

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL65I7S-A/B/C

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL65I7S-A/B/C

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 3 Jan. 2007

◆ OVERVIEW

QL65I7S-A/B/C is a MOCVD grown 650nm band *InGaAlP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 30mW for optoelectronic devices such as DVD-R/+R, DVD-Recorder, High Speed DVD-player and Industrial Bar Code Scanner.

◆ APPLICATION

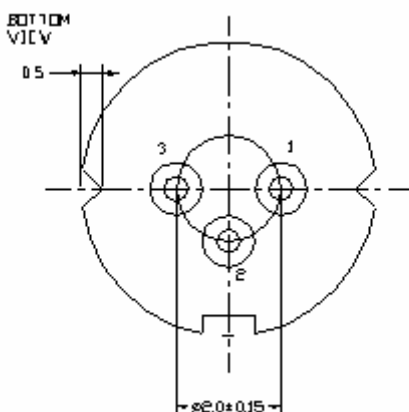
- Standard speed DVD-R/+R
- DVD-RW/+RW
- DVD-RAM

◆ FEATURES

- Visible Light Output : $\lambda_p = 658 \text{ nm}(\text{typ.})$
- Optical Power Output : 30mW CW, 50mW PULSE($T_p = 0.5\mu\text{s}$, Duty = 50%)
- Package Type : TO-18 (5.6mm ϕ)
- Built-in Photo Diode for Monitoring Laser Diode

◆ ELECTRICAL CONNECTION

Bottom View



Pin Configuration

A	LD cathode, PD anode (Fig. 1)
B	LD , PD anode (Fig. 2)
C	LD anode, PD cathode (Fig. 3)

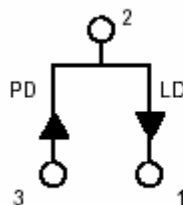


Fig. 1
QL65I7SA

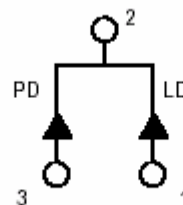


Fig. 2
QL65I7SB

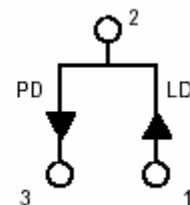


Fig. 3
QL65I7SC

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	Po(CW)	35	mW
	Po(pulse)	50	
Laser Diode Reverse Voltage	V _R	2	V
Photo Diode Reverse Voltage	V _R	30	V
Operating Temperature	Topr	-10 ~ +70	°C
Storage Temperature	Tstg	-40 ~ +85	°C

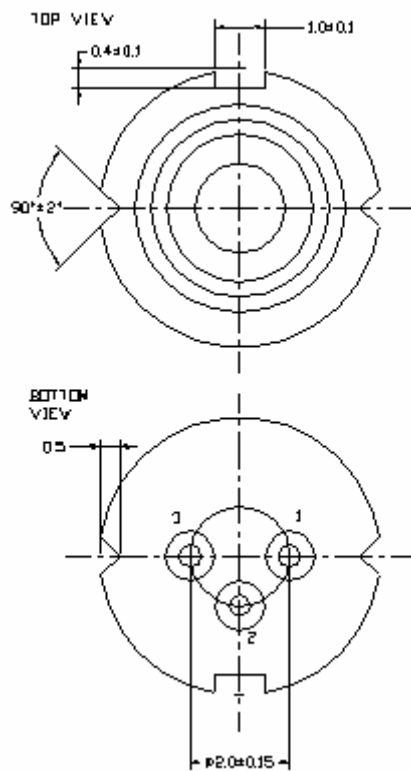
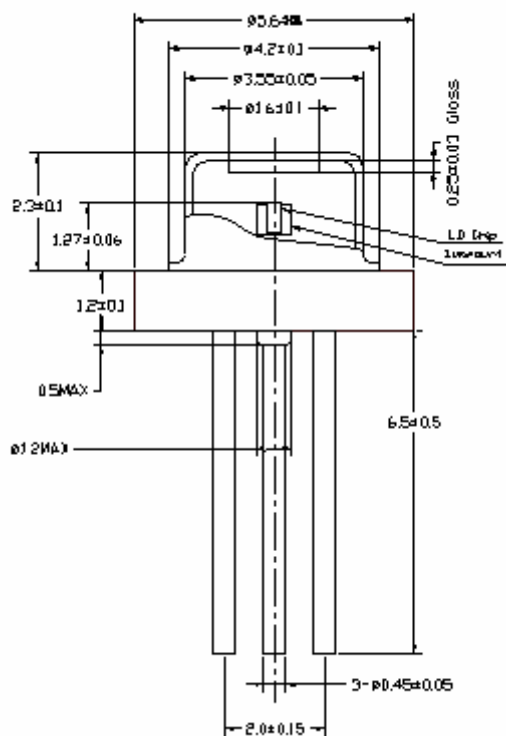
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	30	-	mW	-
Threshold Current	I _{th}	-	35	50	mA	-
Operating Current	I _{op}	-	65	100	mA	Po=30mW
Slope Efficiency	SE	0.7	1.0	1.3	mW/mA	20~30 mW
Operating Voltage	V _{op}	-	2.4	2.0	V	Po=30mW
Lasing Wavelength	λ _p		658	665	nm	Po=30mW
Beam Divergence	θ	7	9.5	13	deg	Po=30mW
	θ _⊥	18	22	26	deg	Po=30mW
Beam Angle	Δθ	-	-	±3	deg	Po=30mW
	Δθ _⊥	-	-	±3	deg	Po=30mW
Monitor Current	I _m	0.05	0.30	1.5	mA	Po=30mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	
PD DARK CURRENT	I _D				nA	V _R =10V
PD Capacitance	C _t				pF	V _{rd} =0.5V f=1MHZ

NOTICE : QL65I7S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

◆ PACKAGE DIMENSION



◆PACKING

