Sumitomo Electric Industries
Part No. SLT1100 Series
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Technical Specification of 1.3μm MQW-FP Laser Diode: SLT1100 Series

Sumitomo Electric Industries, Ltd.

1. General

SLT1100 Series are 1.3μm InGaAsP/16P MQW-FP 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 a flat window 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	6.0	-	mW
		CW, If=Ith+20mA, Tc=-40~+85°C	3.5	-	-	
Operating voltage	Vf	CW, Tc=-40~+85°C	1.0	-	1.6	V
Central wavelength	λc	CW	1280	1310	1340	nm
		CW, Tc=-40~+85°C	1261	-	1360	
Spectral width	Δλ	CW, RMS, Tc=-40~+85°C	0.5	-	5	nm
Radiant beam angle	∥θ	CW, Tc=-40~+85°C		-	40	deg.
	⊥θ		25	-	45	
Rise time	tr	Ib=Ith, 20-80%	-	-	0.2	nsec.
		Ib=Ith, 20-80%, Tc=-40~+85°C	-	-	0.3	
Fall time	tf	Ib=Ith, 80-20%	-	-	0.3	nsec.
		Ib=Ith, 80-20%, Tc=-40~+85°C	-	-	0.5	
Monitor current	Im	CW, VrP=5V	200	450	-	pA
		CW, VrP=5V, Tc=40~+85°C	150	-	-	
Monitor dark current	Id	VrP=5V	-	-	10	nA
		VrP=5V, Tc=-40~+85°C	-	-	30	
Monitor capacitance	C	VrP=5V, f=1MHz, Tc=-40-+85°C	-	-	10	pF

5. Ordering information

Part number	Pin assignment	Pin length
SLT1100	Type A	13.5±0.5mm
SLT1101	Type B	13.5±0.5mm
SLT1106	Type C	13.5±0.5mm
SLT1107	Type D	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.: SLT110□/□□□

(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
7	Type D	13.5±0.5

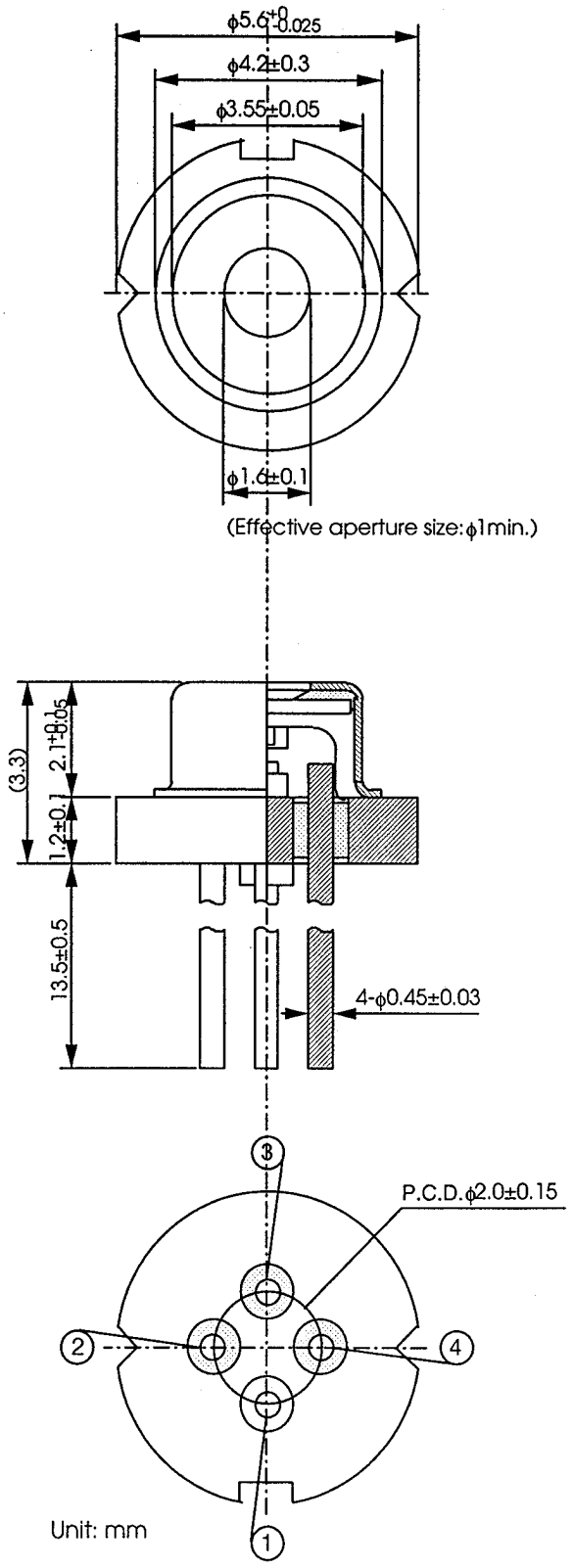
Pin Assignment

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

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

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

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



7. For more information

U.S.A.

Sumitomo Electric Lightwave Corp.
78 Alexander Drive
Research Triangle Park, NC 27709
U.S.A.
Tel. (919) 541-8100
Fax. (919) 541-8376

Europe
Sumitomo Electric Europe Ltd.
Unit 11, Magnolia House
Spring Villa Park, Spring Villa Road
Edgware, Middlesex, HA8 7EB
United Kingdom
Tel. (0181) 905-6167
Fax. (0181) 905-6120

Japan
Sumitomo Electric Industries, Ltd.
(International Business Division)
3-12, Moto-Akasaka 1-chome
Minato-ku Tokyo 107
Japan
Tel. (03) 3423-5771
Fax.(03) 3423-5099