

Sumitomo Electric Industries, Ltd.  
Part No.: SPT2400-x Series  
Document No.: HUW9824052-01C  
Date of issue: September, 7 1999



Technical Specification  
of  
Long Wavelength PIN Photodiode Module:  
(Receptacle Module)

SPT2400-x Series

## 1. General

SPT2400-x Series are InGaAs/InP PIN photodiode modules designed for fiber optic communication systems. These modules are receptacle modules, and have high responsivity, high speed and low dark current. A photodiode is mounted into a coaxial package integrated with a receptacle.

## 2. Package dimension and pin assignment

*(See attached appendix.)*

## 3. Absolute maximum ratings ( $T_c=+25^{\circ}\text{C}$ , unless otherwise noted.)

Parameter	Symbol	Ratings	Unit
Storage temperature	Tstg	-40~+90	°C
Operating case temperature	Top	-40~+85	°C
Reverse voltage	V <sub>r</sub>	15	V
Reverse current	I <sub>r</sub>	2	mA
Forward current	i <sub>f</sub>	50	mA
Soldering temperature (≤10sec)	Stemp	260	°C

#### 4. Electrical and optical characteristics

( $V_r=5V$ , SMF(9.5/125 $\mu\text{m}$ ),  $T_c=+25^\circ\text{C}$ , unless otherwise noted.)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Responsivity	R	CW, $\lambda=1310\text{nm}$ , (*1)	0.7	0.85	-	A/W
Bandwidth	fc	$\lambda=1310\text{nm}$ , 3dB down, $RL=50\Omega$	1	-	-	GHz
Dark current	Id		-	0.1	1	nA
Total capacitance	Ct	f=11 MHz, (*2)		1.4	1.7	pF
Active diameter	$\phi$		-	100	-	$\mu\text{m}$

Note: \*1. Measured with the standard equipment of SEL  
 \*2. Measured at anode-cathode, case open and not grounded.

## 5. Ordering information

Part Number	Pin Assignment	Pin Length	Receptacle type
SPT2401-C	Type D	13.5±0.5mm	SC
SPT2401-D			FC

## 6. Precaution

- (1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent electro-static damage. For safekeeping 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.
- (2) The stress to the fiber pigtail may cause the damage on the performance. The fiber pigtail may snap off by dropping the module.
- (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.: SPT2400-□-□-□-□-□  
 (Customize code)

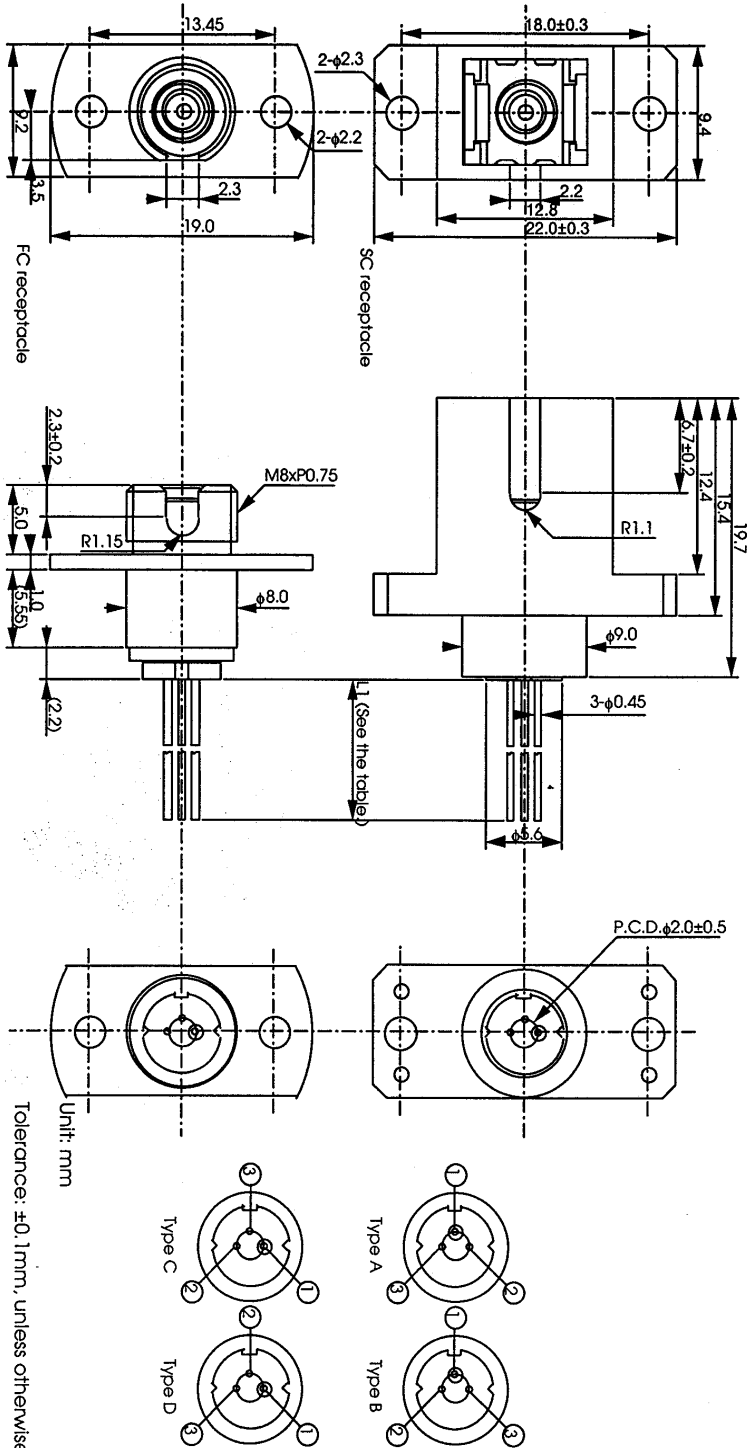
Code	Receptacle type
C	SC
D	FC

Code	Pin assignment	Pin length (L1)
0	Type A	13.5±0.5
1	Type D	13.5±0.5
2	Type B	13.5±0.5
6	Type C	19.5±0.5
7	Type D	19.5±0.5

Pin No.	Pin function
1	(CASE) PD cathode
3	PD anode

Receptacle type

Pin assignment and pin length



Unit: mm  
 Tolerance: ±0.1mm, unless otherwise noted.

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## **7. For More Information**

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