

Sumitomo Electric Industries, Ltd.

Part No.: SLT2000-x Series

Document No.: HUW9824050-01C

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Technical Specification
of
1.3 μ m MQW-FP Laser Diode Module:
(Receptacle Module)

SLT2000-x Series



1. General

SLT2000-x Series are 1.3 μ m InGaAsP/InP MQW-FP laser diode modules designed for fiber optic communication systems. These modules are receptacle modules, and have low threshold current and high performance at high temperature.

A laser diode is mounted into a coaxial package integrated with an InGaAs monitor PD and a receptacle.

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~+85	°C
Operating case temperature	Top	-40~+85	°C
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

(Pf=0.16mW, SMF(9.5/125μm), 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	Pf	CW, If=Ith+20mA	0.08	0.16	0.25	mW
		CW, If=Ith+20mA, Tc=-40~+85°C	0.04	—	—	
Operating voltage	Vf	CW, Tc=-40~+85°C	—	—	1.6	V
Slope efficiency	Se	CW, Average(Ith to Ith+20mA)	0.004	—	—	mW/mA
Central wavelength	λc	CW	1280	1310	1340	nm
		CW, Tc=-40~+85°C	1260	—	1360	
Spectral width	Δλ	CW, RMS, Tc=-40~+85°C	—	2	5	nm
Tracking error	ΔPf	Im hold(@Pf=0.16mW(25°C))	-1.5	—	1.5	dB
		CW, Tc=-40~+85°C	—	—	—	
Rise time	tr	Ib=Ith, 20-80%, Tc=-40~+85°C	—	—	0.3	nsec.
Fall time	tf	Ib=Ith, 80-20%, Tc=-40~+85°C	—	—	0.5	nsec.
Extinction ratio	Er	10log(0.16mW/Pf(Ith)) Tc=-40~+85°C	10	—	—	dB
Monitor current	Im	CW, VrP=5V	200	—	—	μA
		CW, VrP=5V, Tc=-40~+85°C	150	—	—	
Monitor dark current	Id	VrP=5V	—	1	10	nA
Monitor capacitance	C	VrP=5V, f=1MHz	—	—	10	pF
Connector repeatability	—	(*1)		±0.5	±1.0	dB

Note: *1. Measured with a SEI's master plug.

5. Ordering information

Part number	Pin assignment	Pin length	Receptacle type
SLT2000-C	Type A	13.5±0.5mm	SC
SLT2000-D			FC
SLT2006-C	Type C	13.5±0.5mm	SC
SLT2006-D			FC

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 modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.
- (3) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.
- (4) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

Appendix

Part No.: SLT200□-□/□□□

(Customize code)

Code	Receptacle type
C	SC
D	FC

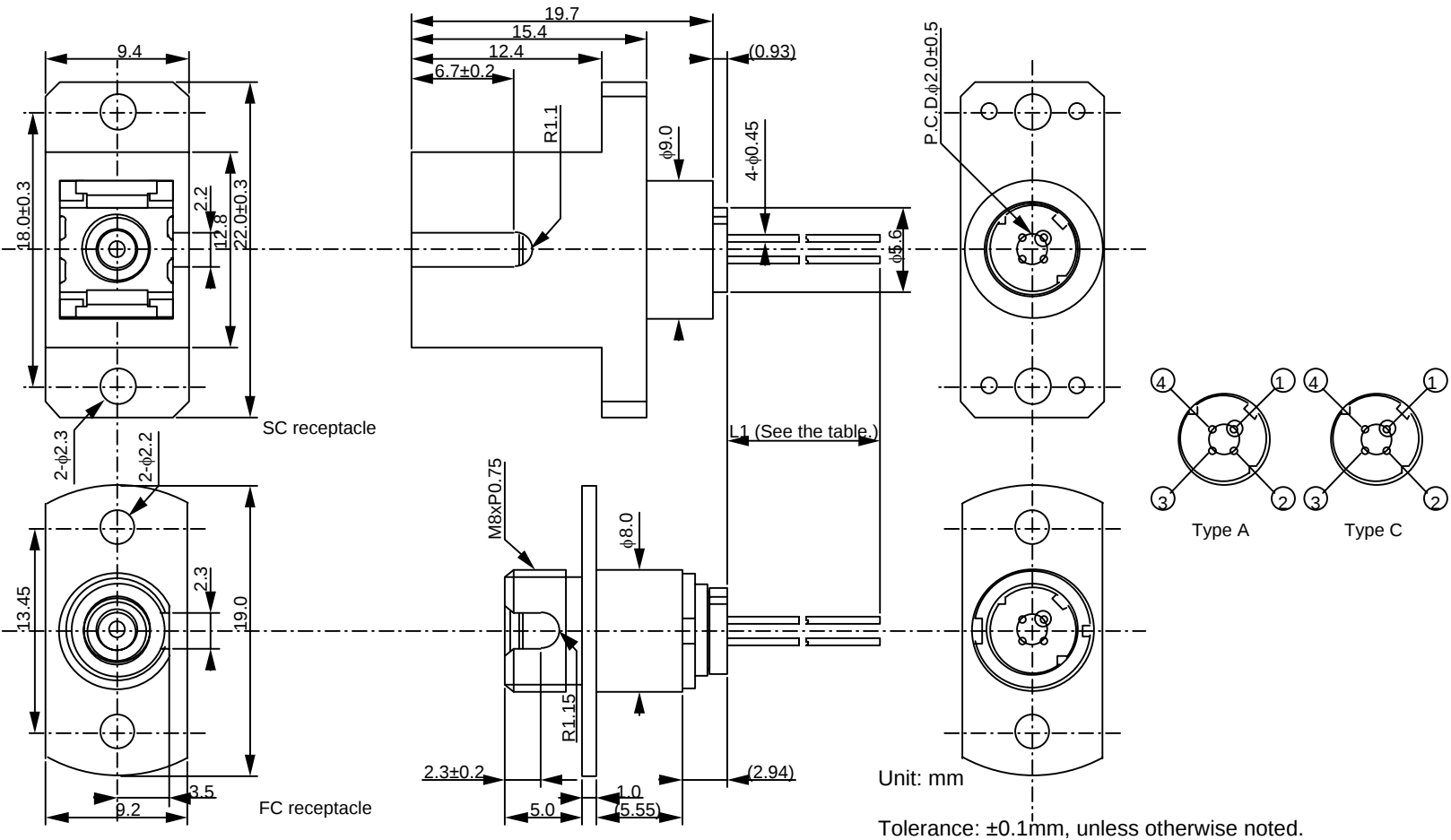
Code	Pin assignment	Pin length (L1)
0	Type A	13.5±0.5
2	Type A	18.5±0.5
6	Type C	13.5±0.5

Pin No.	Pin function for typeA and typeB
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

Receptacle type

Pin assignment and pin length



7. For More Information

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Revision Record

Document No.	Date of issue	Description	Incorporated by	Checked by	Approved by
HUW9824050-01A	Nov./24/98	Initial issue.	T. Nakanishi	H. Michikoshi	T. Fujitani
HUW9824050-01B	Sep./23/99	Corrected Vf on condition of Tc=-40~+85°C from min.: 1.0V to min.: “—”; Corrected Se on condition of Tc=+25°C from typ.: 0.008mW/mA, max.: 0.125mW/mA to typ.: “—”, max.: “—”; Added Im on condition of Tc=+25°C; Removed Type E of the pin.	T. Nakanishi	M. Yoshimura	T. Fujitani
HUW9824050-01C	Feb./07/01	Corrected Tstg from -40~+90°C to -40~+85°C; Removed Type D from the option of the pin assignment.	T. Nakanishi	M. Yoshimura	M. Yoshimura