LD85D6S-A/B/C

AlGaAs Laser Diode

Quantum Semiconductor International Co., Ltd.

Ver.2 APR.2005

♦OVERVIEW

LD85D6SA is a MOCVD grown 850nm 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

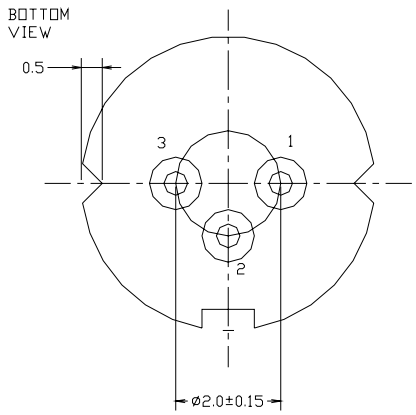
- Sensor
- Industrial Optical Module

♦FEATURES

- Visible Light Output : λp = 850 nm
- Optical Power Output : 5mW CW
- Package Type : TO-18 (5.6mmϕ)
- 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)

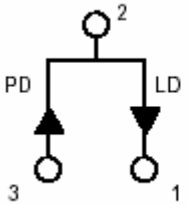


Fig. 1
LD85D6SA

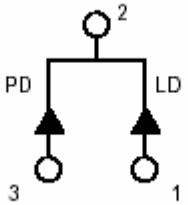


Fig. 2
LD85D6SB

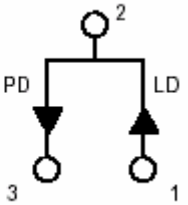


Fig. 3
LD85D6SC

♦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 ~ +60	°C
Storage Temperature	Tstg	–40 ~ +85	°C

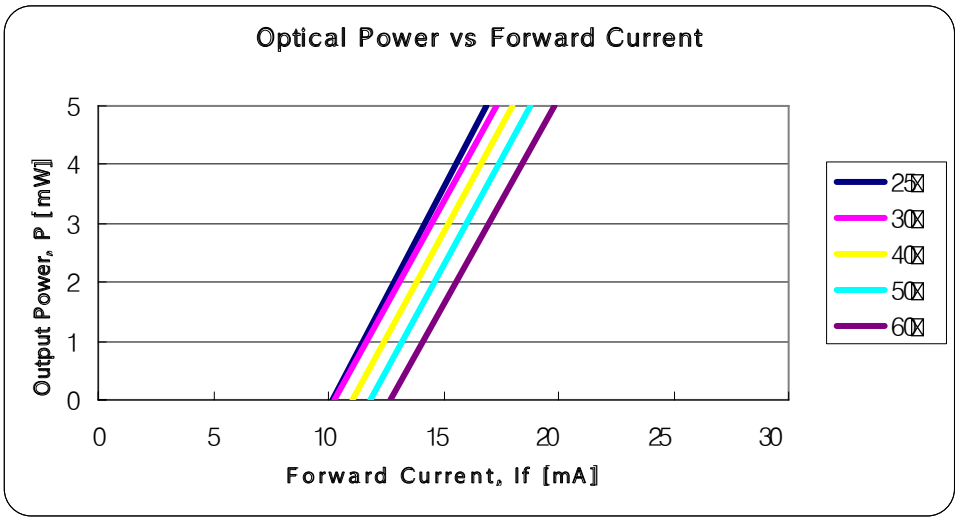
♦ELECTRICAL and OPTICAL CHARACTERISTICS at Tc=25°C

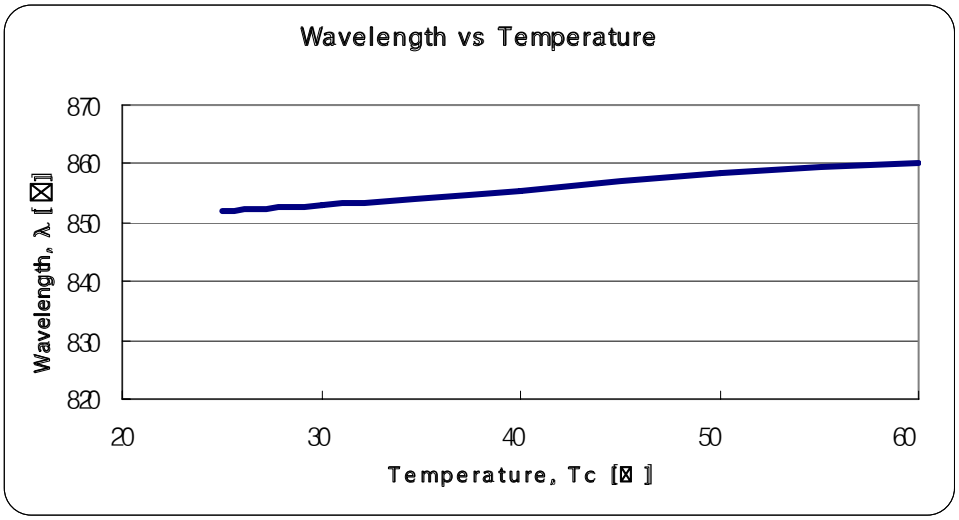
Items	Symbols	Min.	Typ.	Max.	Unit	Condition
Optical Output Power	Po	-	5	-	mW	-
Threshold Current	Ith	5	10	20	mA	-
Operating Current	Iop	15	20	30	mA	Po=5mW
Slope Efficiency	SE	0.4	0.7	0.9	mW/mA	2~5 mW
Operating Voltage	Vop	-	1.9	2.5	V	Po=5mW
Lasing Wavelength	λp	845	850	855	nm	Po=5mW
Beam Divergence	θ ∥	7	9	12	deg	Po=5mW
	θ ⊥	25	32	40	deg	Po=5mW
Beam Angle	Δθ∥	-	-	±2	deg	Po=5mW
	Δθ ⊥	-	-	±3	deg	Po=5mW
Monitor Current	Im	0.2	0.4	0.6	mA	Po=5mW
Astigmatism	As			15	μm	
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	

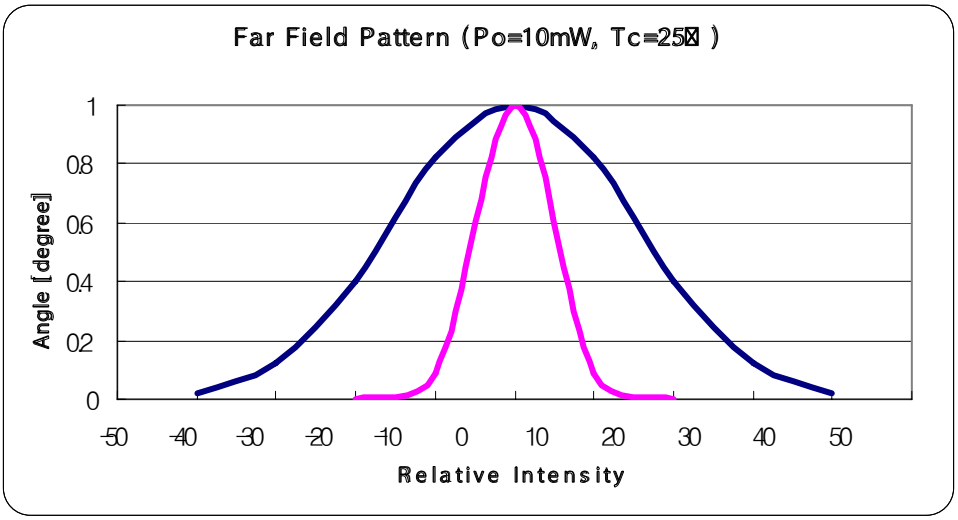
NOTICE : LD85D6S-A/B/C to be operated on APC

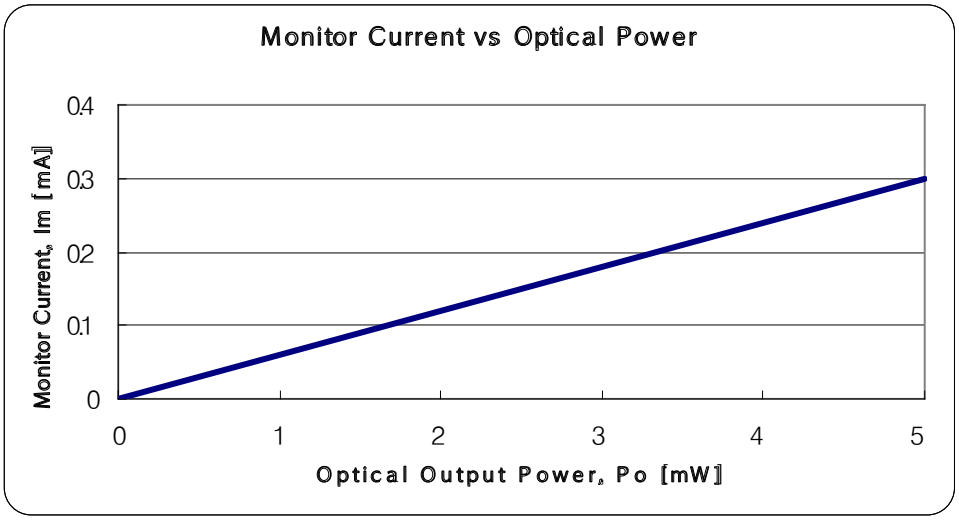
The above product specifications are subject to change without notice.

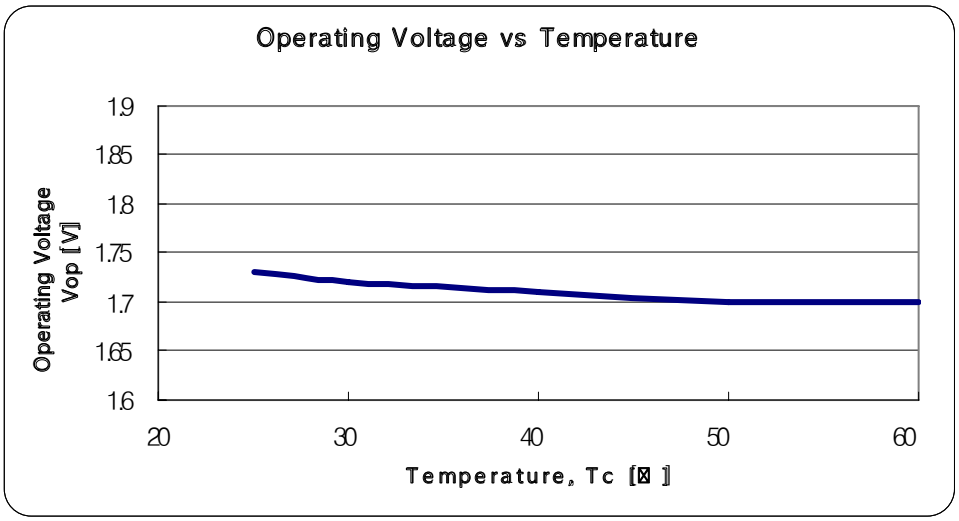
EXAMPLE of REPRESENTITIVE CHARACTERISTICS

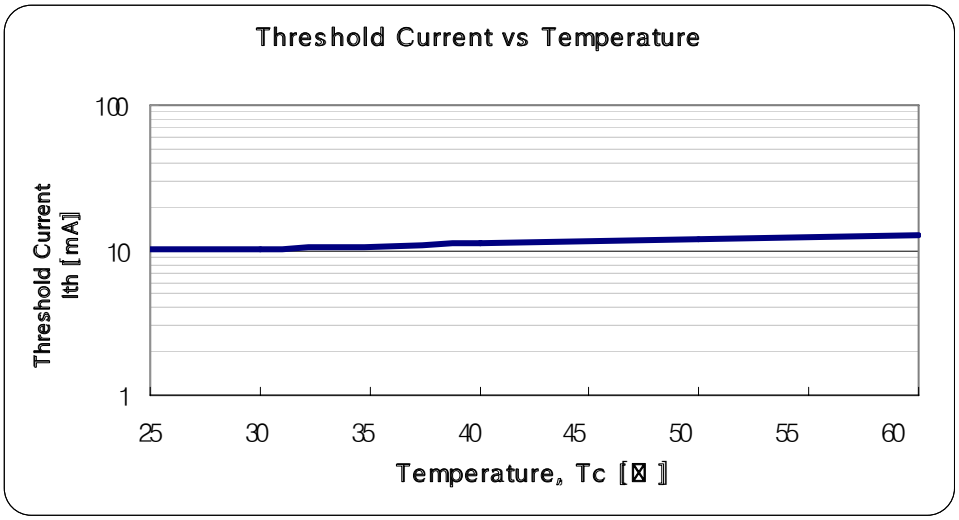




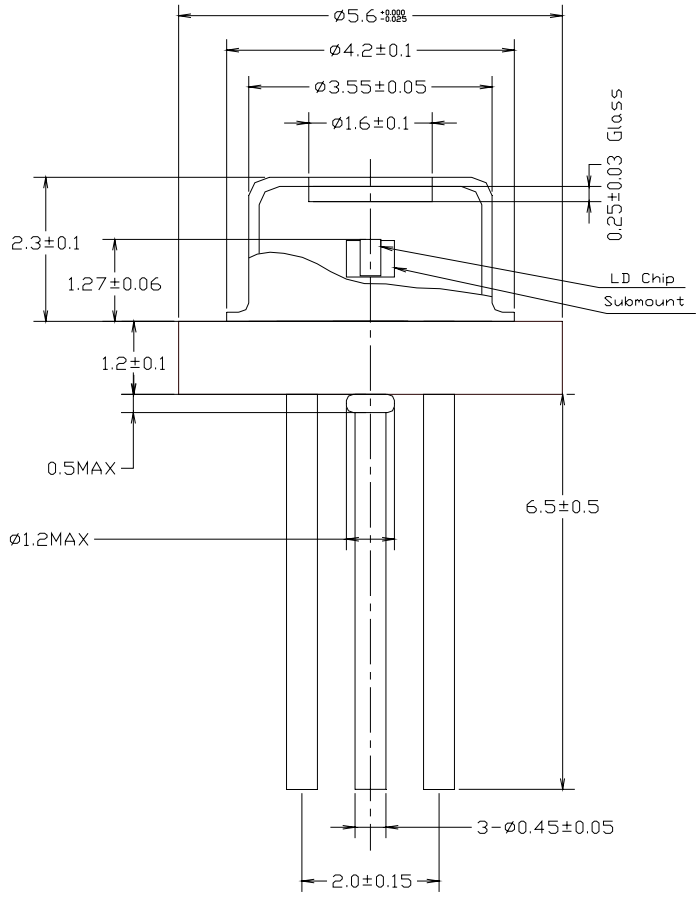


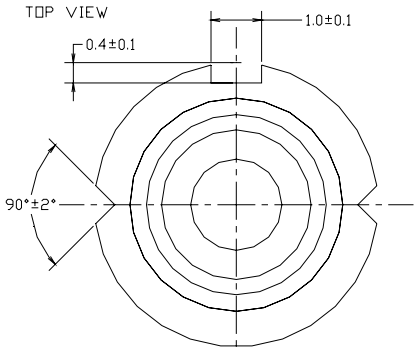

Monitor Current vs Optical Power
Monitor Current, Im [mA]
0.4
0.3
0.2
0.1
0
0
1
2
3
4
5
Optical Output Power, Po [mW]

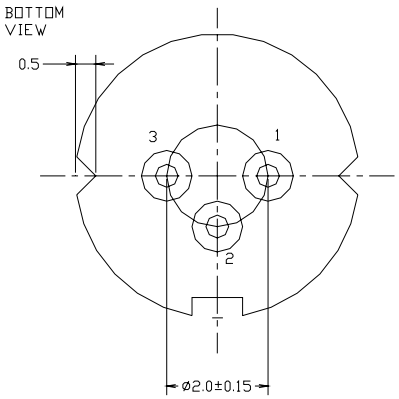

Operating Voltage vs Temperature
Operating Voltage
Vop [V]
1.9
1.85
1.8
1.75
1.7
1.65
1.6
20
30
40
50
60
Temperature, Tc [℃]


Threshold Current vs Temperature
Threshold Current
Ith [mA]
100
10
1
25
30
35
40
45
50
55
60
Temperature, Tc [℃]

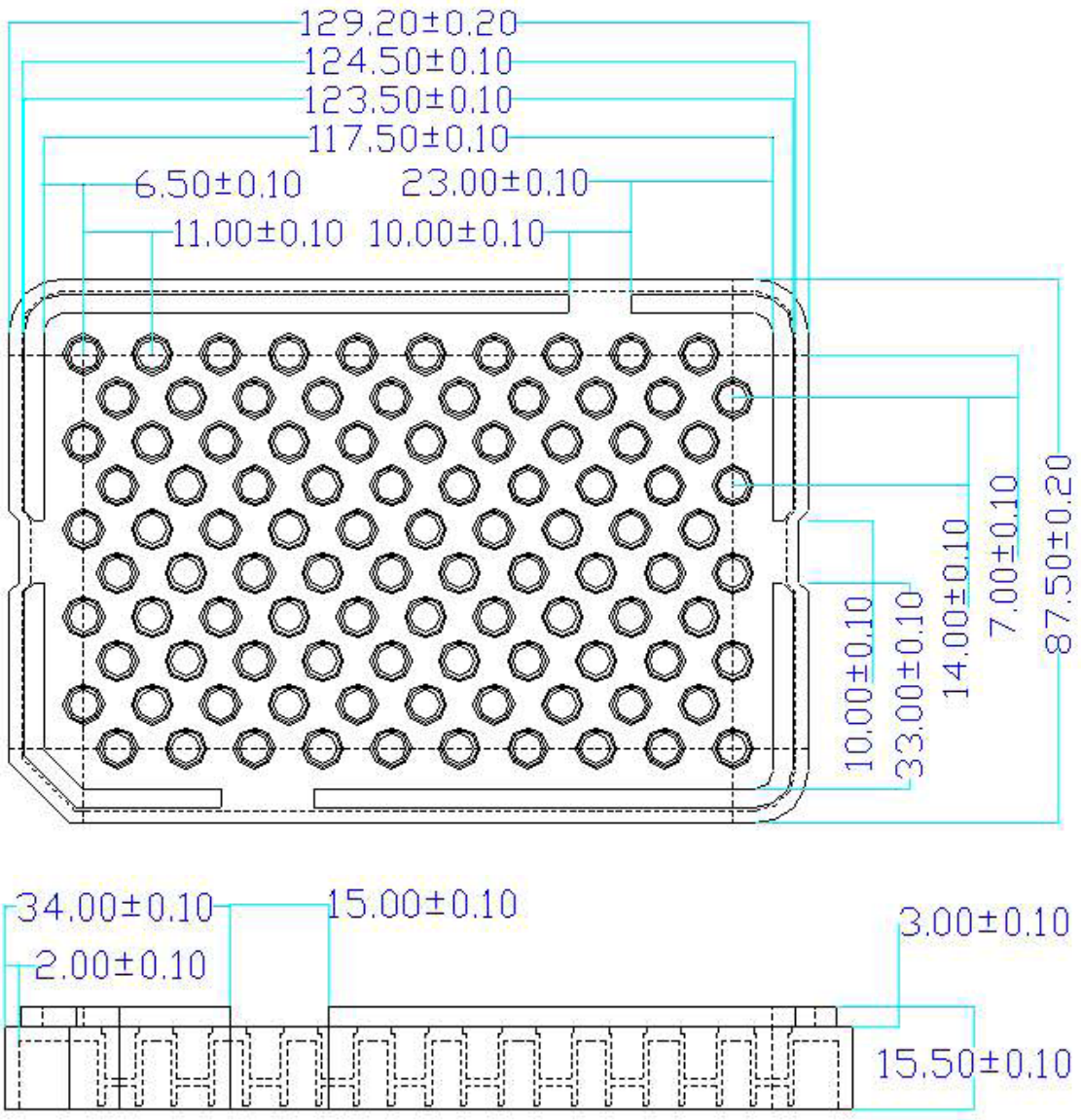
♦PACKAGE DIMENSION







♦PACKING



First Sensor

International Sales

First Sensor AG
Peter-Behrens-Str. 15
12459 Berlin
Germany
T +49 30 6399 2399
F +49 30 6399 23-752
sales.opto@first-sensor.com
www.first-sensor.com

US Sales

First Sensor Inc.
5700 Corsa Avenue #105
Westlake Village, CA 91362
USA
T +1 818 7063 400
F +1 818 8897 053
sales.us@first-sensor.com
www.first-sensor.com

QSI Co., Ltd.