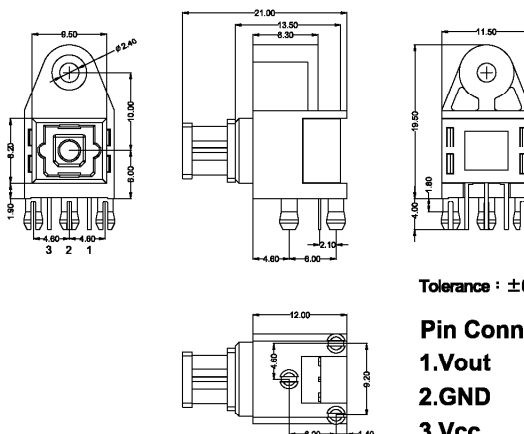


## FIBER OPTIC Receiver Module

## Features

- TTL interface compatible.
- 13.2Mbps data rate (NRZ Signal).
- Directly connectable to demodulation IC.
- Supply voltage 3.3V/ 5V equipment.

## Outline Dimensions (Unit:mm)

Tolerance :  $\pm 0.2\text{mm}$ 

## 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 ( $T_a=25^\circ\text{C}$ ,  $V_{cc}=3.3\text{V}/5\text{V}$ )

Parameter	Symbol	Rating	Unit
Storage Temperature	$T_{\text{stg}}$	-40~80	$^\circ\text{C}$
Operating Temperature	$T_{\text{opr}}$	-20~70	$^\circ\text{C}$
Supply Voltage	$V_{cc}$	-0.5~7	V
Input Voltage	$V_{\text{IN}}$	-0.5~ $V_{cc}+0.5$	V
Soldering Temperature	$T_{\text{sol}}$	260 (Note 1)	$^\circ\text{C}$

Note 1 : Soldering time  $\leq 10$  seconds (At a distance of 1 mm from the package.)2. Recommended Operating Conditions ( $T_a=25^\circ\text{C}$ ,  $V_{cc}=3.3\text{V}/5\text{V}$ )

Parameter	Symbol	Min	Typ.	Max	Unit
Supply Voltage	$V_{cc}$	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

### 3. Electrical and Optical Characteristics : Receiver ( $T_a=25^{\circ}\text{C}$ , $V_{cc}=3.3\text{V}/5\text{V}$ )

Parameter	Symbol	Condition	Min	Typ.	Max	Unit
Operating transfer rate	T	NRZ Signal (Note 2)	0.1	-	13.2	Mb/s
Operating voltage	$V_{cc}$		2.7	3.3	5.5	V
Optical Input Sensitivity (Note 3)	PI		-24	-	-14.5	dBm
Peak Emission Wavelength	$\lambda_p$		-	700	-	nm
Dissipation Current	$I_{cc}$	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	$t_r$	Refer to Fig.(2)	-	10	15	ns
Fall time	$t_f$	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	$\Delta tw$	Refer to Fig.(2)	-20	-	20	ns
Jitter Time	$\Delta t_j$	Refer to Fig.(3)	-	-	15	ns

Note 2 : LED is ON when input signal is high, and OFF when it is low.

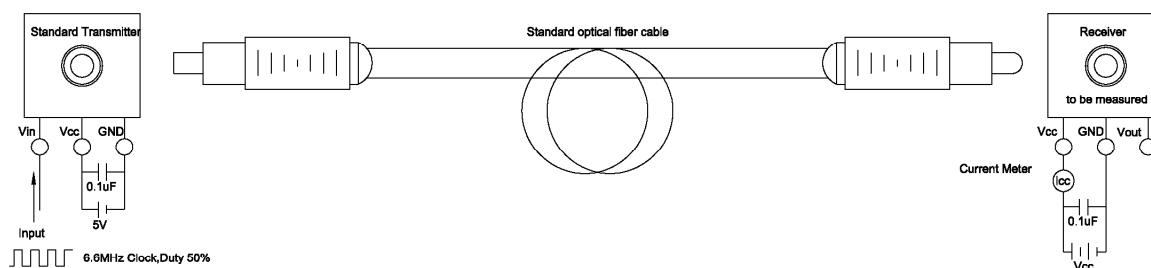
The duty factor must be maintained between 25 to 75%.

Note 3 : Measure with a standard optical fiber, peak value.

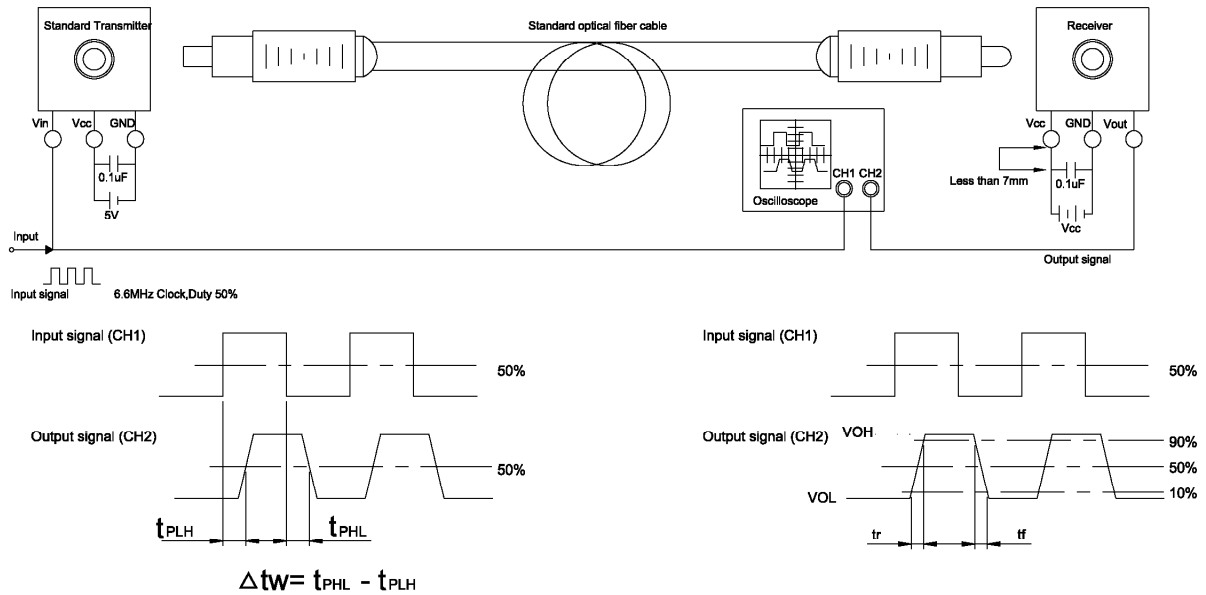
### 4. Measuring method

#### (1).Measuring Supply Current

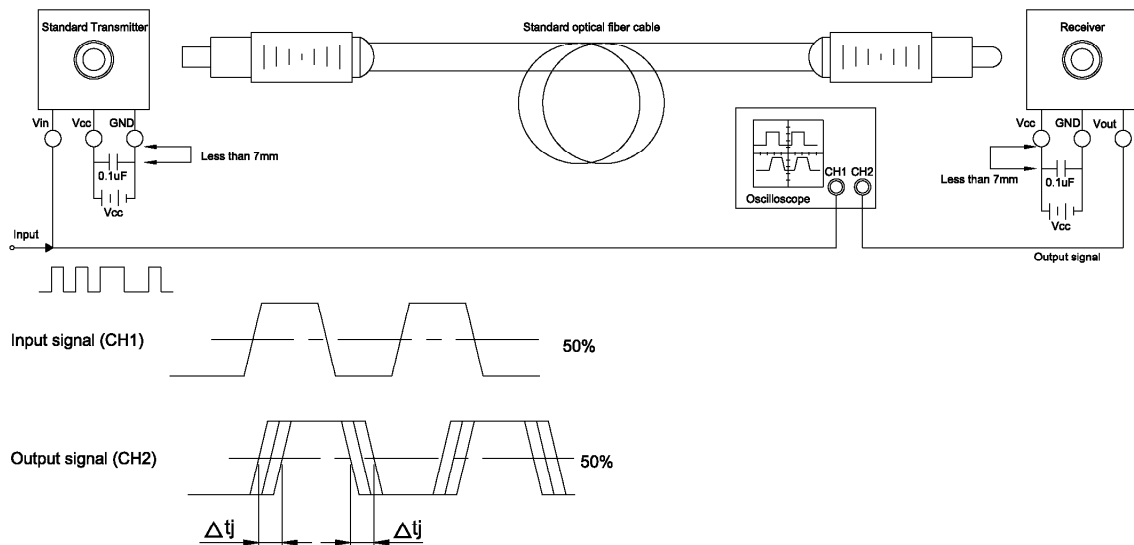
	Input test Conditions	Measuring method
Supply Voltage	$V_{cc}=5.0\text{V}$	DC Average current
Fiber coupling light output	$P_c=-14.5\text{dBm}$	
Standard transmitter input signal	13.2Mbps NRZ	



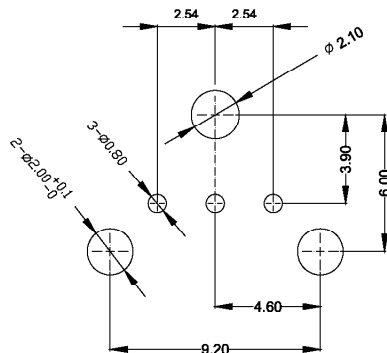
## (2).Measuring method of Output Voltage and Pulse response



## (3).Measuring method of Jitter



## 5.Recommended PCB Layout



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