



## QL63K4S-A/B/C

*Tentative*

Ver. 3 2007

### ◆ OVERVIEW

QL63K4S-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 60mW for optoelectronic devices such as Optical Leveler and Modules.

### ◆ APPLICATION

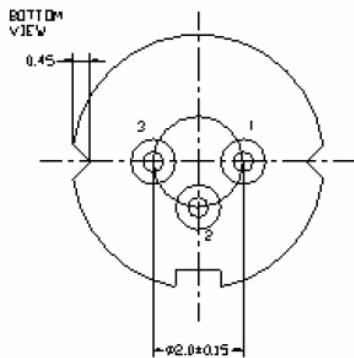
- Bar Code Scanner
- Laser Module

### ◆ FEATURES

- Visible Light Output :  $\lambda_p = 635 \text{ nm}$
- Optical Power Output : 60mW CW
- Package Type : TO-18 (5.6mm $\phi$ )
- 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)

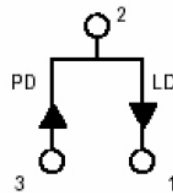


Fig. 1  
QL63K4SA

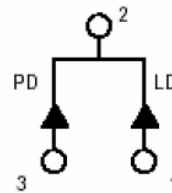


Fig. 2  
QL63K4SB

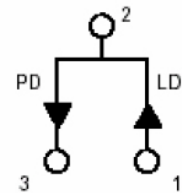


Fig. 3  
QL63K4SC



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◆ ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	60	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 <sup>1)2)</sup>

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Threshold Current	I <sub>th</sub>	-	40	-	mA	-
Operating Current	I <sub>op</sub>	-	105	-	mA	P <sub>o</sub> =60mW
Operating Voltage	V <sub>op</sub>	-	2.4	2.7	V	P <sub>o</sub> =60mW
Lasing Wavelength	λ <sub>p</sub>	633	640	645	nm	P <sub>o</sub> =60mW
Wallplug Efficiency 1	η <sub>p</sub>	18	24		%	25°C
Wallplug Efficiency 2	η <sub>p</sub>	9	17		%	40°C
Beam Divergence <sup>3)</sup>	θ <sub>  </sub>	7	11	15	deg	P <sub>o</sub> =60mW
	θ <sub>⊥</sub>	22	28	33	deg	P <sub>o</sub> =60mW
Beam Angle	Δθ <sub>  </sub>	-	-	±2.0	deg	P <sub>o</sub> =60mW
	Δθ <sub>⊥</sub>	-	-	±3.0	deg	P <sub>o</sub> =60mW
Monitor Current	I <sub>m</sub>	0.01	0.3	0.9	mA	P <sub>o</sub> =60mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	-

**NOTICE : QL63K4S-A/B/C-L Series to be operated on APC**

The above product specifications are subject to change without notice.



## ◆ PACKAGE DIMENSION

