QSI LASER DIODE

SPECIFICATIONS FOR APPROVAL

Customer :

Model : QL63D5SA

Signature of Approval

Approved by _____

Checked by _____

Issued by _____

Approval by Customer

_____

QSI Co., Ltd.

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QL63D5SA

InGaAlP Laser Diode

Quantum Semiconductor International Co., Ltd.

2003. Rev 0

♦OVERVIEW

QL63D5SA 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 5mW for optoelectronic devices such as Optical Leveler and Modules.

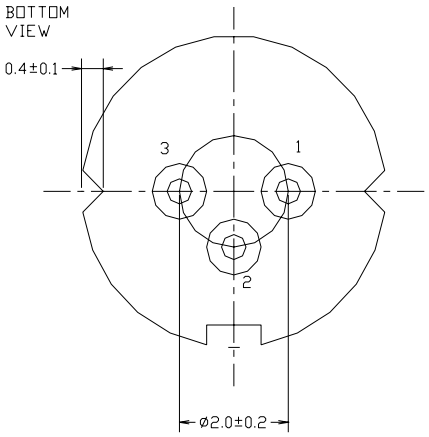
♦APPLICATION

- Laser Pointer
- Optical Leveler
- Laser Module

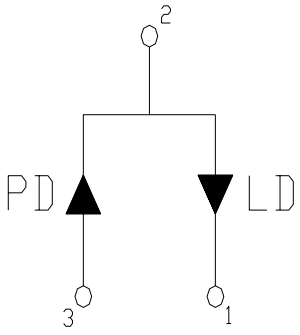
♦FEATURES

- Visible Light Output : λp = 635 nm (TM Mode)
- 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

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♦ABSOLUTE MAXIMUM RATING at Tc=25°C

Items	Symbols	Values	Unit
Optical Output Power	P	5	mW
Laser Diode Reverse Voltage	V	2	V
Photo Diode Reverse Voltage	V	30	V
Operating Temperature	Topr	–10 ~ +50	°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	-	35	40	mA	-
Operating Current	Iop	-	40	50	mA	Po=5mW
Operating Voltage	Vop	-	2.2	2.7	V	Po=5mW
Lasing Wavelength	λp	630	637	640	nm	Po=5mW
Beam Divergence	θ∥	6	8	12	deg	Po=5mW
	θ⊥	28	35	40	deg	Po=5mW
Beam Angle	Δθ∥	-	-	±1.5	deg	Po=5mW
	Δθ⊥	-	-	±2.5	deg	Po=5mW
Monitor Current	Im	0.1	0.15	0.5	mA	Po=5mW
Optical Distance	ΔX, ΔY, ΔZ	-	-	±60	μm	-

NOTICE : QL63D5SA to be operated on APC circuit.

The above product specifications are subject to change without notice.

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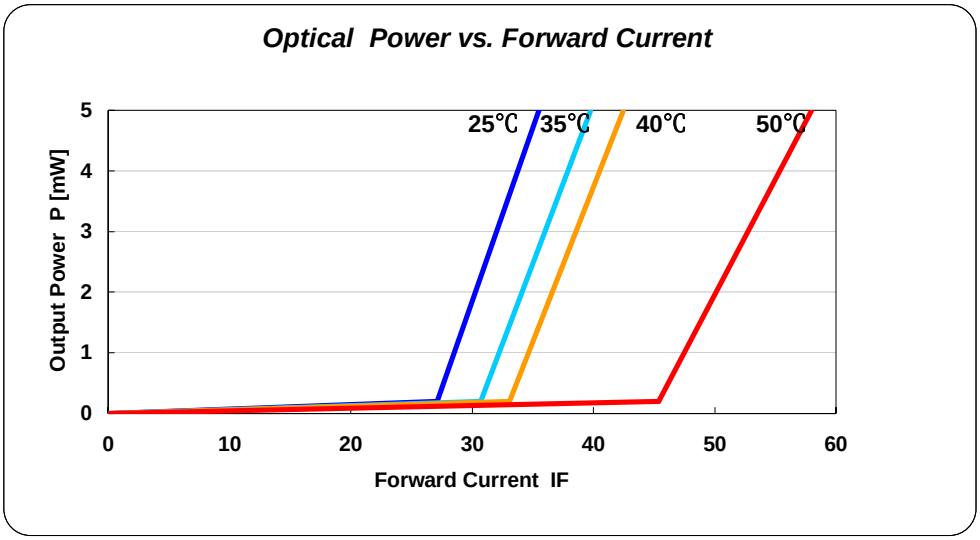
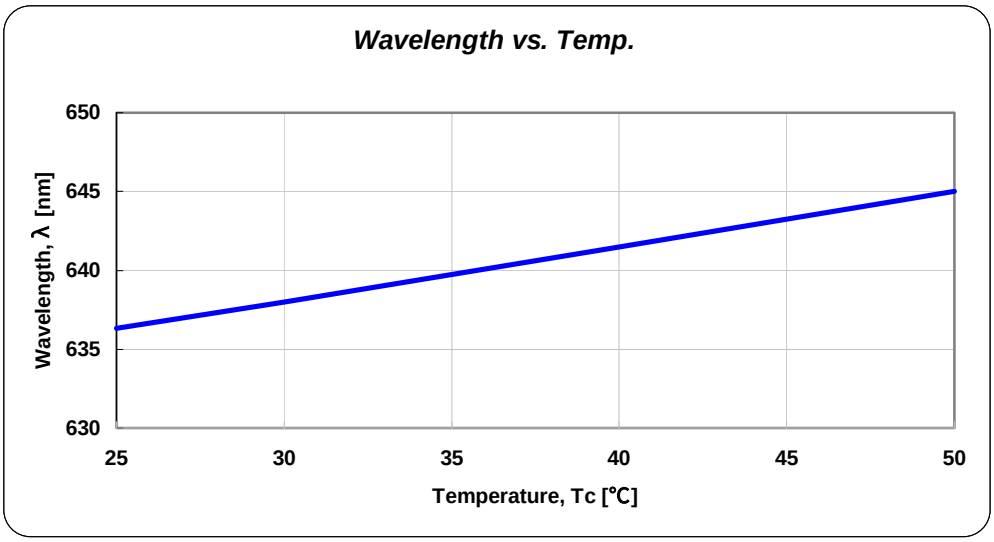
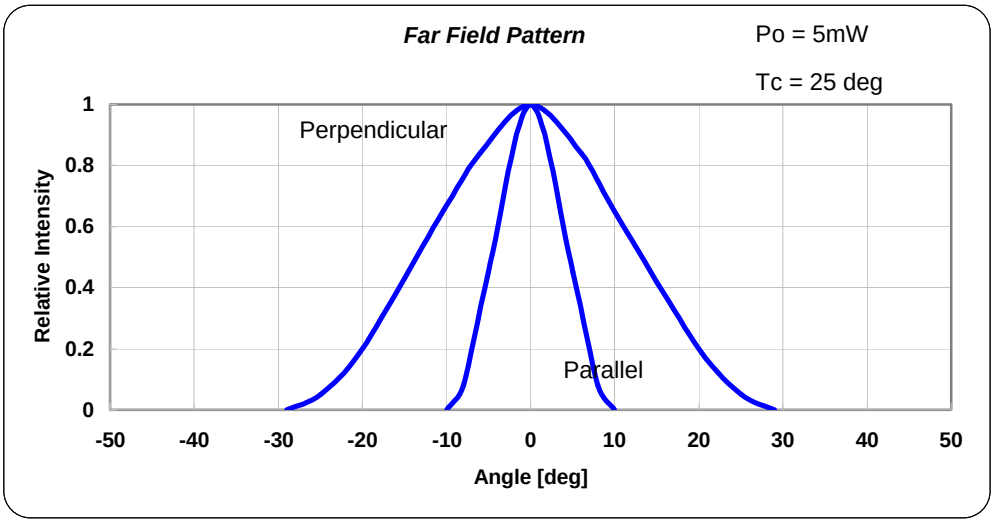
♦EXAMPLE of REPRESENTATIVE CHARACTERISTICS







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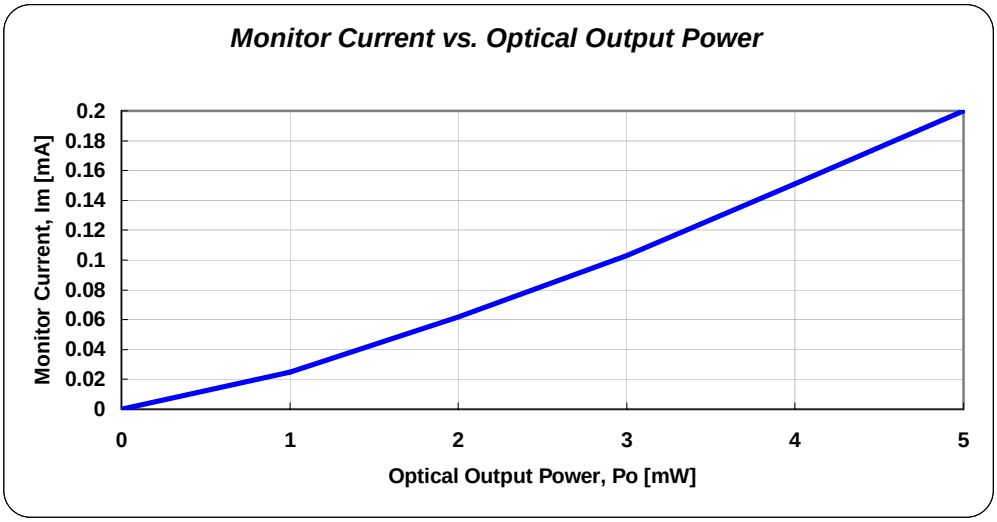
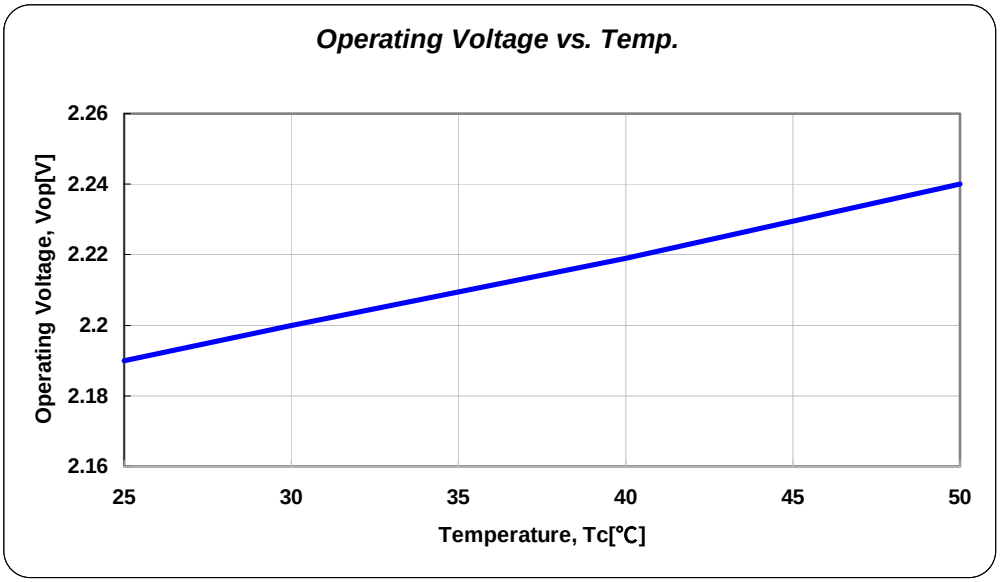
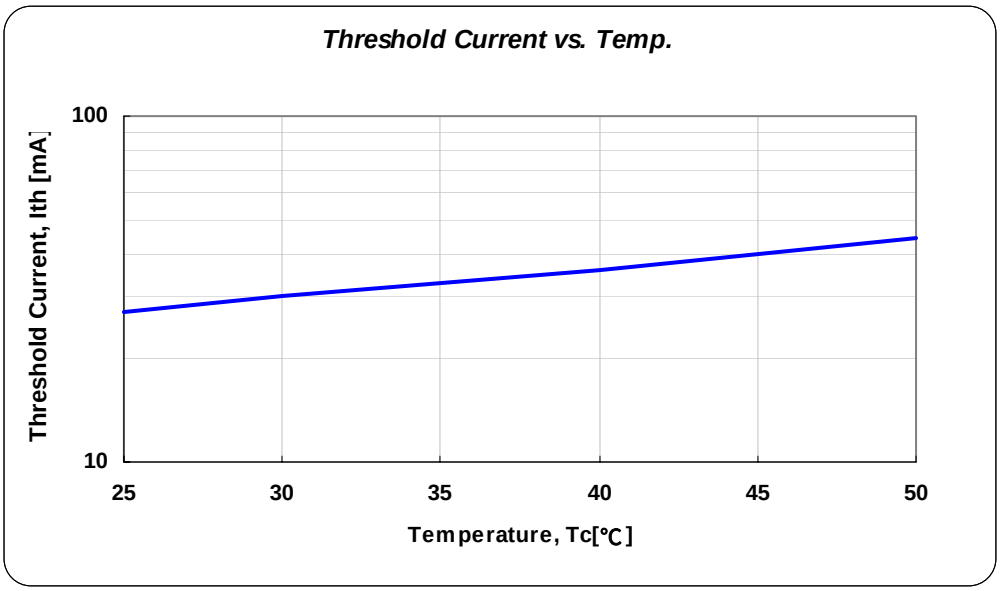
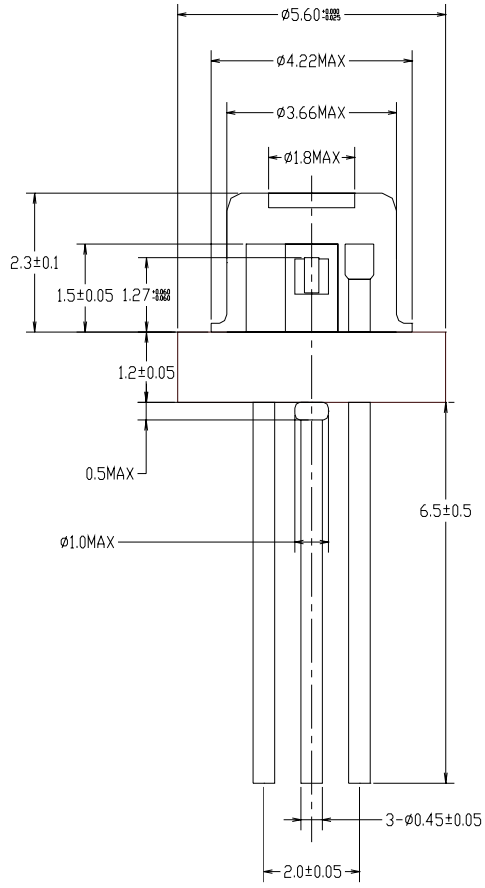
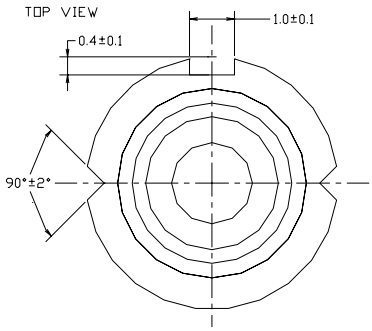

Monitor Current vs. Optical Output Power
Monitor Current, Im [mA]
0.2
0.18
0.16
0.14
0.12
0.1
0.08
0.06
0.04
0.02
0
0
1
2
3
4
5
Optical Output Power, Po [mW]

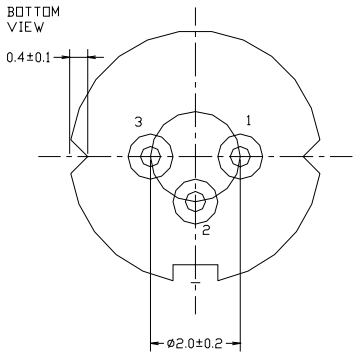

Operating Voltage vs. Temp.
Operating Voltage, Vop[V]
2.26
2.24
2.22
2.2
2.18
2.16
25
30
35
40
45
50
Temperature, Tc[℃]


Threshold Current vs. Temp.
Threshold Current, Ith [mA]
100
10
25
30
35
40
45
50
Temperature, Tc[℃]

♦PACKAGE DIMENSION







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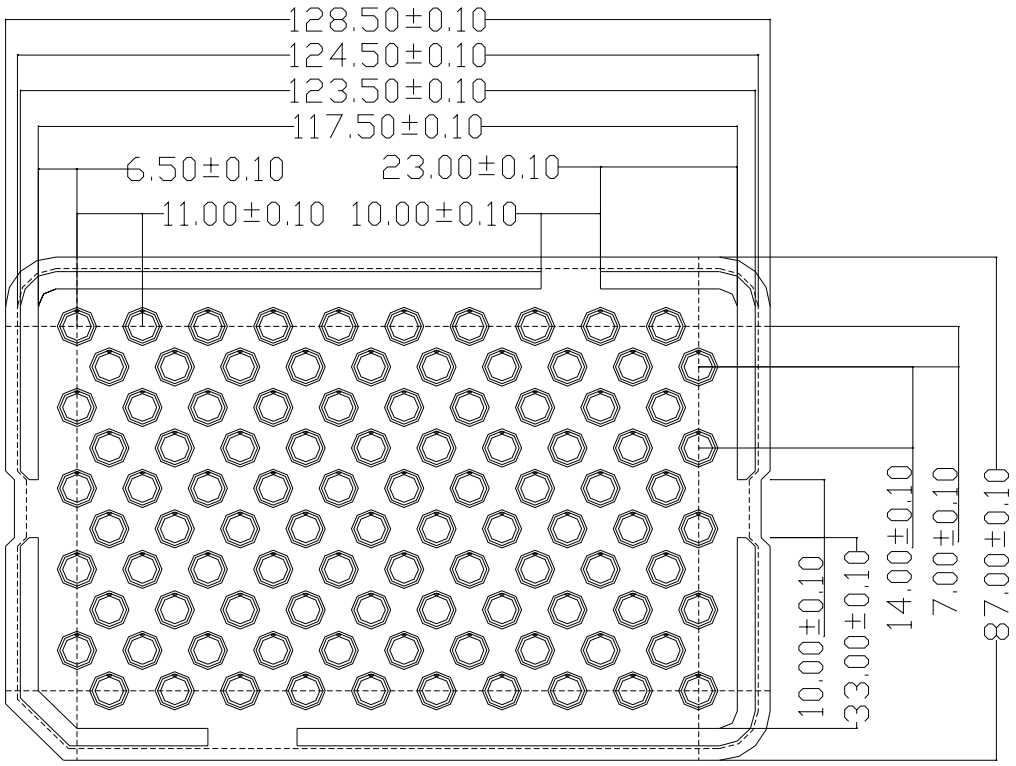
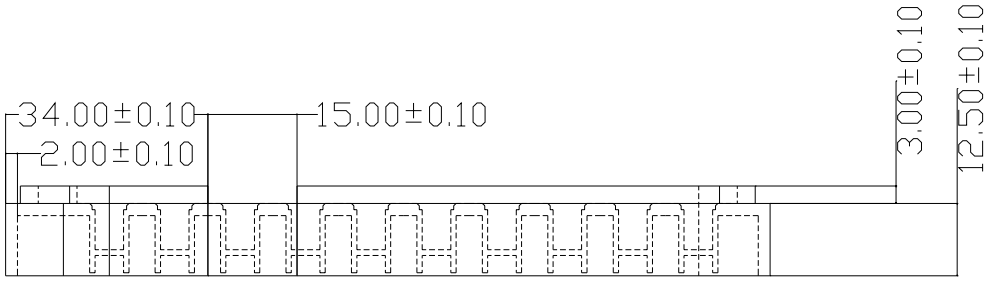
♦PACKING





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