



New Rev

APPROVAL SHEET

CUSTOMER : _____

DEVICE NAME : **Photo Link** _____

MODEL NO. : **STX-T179B3** _____

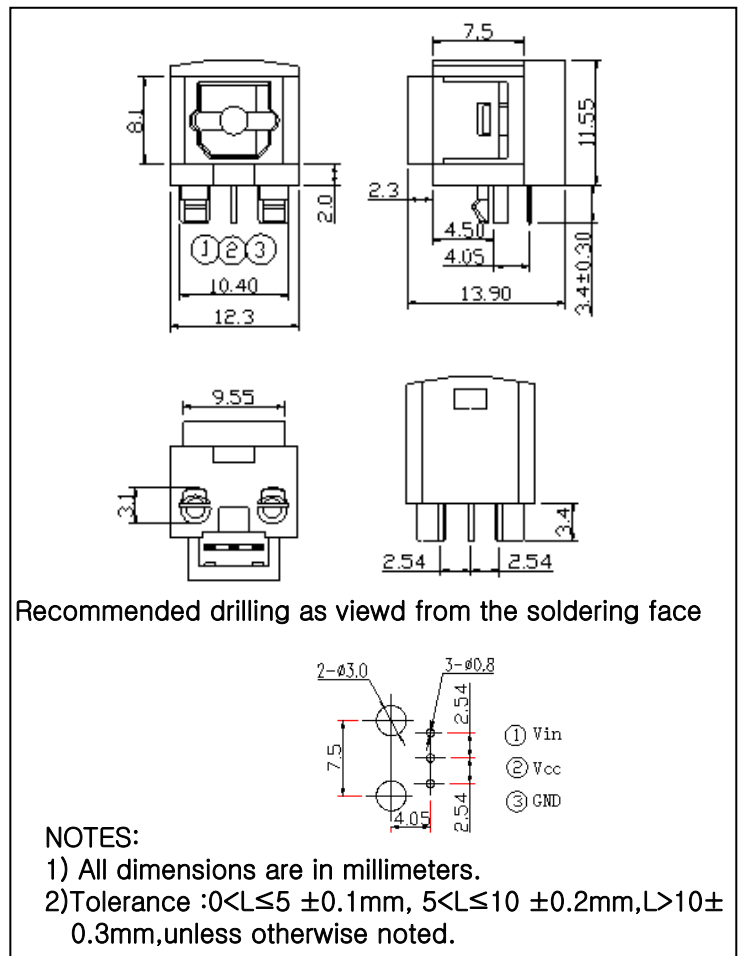
ISSUED DATE : **Jun. 09. 2012** _____

	ISSUE	REVIEW	REVIEW	APPR'D
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● Features:

1. Uni-directional data transmission using plastic fiber, conform to EIAJ standard CP-1201 (For Digital audio interfaces including fiber optic inter-connections).
2. Signal transmission speed:
MAX. 13.2Mbps (NRZ signal)
3. Operating voltage : 2.7 to 5.5 V
4. TTL and high speed C-MOS LOGIC IC compatible
5. ESD capacity : IC ≥ 5KV

● Outline Dimensions

● Applications:

- Audio equipment
- DVD player
- Automobile
- Digital audio
- PC, Notebook
- Sound card

● Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V _{cc}	-0.5 to + 7.0	V
Input voltage	V _{in}	-0.5 to V _{cc} + 0.5	V
Operating temperature	T _{opr}	-20 to +70	°C
Storage temperature	T _{stg}	-30 to +80	°C
Soldering temperature *1	T _{sol}	260	°C

*1 1 time For 5s (≤2 times) (The temperature of the PCB surface is <90°C)

● Recommended Operating Conditions

Parameter	Symbol	MIN.	TYP.	MAX.	Unit
Operating supply voltage	V _{cc}	2.7	---	5.5	V
Operating transfer rate (NRZ signal)	T	---	---	13.2	Mbps

● Electro-Optical Characteristics

 (Ta=25°C, V_{cc}=5V, C_L=15pf)

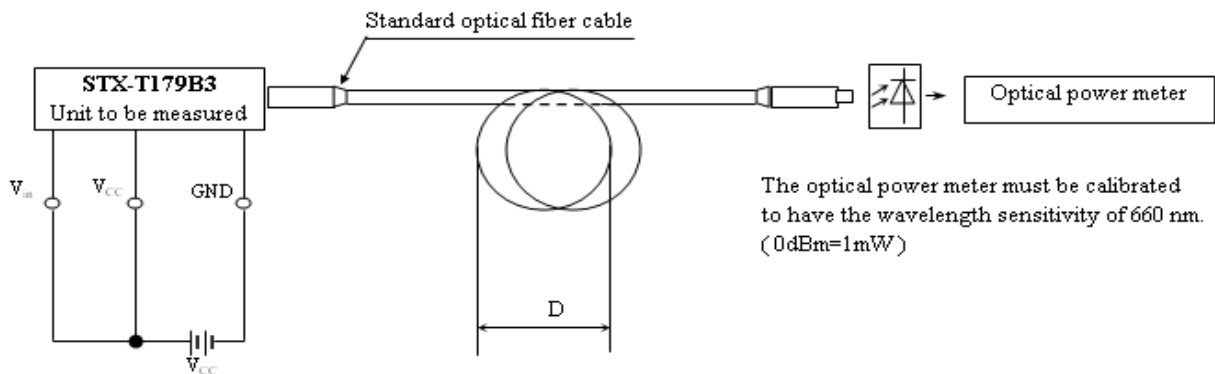
NO.	Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
1	Peak emission wavelength	λ_p		---	660	---	nm
2	Optical power output coupling with fiber	P _c	Refer to Fig. 1	-21	-18	-15	dBm
3	Dissipation current	I _{cc}	Refer to Fig. 2	3	---	7.5	mA
4	High level input voltage	V _{iH}	Refer to Fig. 2	2.0	---	V _{cc}	V
5	Low level input voltage	V _{iL}	Refer to Fig. 2	---	---	0.8	V
6	Low → High delay time	t _{pLH}	Refer to Fig. 3	---	---	100	ns
7	High → Low delay time	t _{pHL}	Refer to Fig. 3	---	---	100	ns
8	Pulse width distortion	Δ_{tw}	Refer to Fig. 3	-15	---	+15	ns
9	Jitter	Δ_{ji}	Refer to Fig. 3	---	1	+15	ns

● Mechanical Characteristics(Ta=25°C)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Insertion and Withdrawal Force	F _p	* 1	3.9	—	40	N

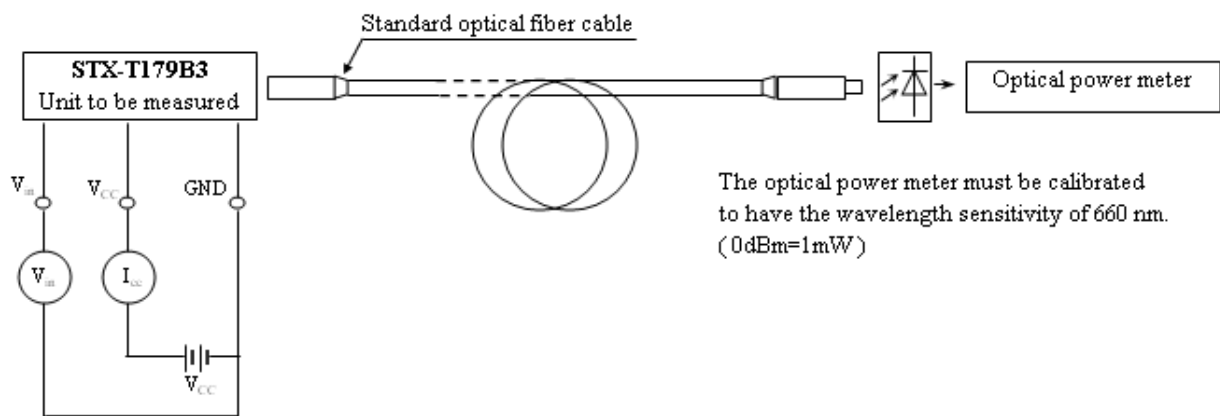
 * 1: Using standard optical fiber cable (980/1000 μ m)

● Fig. 1 Measuring Method of Optical Output Coupling with Fiber



- Notes (1) $V_{CC}=5.0V$ (State of operating)
 (2) To bundle up the standard fiber optic cable, make it into a loop with the diameter $D=10cm$ or more.

● Fig. 2 Measuring Method of Input Voltage and Supply Current

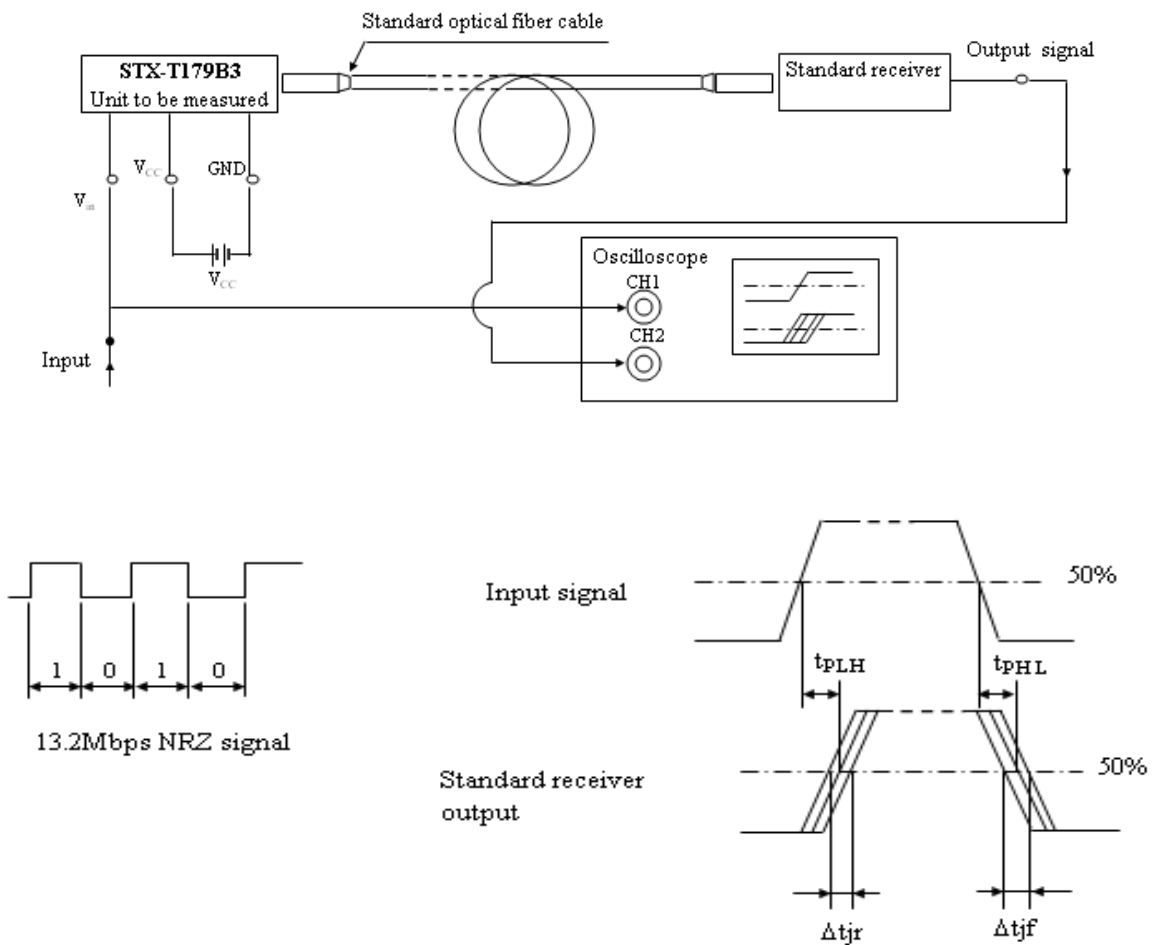


● Input conditions and judgement method

Conditions	Judgement method
$V_{in}=2.0V$ or more	$-21\text{ dBm} \leq P_c \leq -15\text{ dBm}$, $I_{CC}=7\text{ mA}$ or less
$V_{in}=0.8V$ or less	$P_c \leq -36\text{ dBm}$, $I_{CC}=7\text{ mA}$ or less

Note: $V_{CC}=5.0V$ (State of operating)

● Fig.3 Measuring Method of Pulse Response and Jitter



● Test item

Test item	Symbol	Test condition
Low →High pulse delay time	t_{PLH}	Refer to the above prescriptions
High →Low pulse delay time	t_{PHL}	Refer to the above prescriptions
Pulse width distortion	$\Delta\tau$	$\Delta\tau = t_{PHL} - t_{PLH}$
Low →High Jitter	Δt_{jr}	Set the trigger on the rise of input signal to measure the jitter of the rise of output
High →Low Jitter	Δt_{jf}	Set the trigger on the fall of input signal to measure the jitter of the fall of output

Notes (1) The waveform write time shall be 4 seconds. But do not allow the waveform to be distorted by increasing the brightness too much.

(2) $V_{CC} = 5.0$

(3) The probe for the oscilloscope must be more than 1M and less than 10pF.

● RELIABILITY TEST

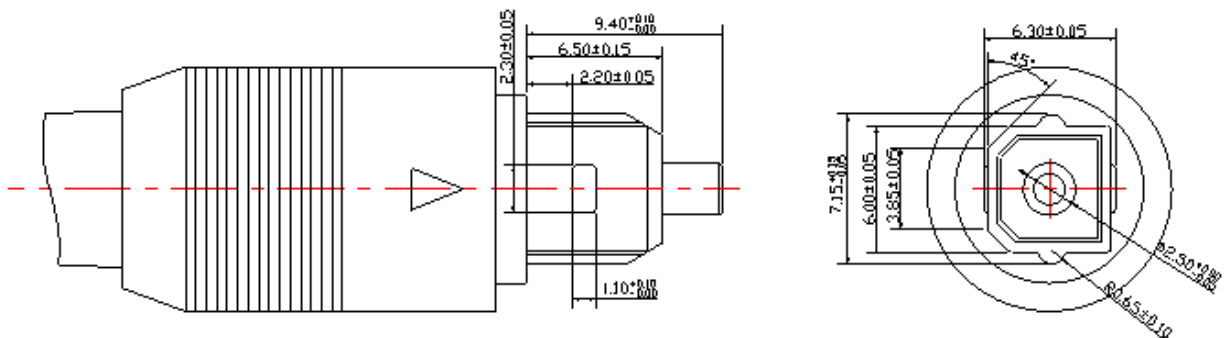
NO.	TEST ITEMS	TEST CONDITIONS	JUDGEMENT CRITERIA	SAMPLE NUMBER(n)
				SAMPLE FAILURE(c)
1	Life Test	Vcc=5V , 500H	Electro-Optical Characteristics NO.2~9 Shall be satisfied	N=10,c=0
2	High Temperature Storage	Ta=80℃±5℃, RH=85% Time=48Hrs		N=10,c=0
3	Low Temperature Storage	Ta=-30℃±5℃, Time=48Hrs		N=10,c=0
4	Temperature Cycling	Ta=-35℃~+85℃(85%RH) (30min) (30min) 20Cycles		N=10,c=0
5	Falling off Tset	Take the PCB with optical fiber jack to fall-self from 1 meter high ,3cycles		N=10,c=0
6	Soldering Strength Test	Soldering the optic fiber chip in the PCB, Then converse swing from a object by 1 kg weight , 1minute		N=10,c=0
7	Low High Temperature Impact Test	Ta=-35℃~+85℃ (30min) (30min) 8Cycles		N=10,c=0
8	Soldering Ability Test	Ta=260℃±5℃,5seconds	95% or more of the solder area is covered with solder, and Electro-Optical Characteristics NO.2~9 shall be satisfied	N=10,c=0
9	Soldering Heat	Ta=260℃±5℃,10seconds		N=10,c=0

● **MATERIAL DESCRIPTION**

NO.	Name	Material
1	HOUSING	ABS
2	PLUG	ABS
3	COVER	ABS
4	SHELL SPLINTER	STAINLESS STEEL
5	LEAD FRAME	Cu

● **RECOMMENDED**

BE SUIT WITH THIS OPTICAL DIGITAL CABLE



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