



## Features :

- ✓ SC receptacle
- ✓ DFB uncooled DFB Laser Diode
- ✓ High sensitive APD-TIA

## Applications :

- PON
- FTTX application

## Descriptions :

This single-fiber optical subassembly is designed for FTTx applications. It is integrated with one 2.5Gb/s 1490nm DFB LD and one 1.25Gb/s APD-TIA together with SC receptacle for beam direction.

## —Performance Specifications :

### 1. Absolute Maximum Ratings ( 25°C )

Items	Symbol	Unit	Min	Typical	Max	Condition	
<b>Absolute Maximum Ratings</b>							
1	Operating Case Temperature (case)	TC	°	-40		85	
2	Storage Temperature	TS	°	-40		85	
3	Storage and Operating Humidity		%			85	
4	Lead Soldering Temperature		°			260	10S
5	Optical Output Power		dBm			5	
6	LD Forward Current		mA			150	
7	LD Reverse Voltage		V			2	
8	MPD Forward Current		mA			2	
9	MPD Reverse Voltage		V			20	

## 2. Transmitter characteristics ( 25°C )

Items		Symbol	Unit	Min	Typical	Max	Condition
<b>Transmitter</b>							
1	Data Rate		Mbit/s		2488		
2	Forward Voltage	V <sub>f</sub>	V		1.1	1.9	
3	Centre Wavelength, RT	$\lambda_C$	nm	1480	1490	1500	
4	Side Mode Suppression Ratio	SMSR	dB	30			
5	Optical Spectrum Width (RMS)	$\Delta\lambda$	nm			1	
6	Optical Output Power (I <sub>th</sub> + 20mA)	P <sub>O</sub>	dBm	1.8mW		5mW	25°C , mW
7	Optical Output Power (I <sub>th</sub> + 20mA)	P <sub>O</sub>	dBm	0.9mW		6mW	85°C
8	Threshold Current OT	I <sub>th</sub>	mA			45	-40~85°C
9	Threshold Current RT	I <sub>th</sub>	mA			15	25°C
10	Slope Efficiency	SE	mW/mA	0.090			
11	Slope Efficiency	SE	mW/mA	0.045			85°C
12	Monitor Current	I <sub>pd</sub>	mA	0.1		1.0	@I <sub>th</sub> + 20mA
13	Tracking Error	TE	dB	-1.5		1.5	
14	Monitor Dark Current	I <sub>dk</sub>	nA			100	@VRD=5v
15	MPD Capacitance	C <sub>t</sub>	pF				
16	Transmitter operating current	I <sub>o</sub>	mA			120	

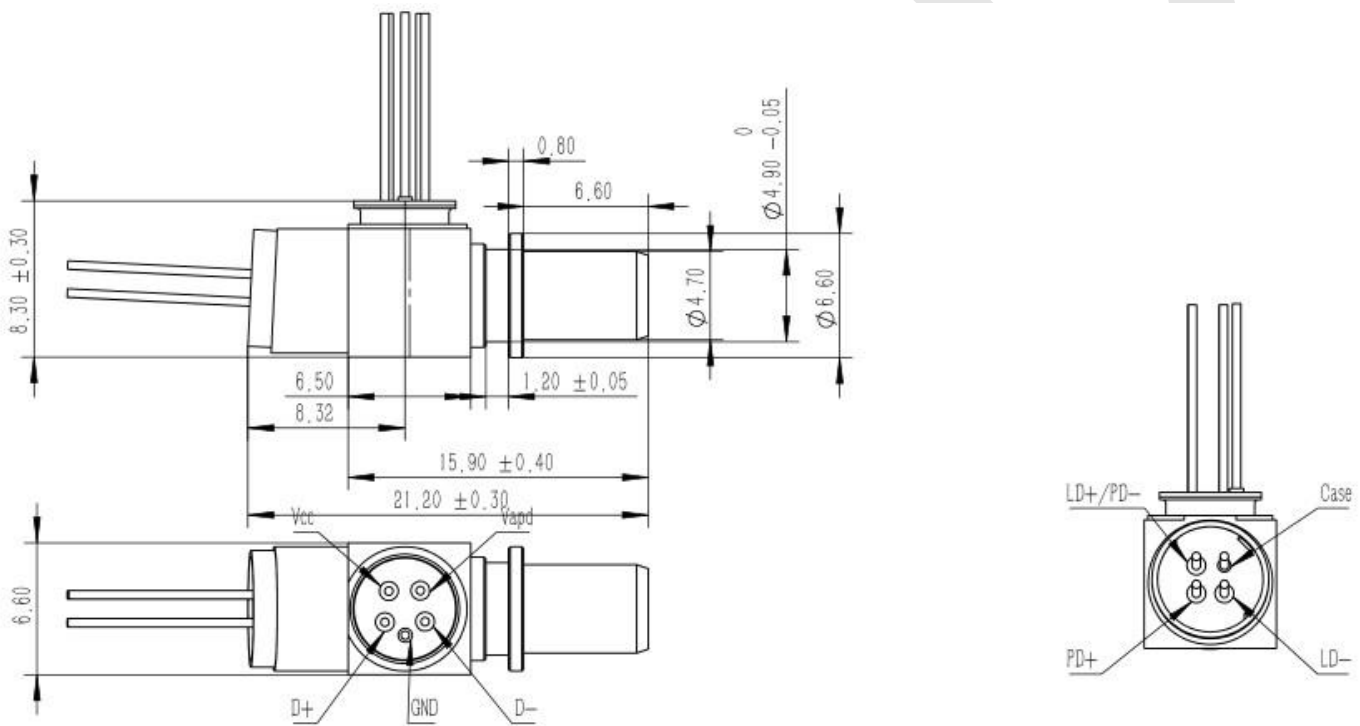
### 3. Digital Receiver characteristics ( 25°C )

Items	Symbol	Unit	Min	Typical	Max	Condition
<b>Digital Receiver</b>						
1	Bit Rate	Mbit/s		1244		
2	Operating Wavelength	$\lambda C$	nm	1290	1310	1330
3	Supply Voltage	VCC	V	3.0	3.3	3.6
4	Supply Current (no load)	ICC	mA	33		60
5	APD Operating Voltage			Vbr-3v		
7	Sensitivity RT	PSEN	dBm			-31 1.25Gbps, PRBS23 BER=10-10, $\lambda$ =1310nm
8	Damage threshold	Pin damage	dBm	5		
9	Receiver Overload	OL	dBm	-7		
10	Breakdown Voltage	Vbr	V	35		55
11	Dark Current	Idk	nA			150
12	Saturation Power		dBm			
13	Responsively	R				
14	Differential Output Swing	Vout				
15	Optical Return Loss @ 1310nm	ORL	dB			-20

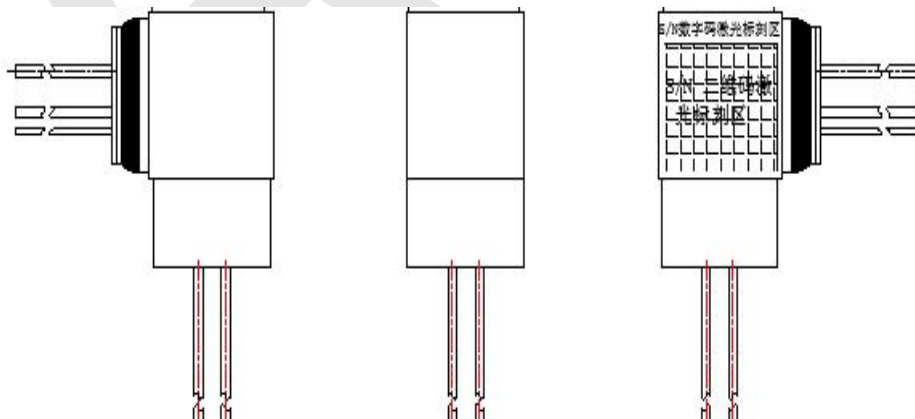
### 4. Other characteristics ( 25°C )

Items	Symbol	Unit	Min	Typical	Max	Condition
1	Optical Crosstalk	Xopt			-45	
2	Connector repeatability	-	dB	-0.5	+0.5	Same plug orientation, same fiber, 10 times plug, CW, mater
3	Connector repeatability	-	dB	-1	+1	Different plug orientation, same fiber, 10 times plug, CW,
4	Connector repeatability	-	dB	-1	+1	Same plug orientation, 3 fiber, 10 times plug, CW

## 5、 Product structure drawing



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Note : Customer type identification code is customizable,if there is no demand, it is empty.

More information :

Tel: +86-755-86674946

FAX: +86-755-86296723

Email: [sales@atoptechnology.com](mailto:sales@atoptechnology.com)

Web: [www.atoptechnology.com](http://www.atoptechnology.com)