

◆ OVERVIEW

QL85F6SA is a MOCVD grown 850nm band *A/GaAs* 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 applications.

◆ APPLICATION

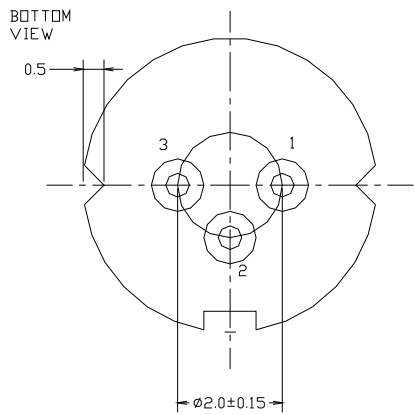
- Sensor
- Industrial Optical Module

◆ FEATURES

- Visible Light Output : $\lambda_p = 850\text{ nm}$
- Optical Power Output : 10mW 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)

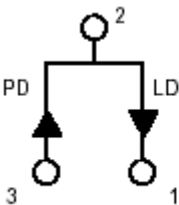


Fig. 1

QL85F6SA

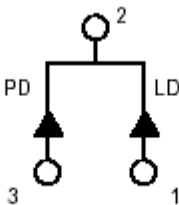


Fig. 2

QL85F6SB

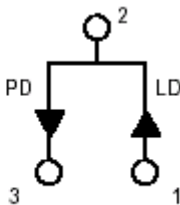


Fig. 3

QL85F6SC

◆ 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

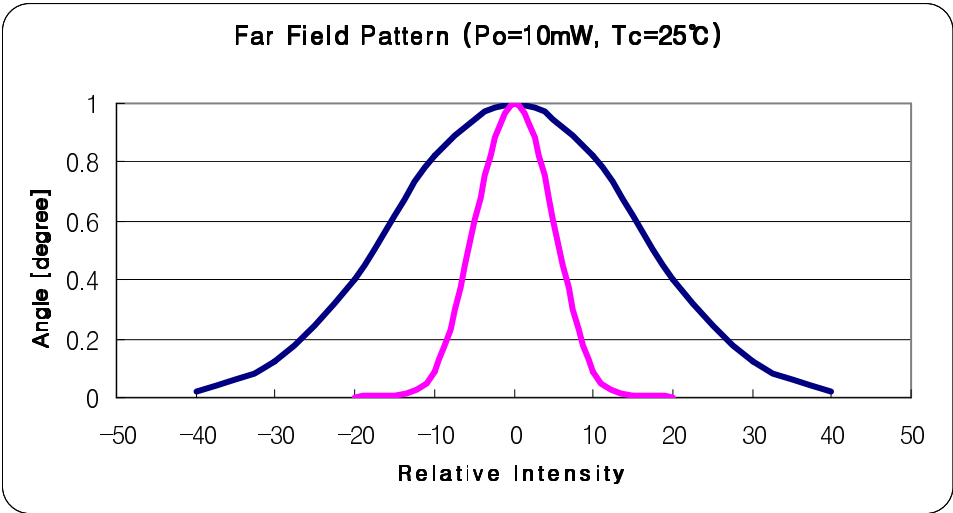
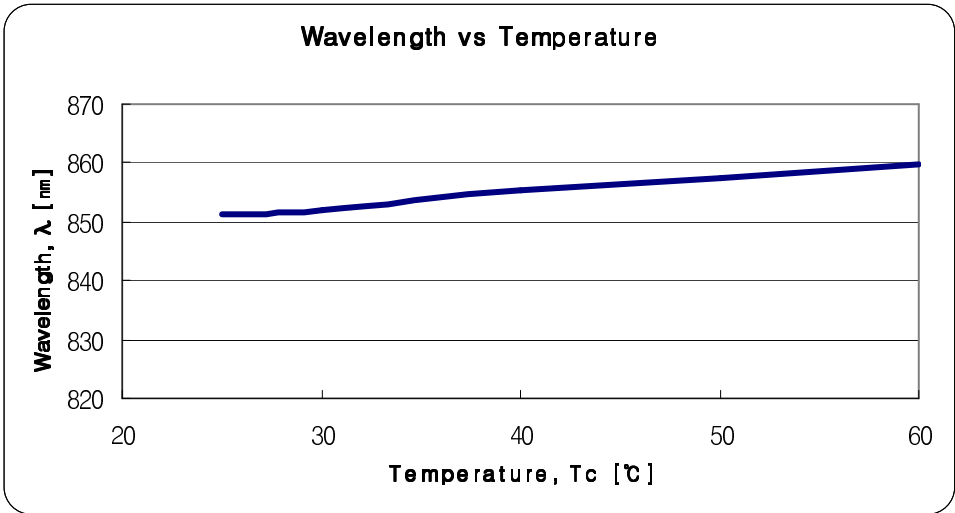
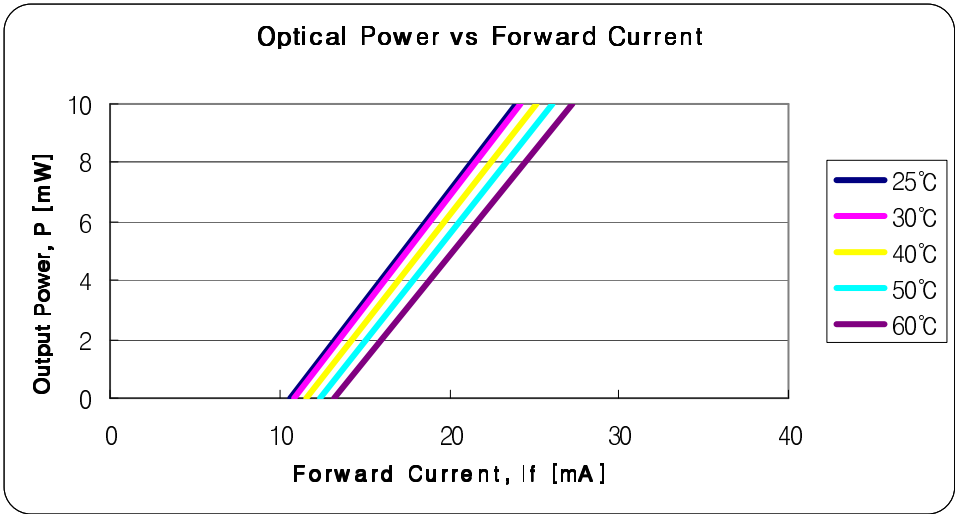
◆ ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	10	-	mW	-
Threshold Current	Ith	5	10	20	mA	-
Operating Current	Iop	15	25	35	mA	Po=10mW
Slope Efficiency	SE	0.4	0.7	0.9	mW/mA	5~10 mW
Operating Voltage	Vop	-	1.9	2.5	V	Po=10mW
Lasing Wavelength	λ_p	845	850	855	nm	Po=10mW
Beam Divergence	$\theta_{ }$	7	9	12	deg	Po=10mW
	$\theta_{\perp}$	25	32	40	deg	Po=10mW
Beam Angle	$\Delta\theta_{ }$	-	-	± 2	deg	Po=10mW
	$\Delta\theta_{\perp}$	-	-	± 3	deg	Po=10mW
Monitor Current	I _m	0.1	0.3	0.5	mA	Po=10mW
Astigmatism	As			15	μm	
Optical Distance	$\Delta X, \Delta Y, \Delta Z$	-	-	± 60	μm	

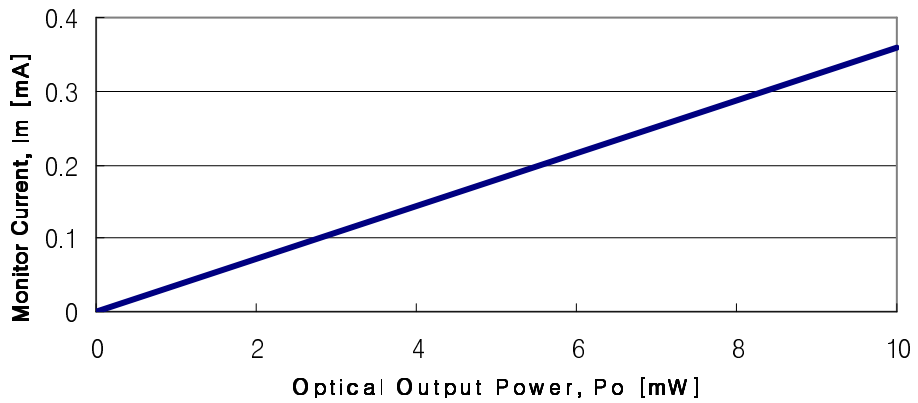
NOTICE : QL85F6S-A/B/C to be operated on APC

The above product specifications are subject to change without notice.

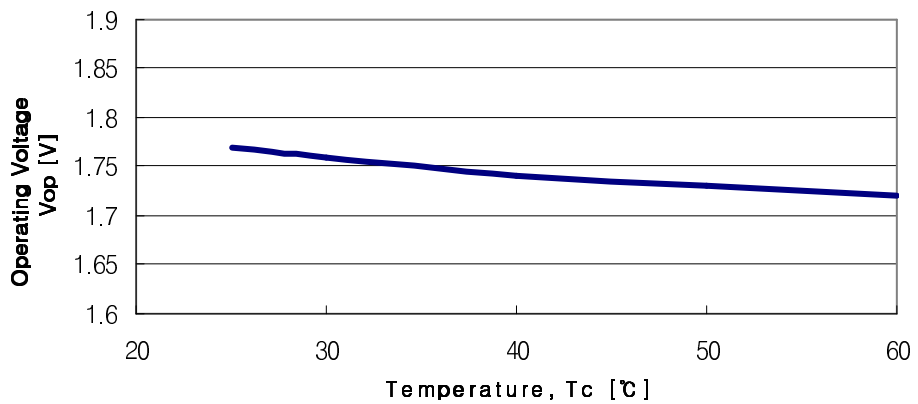
EXAMPLE of REPRESENTATIVE CHARACTERISTICS



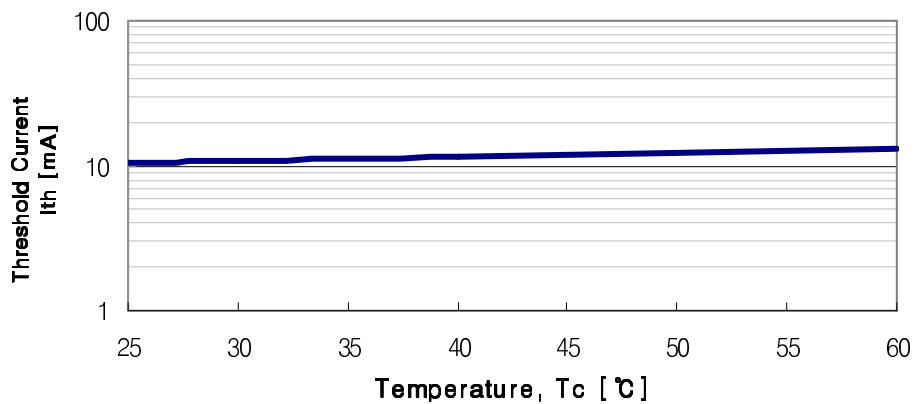
Monitor Current vs Optical Power



Operating Voltage vs Temperature



Threshold Current vs Temperature



◆ PACKAGE DIMENSION

