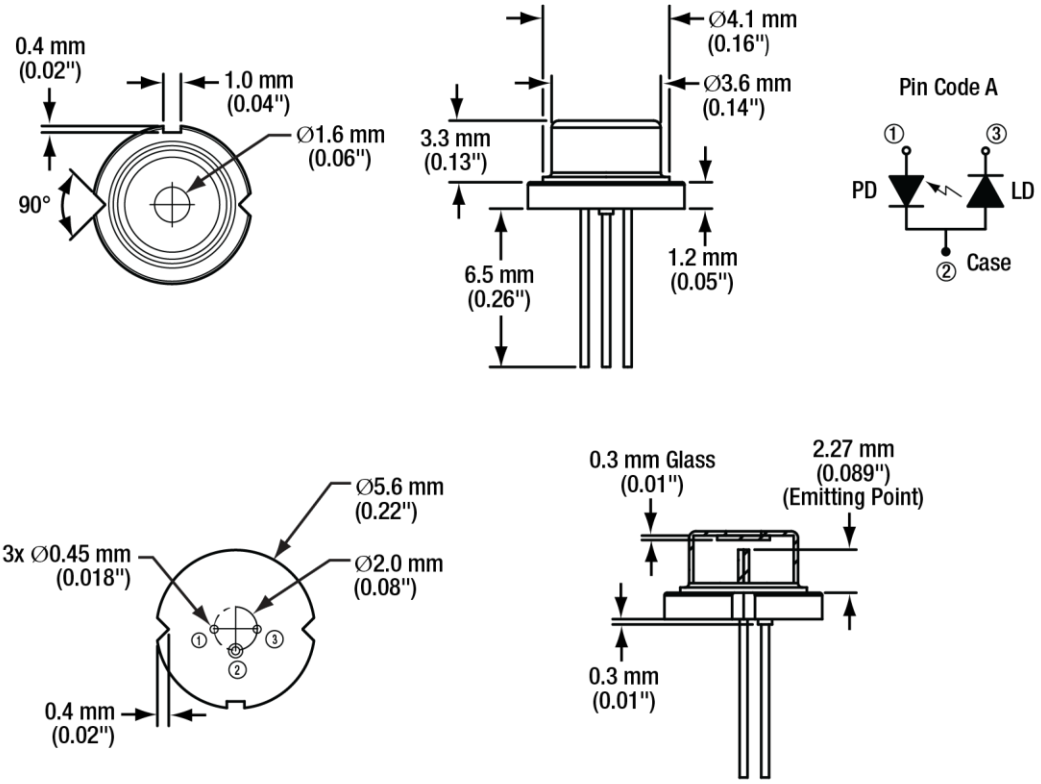
Absolute Maximum Ratings[a]	
Specification	**Maximum**
Optical Output Power, CW	90 mW
LD Reverse Voltage	2 V
PD Reverse Voltage	30 V
Operating Temperature	-10 °C to 50 °C
Storage Temperature	-40 °C to 85 °C

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

HL6366DG Specifications[a]					
		Symbol	**Min**	**Typical**	**Max**
Center Wavelength @ P_{op}		λ_o	635 nm	642 nm	645 nm
Optical Output Power, CW		P_{op}	-	80 mW	-
Threshold Current		I_{TH}	-	75 mA	95 mA
Operating Current, CW @ P_{op}		I_{op}	-	150 mA	175 mA
Operating Voltage @ P_{op}		V_{op}	-	2.5 V	3.0 V
Slope Efficiency		η	-	1.0 mW/mA	-
Beam Divergence (FWHM) @ P_{op}	**Parallel**	$\theta_{//}$	7°	10°	13°
	Perpendicular	$\theta_{\perp}$	16°	21°	24°
Monitor Current @ P_{op}		I_{PD}	0.1 mA	0.3 mA	0.5 mA

a. T_{CASE} = 25 °C if not specified.

Drawing


0.4 mm
(0.02")
1.0 mm
(0.04")
Ø1.6 mm
(0.06")
90°
Ø4.1 mm
(0.16")
Ø3.6 mm
(0.14")
3.3 mm
(0.13")
6.5 mm
(0.26")
1.2 mm
(0.05")
Pin Code A
①
③
PD
LD
②
Case
Ø5.6 mm
(0.22")
3x Ø0.45 mm
(0.018")
Ø2.0 mm
(0.08")
0.4 mm
(0.02")
0.3 mm Glass
(0.01")
2.27 mm
(0.089")
(Emitting Point)
0.3 mm
(0.01")