Sumitomo Electric Industries, Ltd.
Part No. SLT1230 Series
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Technical Specification
of
1.3μm MQW-DFB Laser Diode:

SLT1230 Series

Sumitomo Electric Industries, Ltd.

1. General

SLT1230 Series are 1.3μm InGaAsP/InP MQW-DFB laser diodes fabricated by OMVPE entirely. These diodes have low threshold current and high performance at high temperature. A laser diode is mounted into a coaxial package integrated with an InGaAs monitor PID and an aspherical lens cap.

2. Package dimension and pin assignment

(See attached appendix)

3. Absolute maximum ratings (Tc=+25°C, unless otherwise noted.)

Parameter	Symbol	Ratings	Unit
Storage temperature	Tstg	-40~+100	°C
Operating case temperature	Top	-40~+85	°C
Peak optical output power	Po	20	mW
Forward current (LD)	IfL	150	mA
Reverse voltage (LD)	VrL	2	V
Reverse voltage (PD)	VrP	15	V
Reverse current (PD)	IrP	2	mA
Soldering temperature (<10sec.)	Stemp	260	°C

4. Electrical and optical characteristics (Po=5mW, Tc=+25°C, unless otherwise noted.)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Threshold current	Ith	CW	-	8	15	mA
		CW, Tc=-40~+85°C	-	-	40	
Optical output power	Po	CW, If=Ith+20mA	5.0	7.0	-	mW
		CW, If=Ith+20mA, Tc=-40~+85°C	3.0	-	-	
Operating voltage	Vf	CW, Tc=-40~+85°C	-	-	1.6	V
Central wavelength	λc	CW	1290	1310	1325	nm
		CW, Tc=-40~+85°C	1280	-	1335	
Side-mode suppression ratio	SMSR	CW, Tc=+25°C	30	35	-	dB
		CW, Tc=-40~+85°C	30	-	-	
Rise time	tr	Ib=Ith, 20-80%	-	-	0.15	nsec.
		Ib=Ith, 20-80%, Tc=-40~+85°C	-	-	0.25	
Fall time	tf	Ib=Ith, 80-20%	-	-	0.20	nsec.
		Ib=Ith, 80-20%, Tc=-40~+85°C	-	-	0.30	
Monitor current	Im	CW, VrP=5V	100	300	-	pA
		CW, VrP=5V, Tc=-40~+85°C	80	-	-	
Monitor dark current	Id	VrP=5V	-	-	10	nA
		VrP=5V, Tc=-40~+85°C	-	-		
Monitor capacitance	C	VrP=5V, f=1 MHz, Tc=-40~+85°C	-	-		pF

5. Ordering information

Part number	Pin assignment	Pin length
SLT1230	Type A	13.5±0.5mm
SLT1231	Type B	13.5±0.5mm
SLT1236	Type C	13.5±0.5mm

6. Precaution

(1) Radiation emitted by laser devices can be dangerous to the eyes. Avoid eye or skin exposure to direct or scattered radiation.

(2) The governmental approval is required to export this product to other countries. To dispose of this product, the appropriate procedure should be taken to prevent illegal exportation.

(3) The laser diodes should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safekeeping and carrying, the modules should be packaged with ESID proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.

(4) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.

(5) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

Appendix

Part No.: SLT123□/□□□

(Customize code)

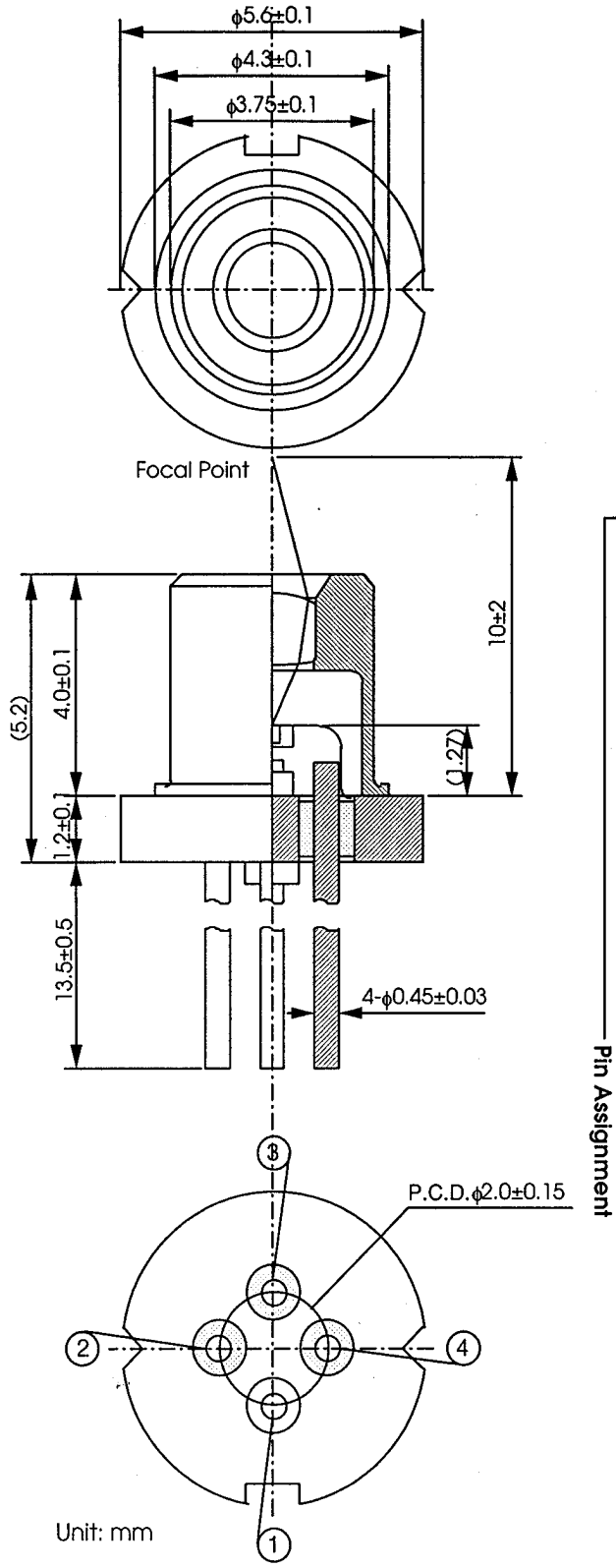
Code	Pin assignment	Pin length (L1)
0	Type A	13.5±0.5
1	Type B	13.5±0.5
6	Type C	13.5±0.5

Pin Assignment

Pin No.	Pin function for typeA
1	LD anode (CASE)
2	LD cathode
3	PD cathode
4	PD anode

Pin No.	Pin function for typeC
1	(CASE)
2	LD cathode
3	PD anode
4	LD anode/PD cathode

Pin No.	Pin function for typeB
1	LD anode (CASE)
2	PD anode
3	PD cathode
4	LD cathode



7. For More Information

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