

QL65E7SB

InGaAlP Laser Diode

2002

◆ OVERVIEW

QL65E7SB is a MOCVD grown 650 nm band *InGaAlP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 7 mW for optoelectronic devices such as Optical Pickup & Bar Code Reader.

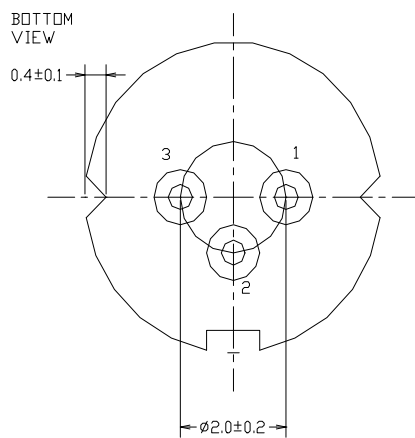
◆ APPLICATION

Optical Pick-Up
Bar Code Reader
Laser Module

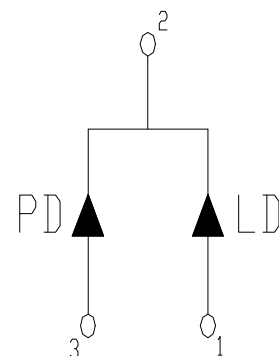
◆ FEATURES

Visible Light Output: $\lambda_p = 650 \text{ nm}$
Optical Power Output: 7 mW CW
Package Type: TO-18
Built-in Photo Diode for Monitoring Laser Output

◆ ELECTRICAL CONNECTION



Bottom View



Pin Configuration

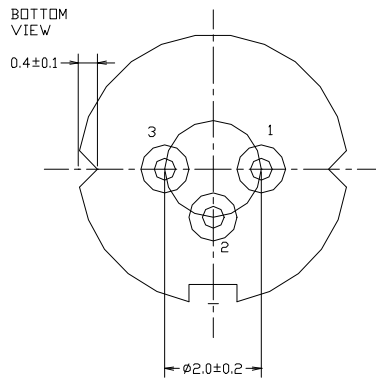
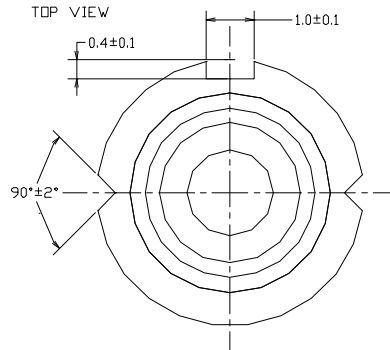
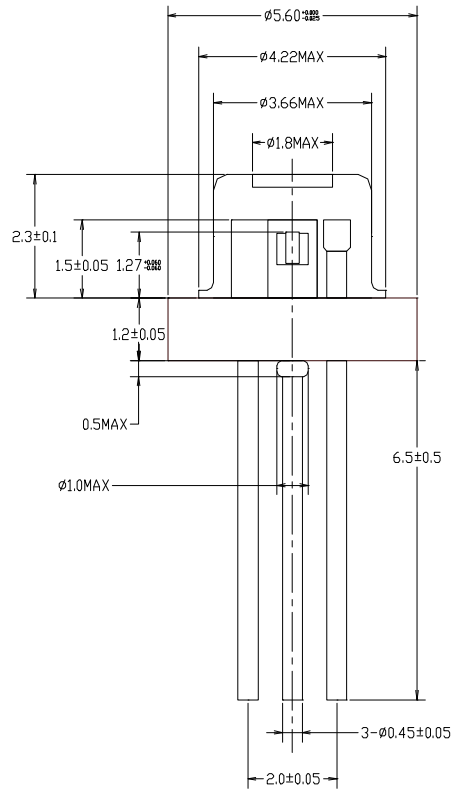
◆ **ABSOLUTE MAXIMUM RATING at Tc = 25°C**

Items	Symbols	Values	Unit
Optical Output Power	P	10	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ... +70	°C
Storage Temperature	Tstg	-40 ... +85	°C

◆ **ELECTRICAL and OPTICAL CHARACTERISTICS at Tc = 25°C**

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	7	-	mW	-
Threshold Current	Ith	-	30	45	mA	-
Operating Current	Iop	-	45	55	mA	Po = 7 mW
Operating Voltage	Vop	-	2.2	2.6	V	Po = 7 mW
Lasing Wavelength	λ_p	645	655	660	nm	Po = 7 mW
Beam Divergence	$\theta_{ }$	7	8	12	deg	Po = 7 mW
	θ_{\perp}	22	29	38	deg	Po = 7 mW
Beam Angle	$\Delta\theta_{ }$	-	-	4.5	deg	Po = 7 mW
	$\Delta\theta_{\perp}$	-	-	2.5	deg	Po = 7 mW
Monitor Current	I _m	0.1	0.2	0.5	mA	Po = 7 mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	60	μm	
Astigmatism	AS			10	μm	

◆ PACKAGE DIMENSION



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