

## 1550nm MQW-FP Laser Diode with pigtail for OTDR(8-12mW)

### OSMFOP-5XXXXXXX



#### Features:

- ◆ High Stability FP Laser Chip
- ◆ High Power
- ◆ Operate Temperature from -40°C to +85°C

#### Applications:

- ◆ Optical Time Domain Reflectometer (OTDR)
- ◆ High power laser for instrument

#### General:

OSMFOP-5XXXXXXX is a 1550nm Multiple Quantum Well (MQW) structured Fabry-Perot (FP) laser diode coaxial module with single mode fiber. This module is specified to operate under pulsed condition and designed for light source of Optical Time Domain Reflectometer (OTDR).

#### Absolute Maximum Ratings: <sup>\*Note1</sup>

Parameter	Symbol	Ratings	Unit
Storage Temperature	Tstg	-40~+85	°C
Operating Case Temperature	Top	-40~+85	°C
Soldering Temperature (<10s)	Stemp	260	°C

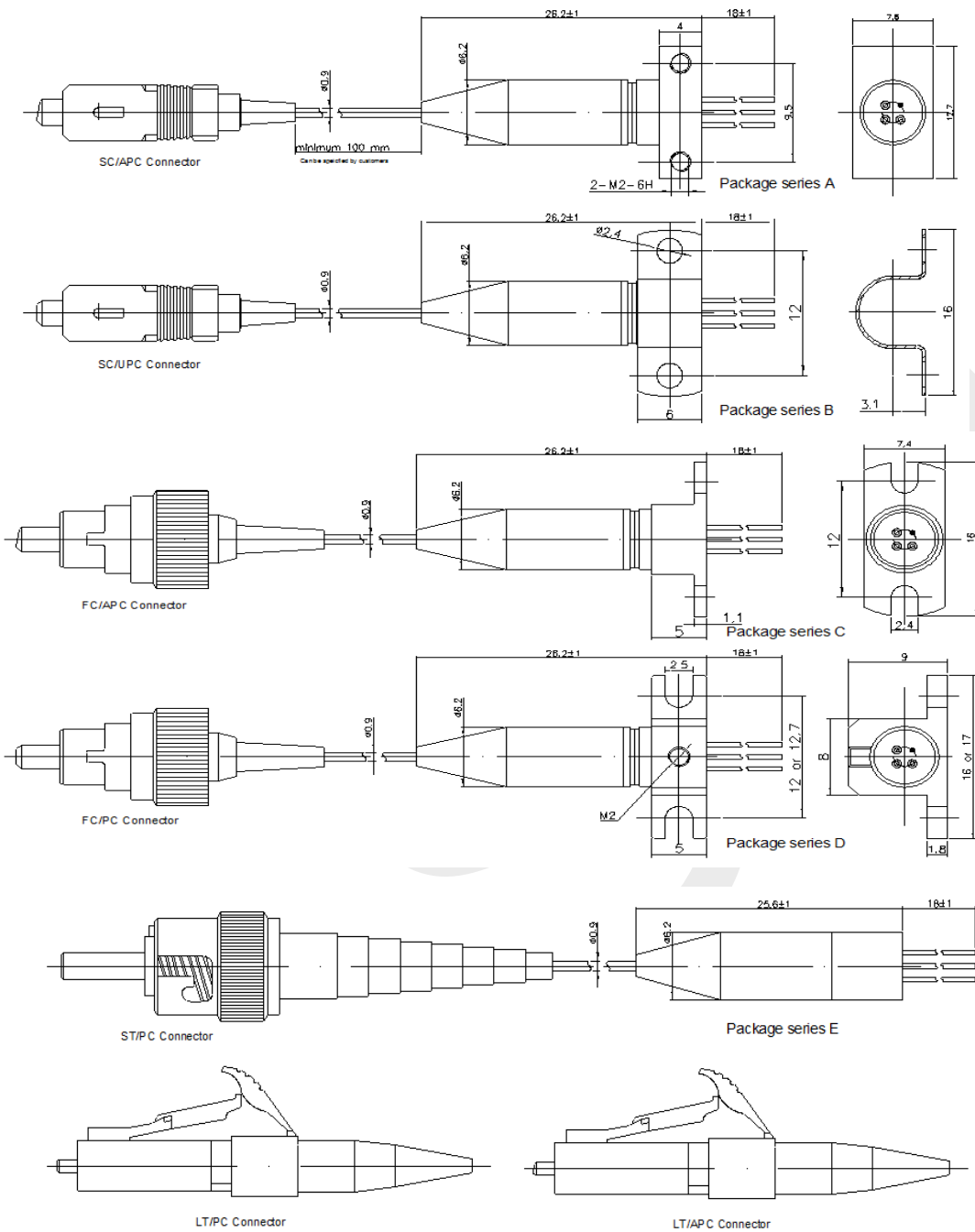
\*Note1: Exceeding any one of these values may destroy the device immediately.

## Electrical and Optical Characteristics:

(Tc=+25°C, unless otherwise noted.)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Optical Output Power (pulse mode)	Pf	I <sub>FP</sub> =100mA, P <sub>W</sub> =10μS, Duty=1%	10	20	—	mW
		I <sub>FP</sub> =200mA, P <sub>W</sub> =10μS, Duty=1%	20	40	—	
		I <sub>FP</sub> =350mA, P <sub>W</sub> =10μS, Duty=1%	40	60	—	
		I <sub>FP</sub> =400mA, P <sub>W</sub> =10μS, Duty=1%	60	80	—	
Threshold Current	I <sub>th</sub>	T=25°C, I <sub>op</sub> =50mA	—	8	15	mA
Output Power	P <sub>o</sub>	CW, I <sub>op</sub> =50mA	5	10	—	mW
Operating Current	I <sub>f</sub>	CW, T=25°C	—	—	100	mA
Operating Voltage	V <sub>f</sub>	CW, I <sub>op</sub> =50mA	—	1.2	2.0	V
Center Wavelength	λ <sub>c</sub>	CW, T=25°C	1530	1550	1570	nm
Spectral Width(-20dB)	Δλ	CW, T=25°C	—	—	3.5	nm
Rise/Fall Times	t <sub>R</sub> , t <sub>F</sub>	10% to 90%	—	0.2	2	ns
Monitor Current	I <sub>m</sub>	CW, I <sub>op</sub> =50mA	100	—	—	uA
Monitor Dark Current	I <sub>d</sub>	CW, V <sub>r</sub> =5V	—	—	0.1	uA

**Pigtail Package Dimension:** \*Note2、3、4



\*Note2: PIN direction and laser mark can be customized. Pigtail is standard SM fiber; the length also can be customized.

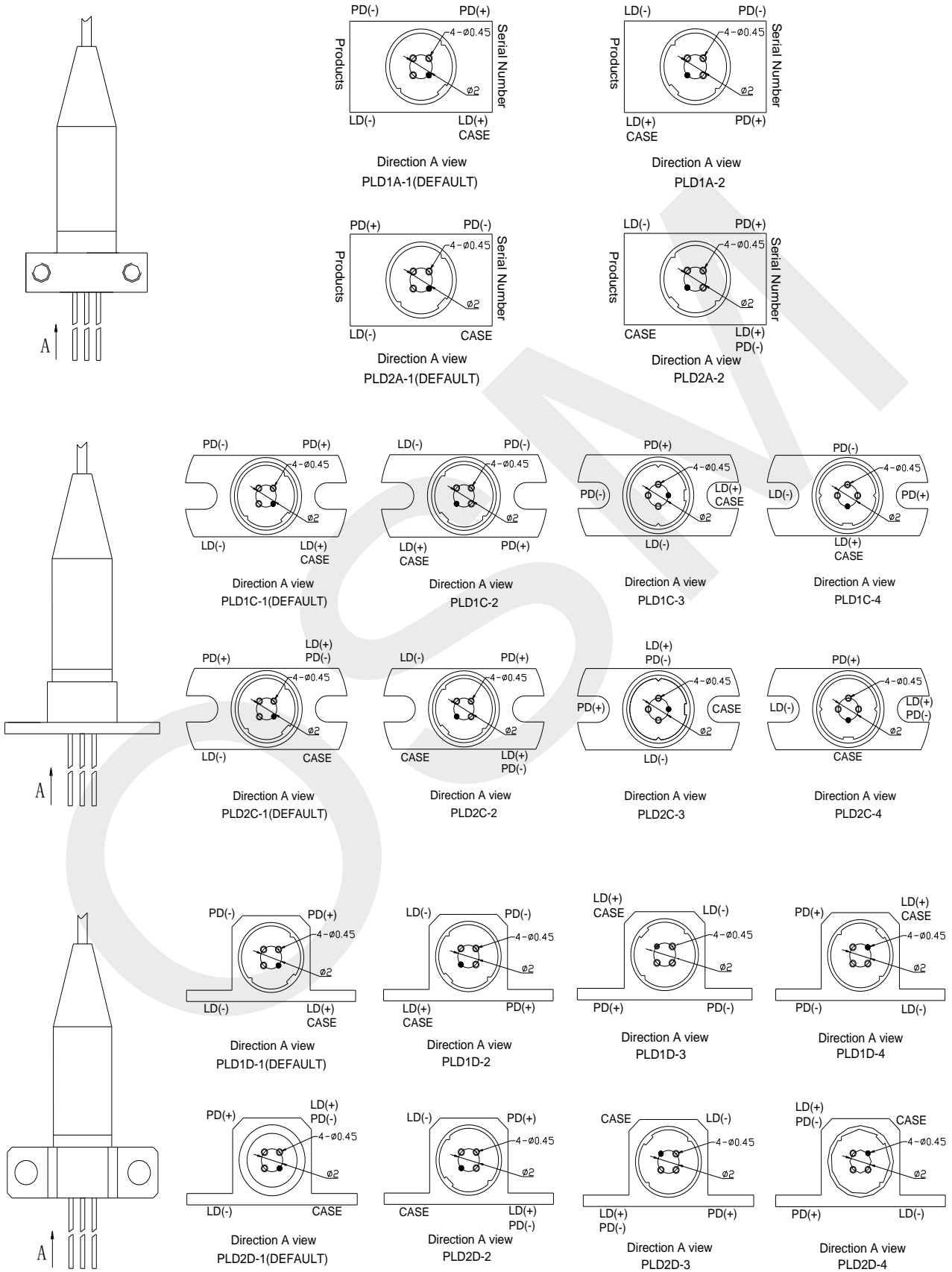
\*Note3: For the package series D, the clamping rings dimensions (A) and drill size (B) are can be selected. The following types can be available. Please designate the detailed type while ordering the package series D.

Fixed card type	A(mm)	B(mm)
D	16	12
D-S	17	12.7

\*Note4: For the package series B, the fix card is fixed by customer self. For the detailed information of fix card of

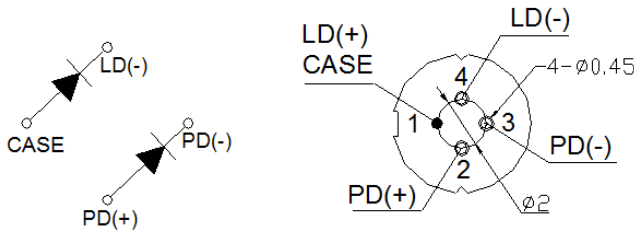
A, C, D package series, please refers the following graphs.

### The Direction of Fix Card:



## Pin Assignment:

TYPE: 1



LD-pin-1 / TYPE: C

## Nomenclature:

**OSMFOP —5**       

A B C D E F G

NO	Parameter	Detailed Description				
A	Wavelength	5=1550				
B	Data Rate	2=2.5G				
C	Power	80=5-10mW				
D	Package Series	A	B	C	D	E
E	Connector	F=FC/PC	S=SC/PC	T=ST/PC	L=LC/PC	
		FA=FC/APC		SA=SC/APC	Blank=None	
F	Pin Type	1=LD-pin-1				
G	Isolator	Blank=None	G= Single Stage	G2=Dual Stage		

## Precaution:

- (1) 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.
- (2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.
- (3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

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