ROITHNER LASERTECHNIK
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QL78D6S-A/B/C

AlGaAs Laser Diode

Ver.0 JAN 2004

◆ OVERVIEW

QL78D6S-A/B/C is a MOCVD grown 780nm band *AlGaAs* laser diode with quantum well structure. It's an attractive light source, with a typical light output power of 5mW for industrial optical module and sensor applications.

◆ APPLICATION

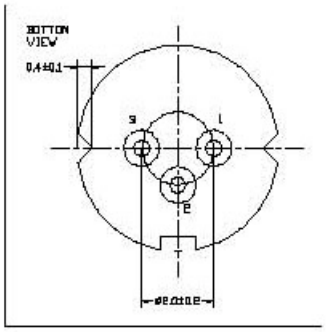
- CD-P

◆ FEATURES

- Lasing Wavelength : $\lambda p = 780nm$
- Optical Power Output : 5㎽ CW
- Package Type : TO-18 (5.6mmΦ)
- Built-in Photo Diode for Monitoring Laser Output

◆ 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)

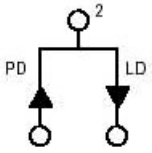


Fig. 1
QL78D6SA

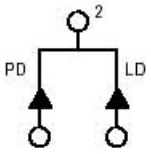


Fig. 2
QL78D6SB

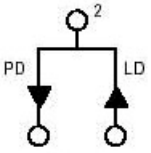


Fig. 3
QL78D6SC

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◆ ABSOLUTE MAXIMUM RATING

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 ~ +60	℃
Storage Temperature	Tstg	-40 ~ +80	℃

◆ ELECTRICAL and OPTICAL CHARACTERISTICS

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	-	20	30	mA	-
Operating Current	Iop	-	30	40	mA	Po=5mW
Operating Voltage	Vop	-	1.9	2.3	V	Po=5mW
Slope Efficiency	SE	0.3	0.5	0.7	mW/mA	Po=3 ~ 5mW
Lasing Wavelength	λp	770	785	800	nm	Po=5mW
Beam Divergence	θ ∥	8	11	15	deg	Po=5mW
	θ ⊥	25	34	40	deg	Po=5mW
Beam Angle	Δθ ∥	-	-	±1.5	deg	Po=5mW
	Δθ ⊥	-	-	±2.5	deg	Po=5mW
Monitor Current	Im	0.1	0.3	0.6	mA	Po=5mW
Optical Distance	ΔX,ΔY,ΔZ	-	-	±60	μm	Po=5mW
Astigmatism	As	-	-	15	μm	Po=5mW

NOTICE : QL78D6S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

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◆ PACKAGE DIMENSION