ROITHNER LASERTECHNIK
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QL78F6S-A/B/C

AlGaAs Laser Diode

Ver. 0 2004

♦OVERVIEW

QL78F6S-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 10mW for industrial optical module and sensor application

♦APPLICATION

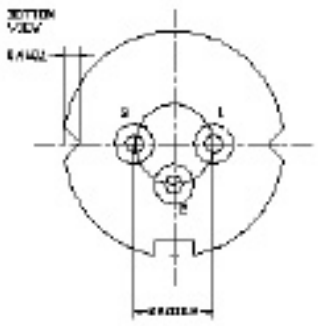
- Sensor
- Industrial optical module

♦FEATURES

- Visible Light Output : λp = 780 nm
- Optical Power Output : 10mW CW
- Package Type : TO-18 (5.6mmφ)
- Built-in Photo Diode for Monitoring Laser Diode

♦ELECTRICAL CONNECTION

Bottom View



Pin Configuration

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

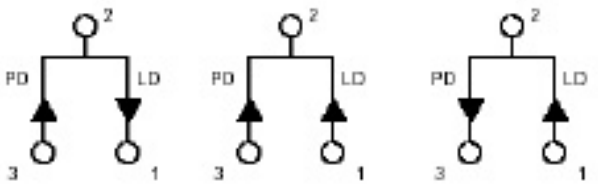


Fig. 1 QL78F6SA

Fig. 2 QL78F6SB

Fig. 3 QL78F6SC

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♦ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	12	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	−10 ~ +60	°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	-	10	-	mW	-
Threshold Current	Ith	8	12	18	mA	-
Operating Current	Iop	-	22	40	mA	Po=10mW
Differential efficiency	η	0.55	0.75	0.95	mW/mA	5mW/ I(10mW)-I(5mW)
Operating Voltage	Vop	1.5	1.8	2.4	V	Po=10mW
Lasing Wavelength	λp	775	788	800	nm	Po=10mW
Beam Divergence	$\theta_{\parallel}$	6	8	11	deg	Po=10mW
	$\theta_{\perp}$	25	31	35	deg	Po=10mW
Beam Angle	$\Delta\theta_{\parallel}$	-	-	±2.0	deg	Po=10mW
	$\Delta\theta_{\perp}$	-	-	±3.0	deg	Po=10mW
Monitor Current	Im	0.5	0.7	1.5	mA	Po=10mW
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	±50	µm	Po=10mW
Astigmatism	As			10	µm	Po=10mW

NOTICE : QL78F6S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

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♦PACKAGE DIMENSION

