

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL63D4S-A/B/C

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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QL63D4S-A/B/C

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 3 2006

◆ OVERVIEW

QL63D4S-A/B/C is a MOCVD grown 635nm band *InGaAlP* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 5mW for optoelectronic devices such as Optical Leveler and Modules.

◆ APPLICATION

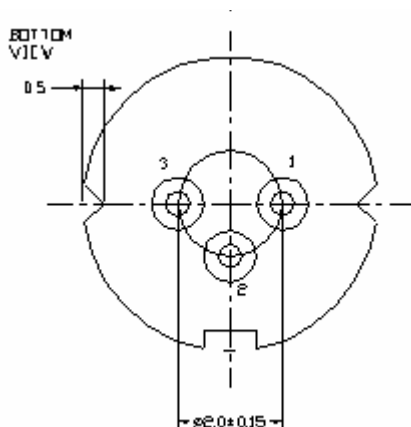
- Laser Pointer
- Bar Code Reader
- Laser Module

◆ FEATURES

- Visible Light Output : $\lambda_p = 635 \text{ nm}$
- Optical Power Output : 5mW CW
- 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)

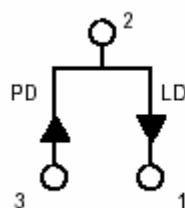


Fig. 1

QL63D4SA

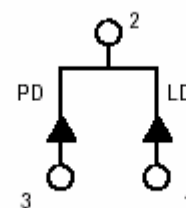


Fig. 2

QL63D4SB

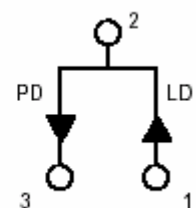


Fig. 3

QL63D4SC

◆ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	6	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +40	°C
Storage Temperature	Tstg	-40 ~ +85	°C

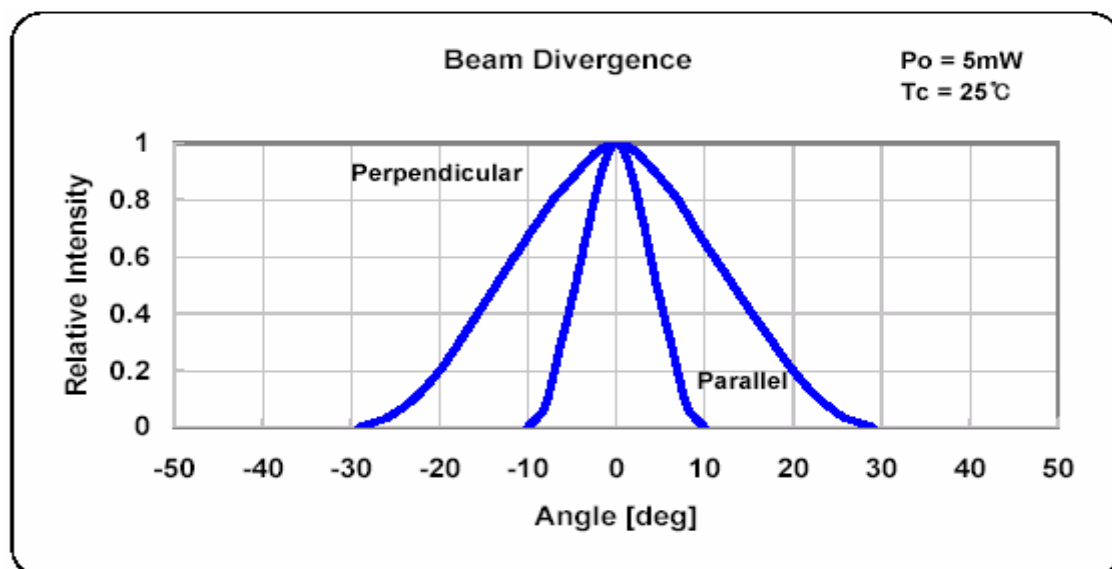
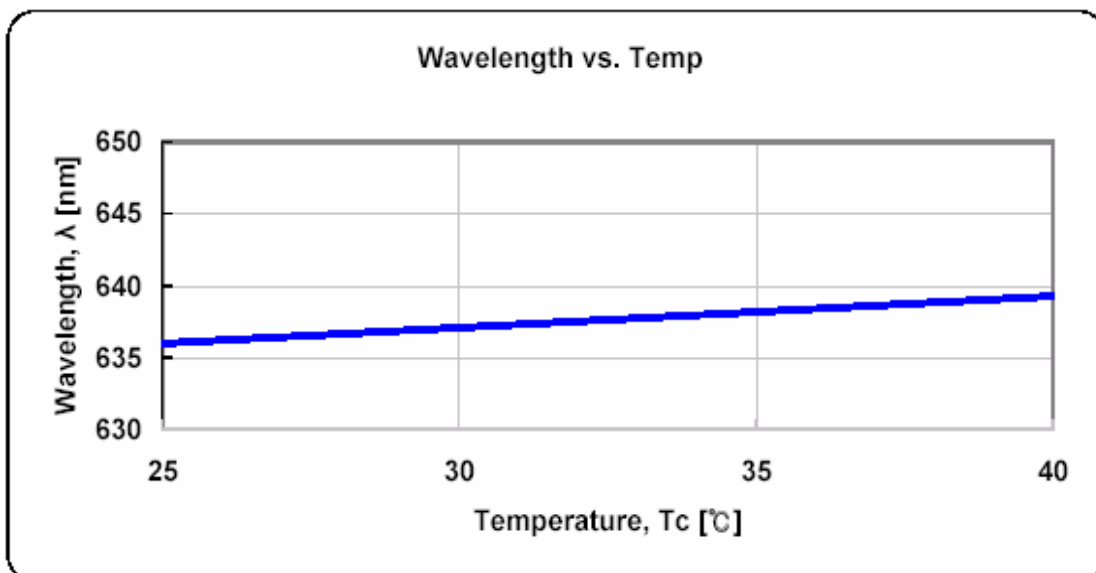
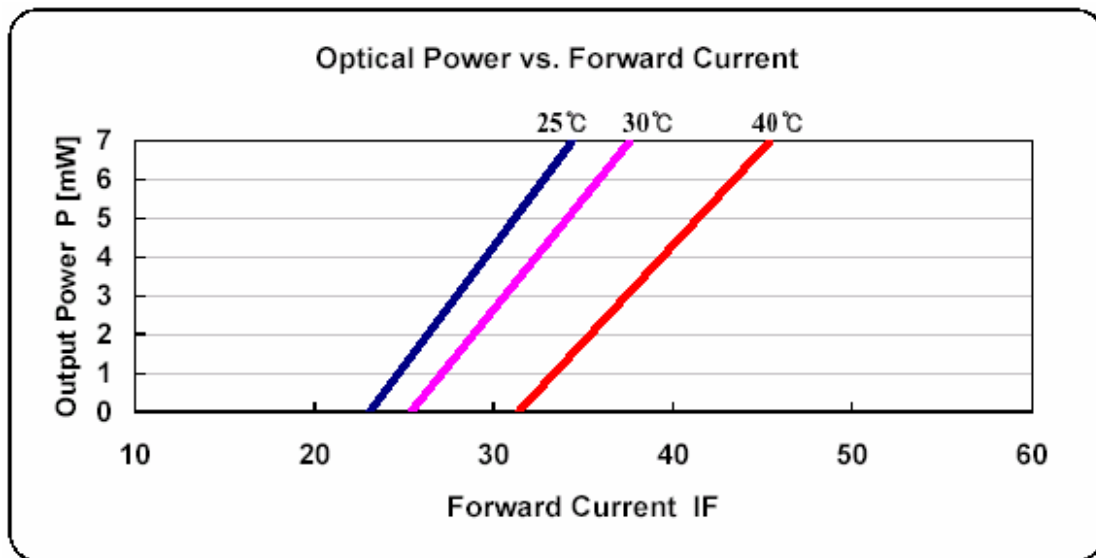
◆ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	23	35	mA	-
Operating Current	Iop	-	32	45	mA	Po=5mW
Operating Voltage	Vop	-	2.2	2.7	V	Po=5mW
Lasing Wavelength	λ_p	630	637	640	nm	Po=5mW
Beam Divergence	$\theta_{ }$	6	8	12	deg	Po=5mW
	$\theta_{\perp}$	28	34	40	deg	Po=5mW
Beam Angle	$\Delta\theta_{ }$	-	-	±2.0	deg	Po=5mW
	$\Delta\theta_{\perp}$	-	-	±3.0	deg	Po=5mW
Monitor Current	Im	0.05	0.15	0.4	mA	Po=5mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±60	μm	-

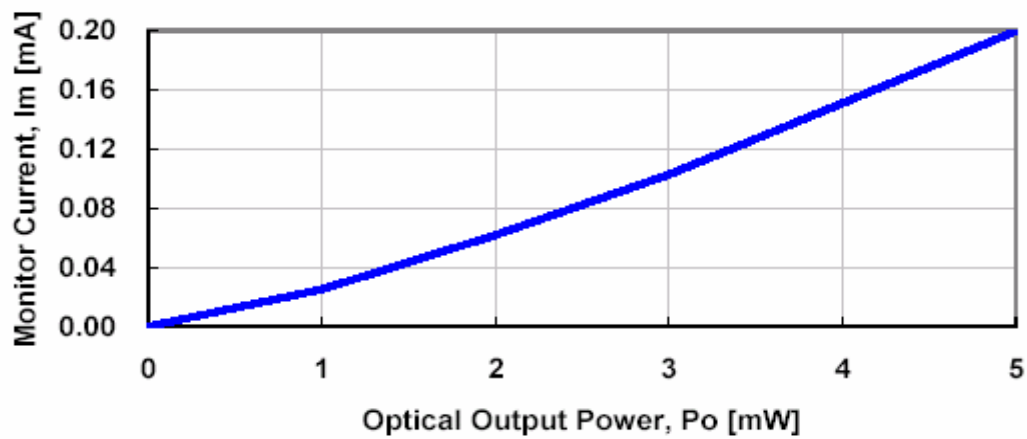
NOTICE : QL63D4S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

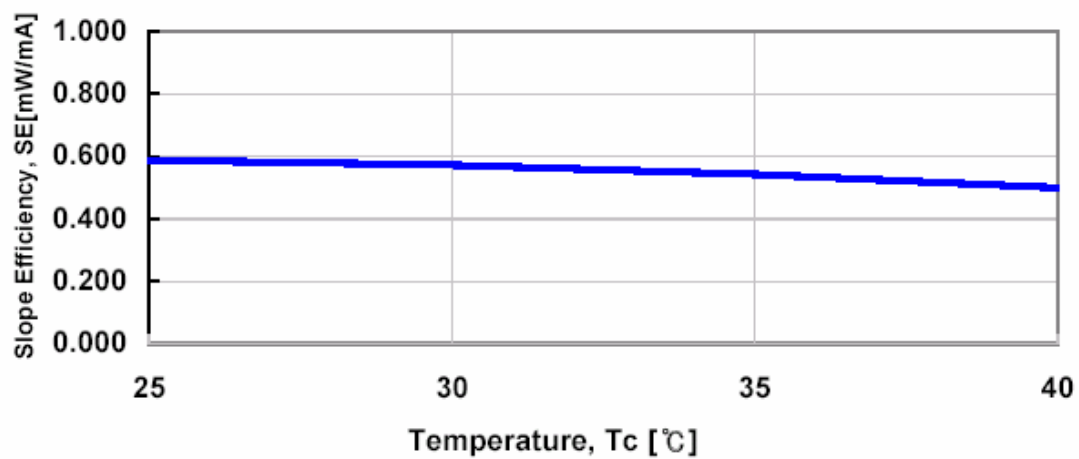
EXAMPLE of REPRESENTATIVE CHARACTERISTICS



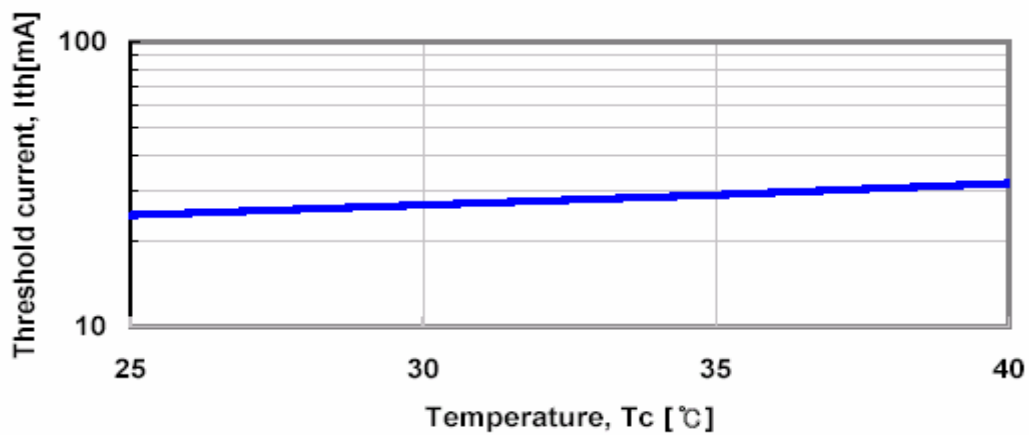
Monitor Current vs. Optical Output Power



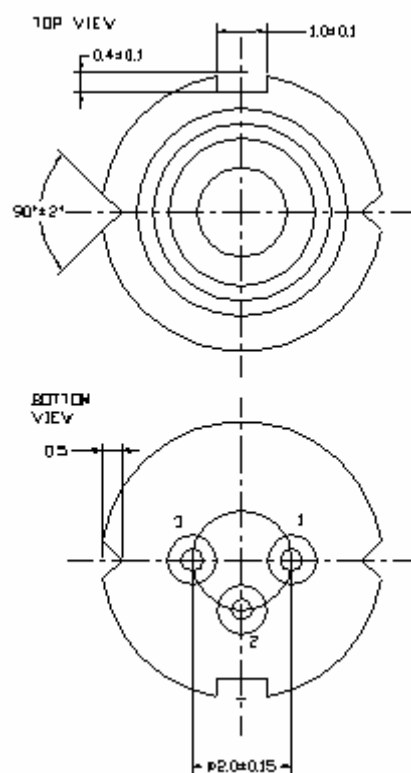
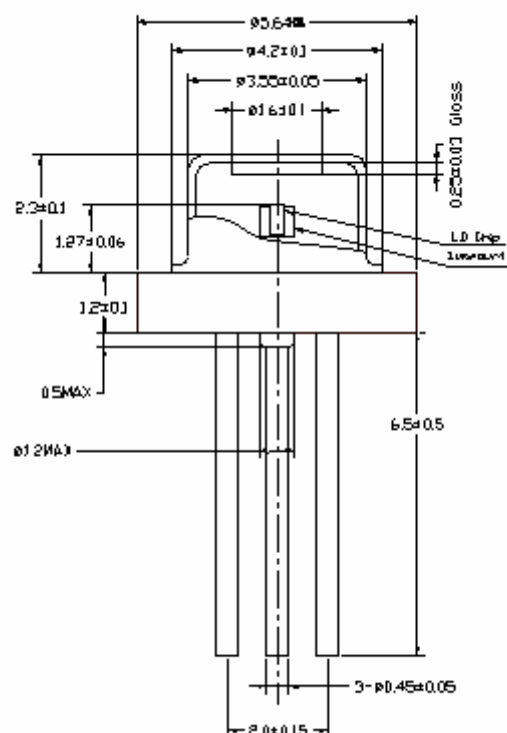
Slope Efficiency vs. Temp.



Threshold current vs. Temp.



◆ PACKAGE DIMENSION



◆PACKING

