

QSI LASER DIODE SPECIFICATIONS FOR APPROVAL

Customer :.

Model : QL65D5S-A/B/C-N

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer



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WWW.QSILaser.com

QL65D5S-A/B/C-N

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver. 4 MAR. 2011

◆ OVERVIEW

QL65D5S-A/B/C-N 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 5mW for optoelectronic devices such as Laser Pointer & Bar Code Reader.

◆ APPLICATION

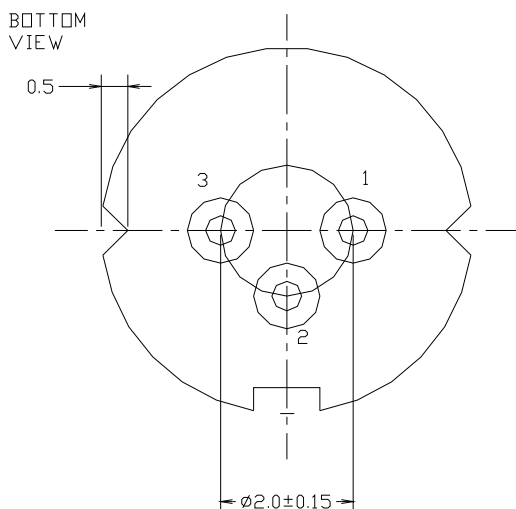
- Laser Pointer
- Optical Leveler
- Bar Code Reader

◆ FEATURES

- Visible Light Output : $\lambda_p = 650 \text{ nm}$
- Optical Power Output : 5mW CW
- Package Type : TO-18 (5.6mm ϕ , without window glass)
- 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)

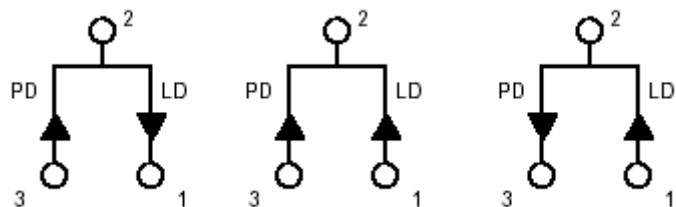


Fig. 1

QL65D5SA-N

Fig. 2

QL65D5SB-N

Fig. 3

QL65D5SC-N

◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	7	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	-10 ~ +50	°C
Storage Temperature	Tstg	-40 ~ +85	°C

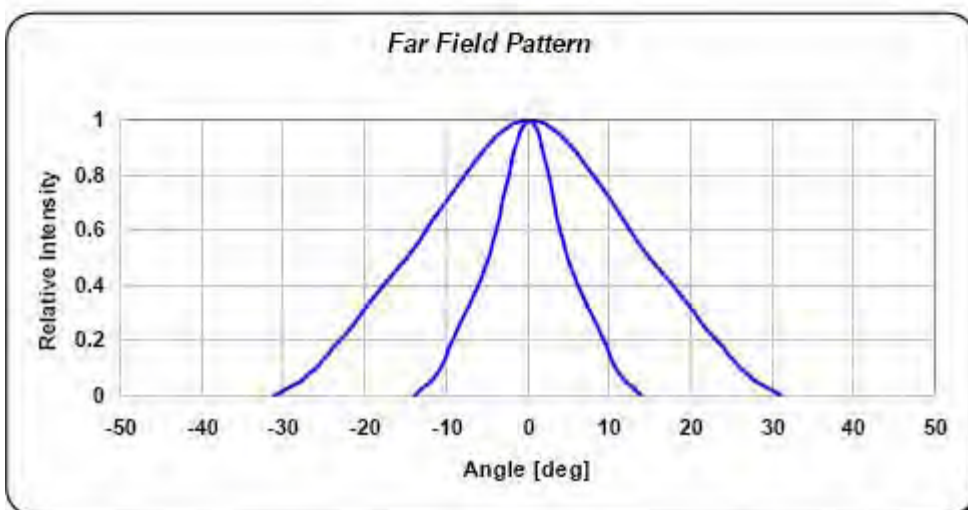
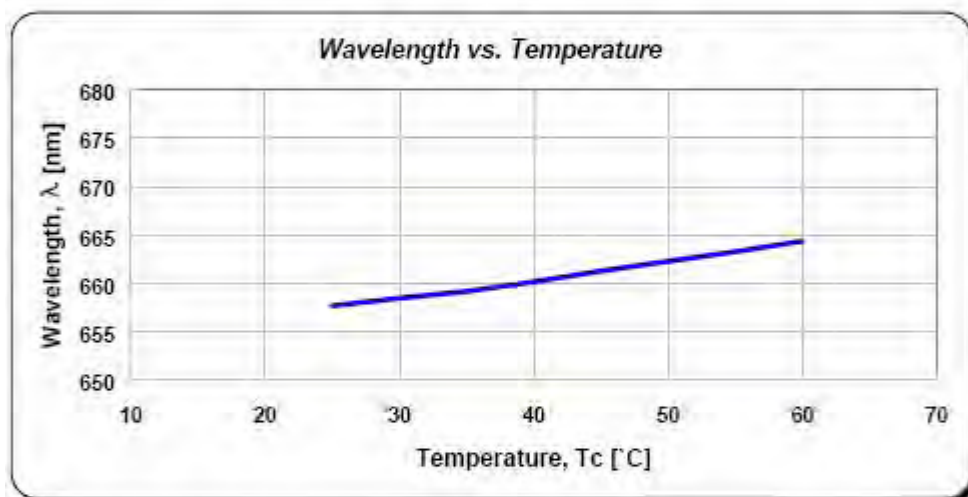
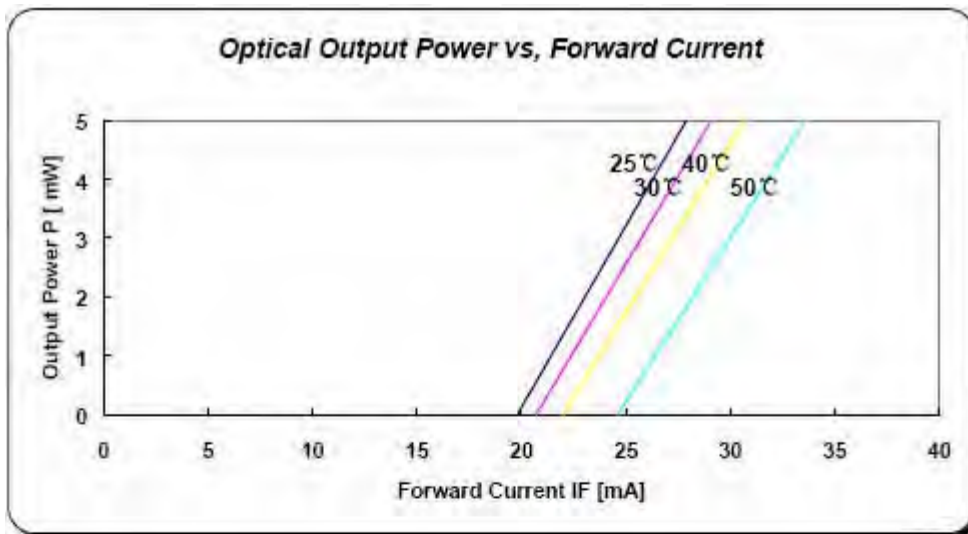
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	16	30	mA	-
Operating Current	Iop	-	22	35	mA	Po=5mW
Operating Voltage	Vop	-	2.2	2.6	V	Po=5mW
Lasing Wavelength	λ_p	650	655	660	nm	Po=5mW
Beam Divergence	$\theta_{ }$	6	9	12	deg	Po=5mW
	θ_{\perp}	22	30	38	deg	Po=5mW
Beam Angle	$\Delta\theta_{ }$	-	-	±3.0	deg	Po=5mW
	$\Delta\theta_{\perp}$	-	-	±3.0	deg	Po=5mW
Monitor Current	Im	0.1	0.2	0.5	mA	Po=5mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±60	μm	-
Life Time	MTTF	10000	-	-	hrs	Topr = 50 °C

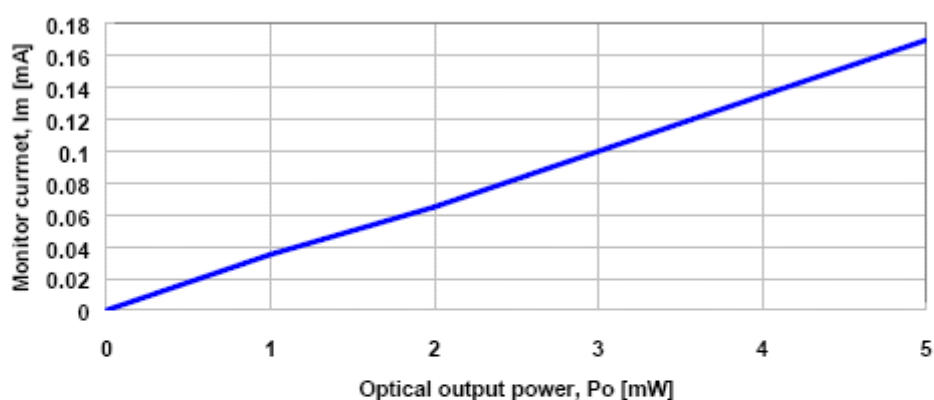
NOTICE : QL65D5S-A/B/C-N to be operated on APC

The above product specifications are subject to change without notice.

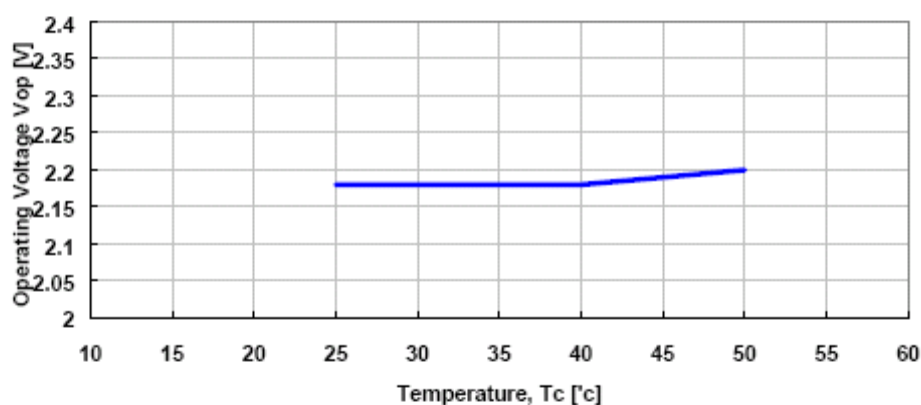
◆ EXAMPLE of REPRESENTATIVE CHARACTERISTICS



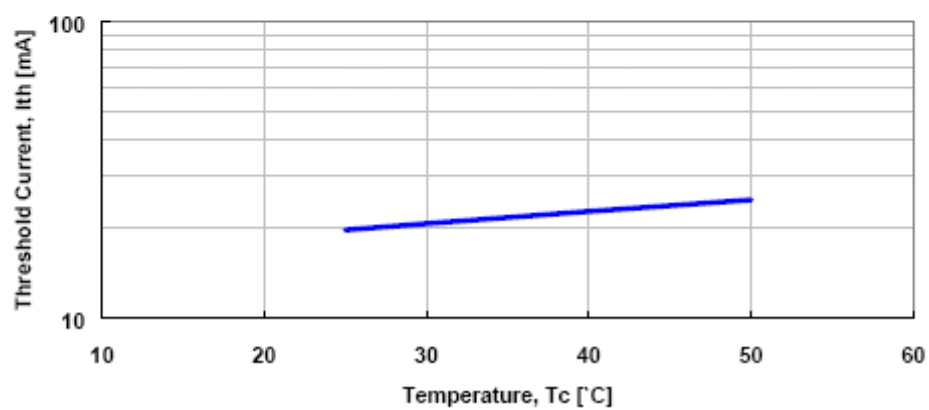
Monitor Current vs. Optical Output Power



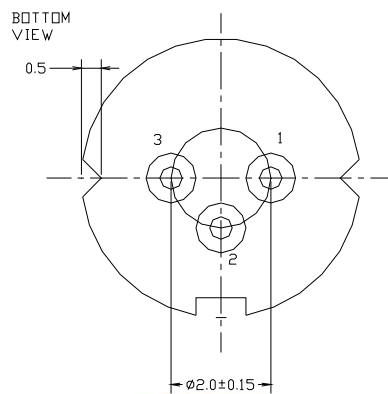
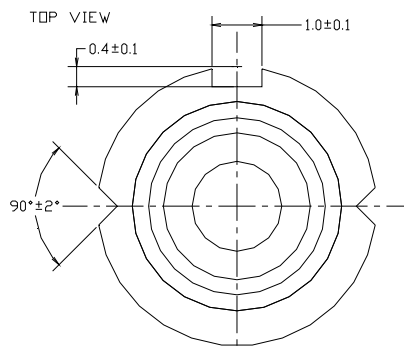
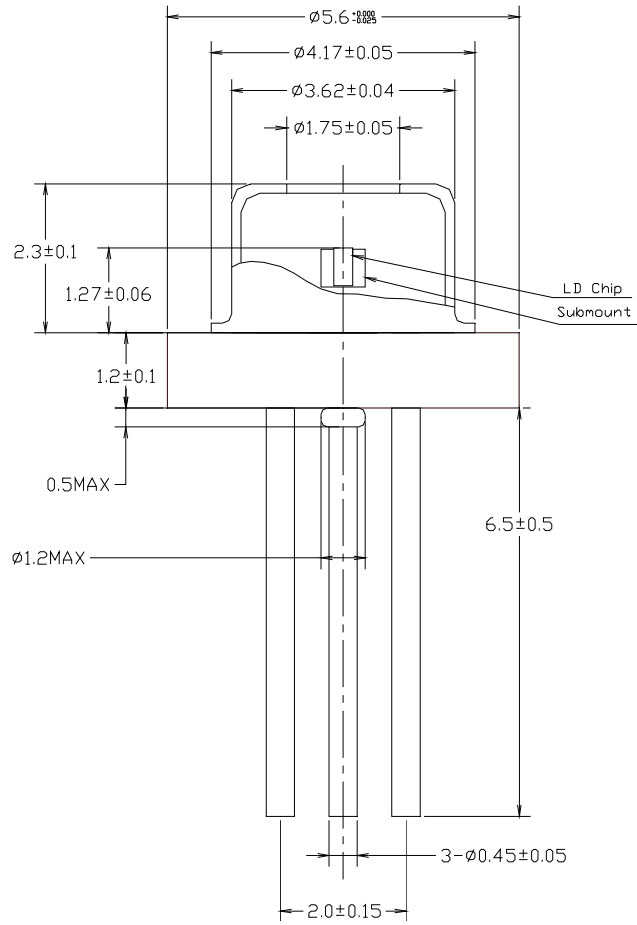
Operating Voltage vs Temp



Threshold Current vs. Temp



◆ PACKAGE DIMENSION



◆PACKING

