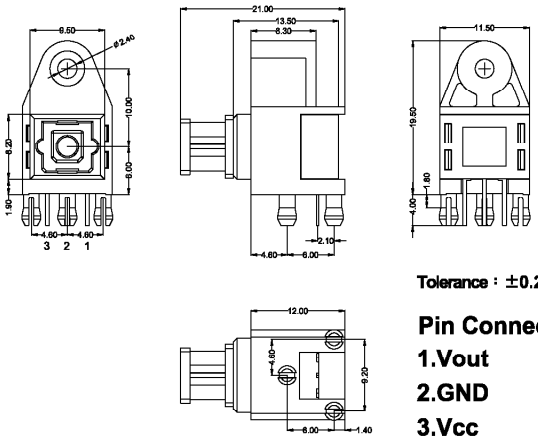
FIBER OPTIC Receiver Module

Features

- TTL interface compatible.
- 13.2Mbps dat a rate(NRZ Signal).
- Directly connectable to demodulati on IC.
- Supply voltage 3.3V/ 5V equipment.

Outline Dimensions (Unit:mm)



Tolerance：±0.2mm

Pin Connection
1.Vout
2.GND
3.Vcc

Applications

- Audio equipment.
- DVD,CD,MDplayer.
- Automobile.
- Sound card.
- Set top box.
- PC,Notebook.

1. Maximum Ratings (Ta=25℃,Vcc=3.3V/5V)

Parameter	Symbol	Rating	Unit
Storage Temperature	T_{stg}	-40~80	℃
Operating Temperature	T_{opr}	-20~70	℃
Supply Voltage	Vcc	-0.5~7	V
Input Voltage	V_{IN}	-0.5~Vcc+0.5	V
Soldering Temperature	T_{sol}	260 (Note 1)	℃

Note 1：Soldering time ≦ 10 seconds (At a distance of 1 mm from the package.)

2. Recommended Operating Conditions (Ta=25℃,Vcc=3.3V/5V)

Parameter	Symbol	Min	Typ.	Max	Unit
Supply Voltage	Vcc	2.7	3.3	5.5	V
Operating transfer rate	T	0.1	-	13.2	Mbps
Input optical power level	PI	-24	-	-14.5	dBm

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3. Electrical and Optical Characteristics : Receiver (Ta=25°C,Vcc=3.3V/5V)

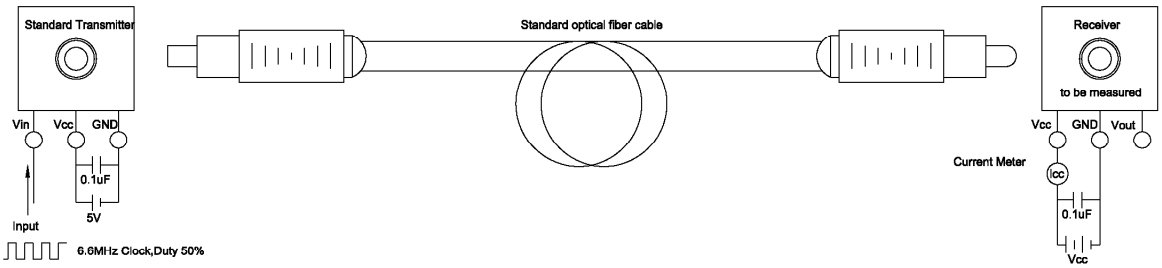
Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Operating transfer rate	T	NRZ Signal (Note 2)	0.1	-	13.2	Mb/s
Operating voltage	Vcc		2.7	3.3	5.5	V
Optical Input Sensitivity (Note 3)	PI		-24	-	-14.5	dBm
Peak Emission Wavelength	λp		-	700	-	nm
Dissipation Current	Icc	Refer to Fig.(1)	-	8	15	mA
High Level Output Voltage	V_{OH}	Refer to Fig.(2)	2.4	-	-	V
Low Level Output Voltage	V_{OL}	Refer to Fig.(2)	-	-	0.4	V
Rise time	tr	Refer to Fig.(2)	-	10	15	ns
Fall time	tf	Refer to Fig.(2)	-	10	15	ns
Low->High Propagation delay time	t_{PLH}	Refer to Fig.(2)	-	-	180	ns
High -> Low Propagation delay time	t_{PHL}	Refer to Fig.(2)	-	-	180	ns
Pulse Width Distortion	△tw	Refer to Fig.(2)	-20	-	20	ns
Jitter Time	△ tj	Refer to Fig.(3)	-	-	15	ns

Note 2 : LED is ON when input signal is high, and OFF when it is low.
The duty factor must be maintained between 25 to 75%.
Note 3 : Measure with a standard optical fiber, peak value.

4. Measuring method

(1).Measuring Supply Current

	Input test Conditions	Measuring method
Supply Voltage	Vcc=5.0V	DC Average current
Fiber coupling light output	Pc=-14.5dBm	
Standard transmitter input signal	13.2Mbps NRZ	



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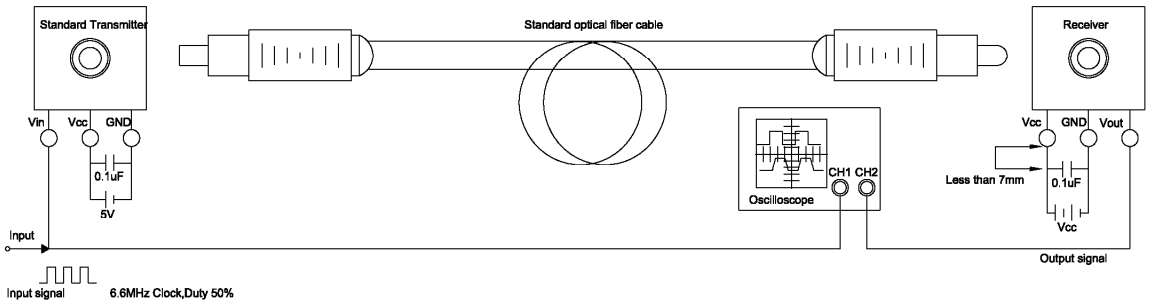
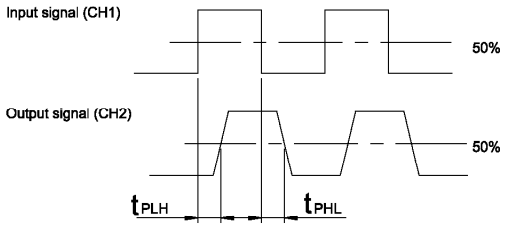
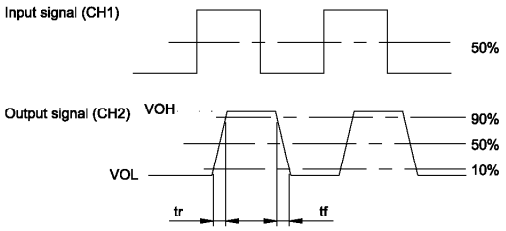
(2).Measuring method of Output Voltage and Pulse response

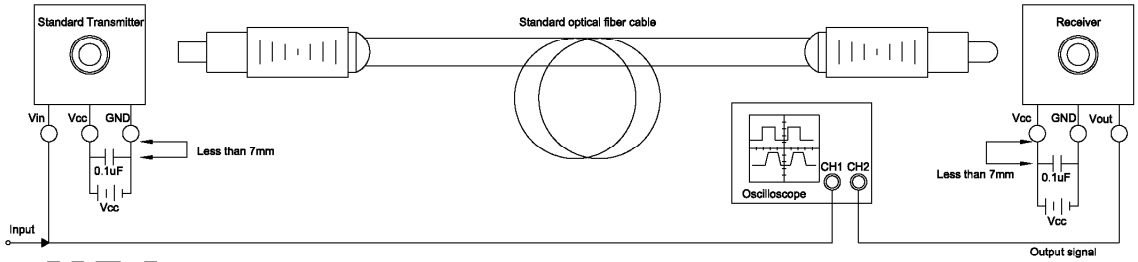


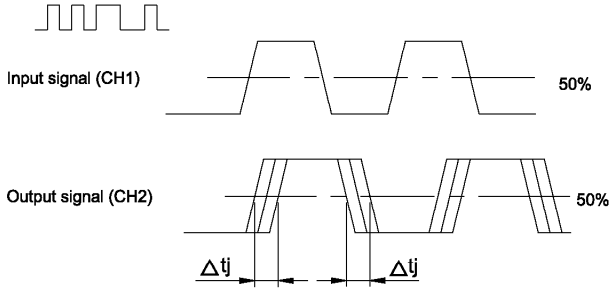




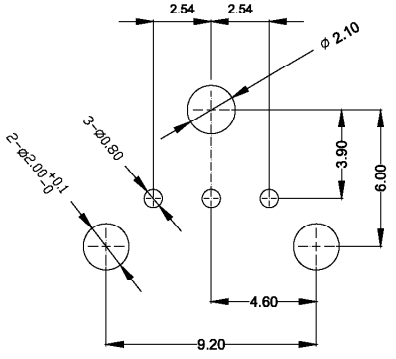
$\Delta tw = t_{PHL} - t_{PLH}$

(3).Measuring method of Jitter





5.Recommended PCB Layout



Notes:
1.Unit:mm
2.Tolerance: 0.3mm

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