■ New ☐ Rev

APPROVAL SHEET

CUSTOMER :

DEVICE NAME : **Photo Link**

MODEL NO. : **STX-T179A1**

ISSUED DATE : **Nov. 08. 2012**

	ISSUE	REVIEW	REVIEW	APPR'D
ISSUED DEPT.			邱丽红	

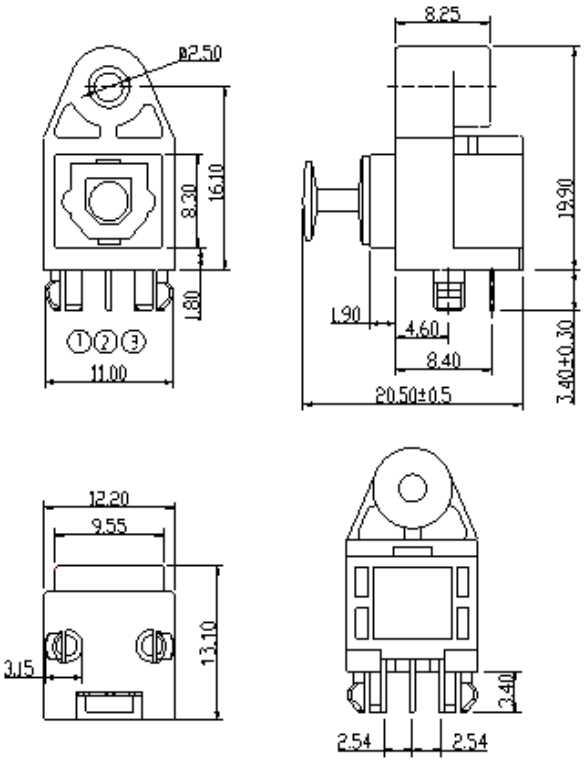
SEKSEMI

TEL : +86-755-88878308
FAX : +86-755-88828216
Email : sek@seksemi.com
http://www.seksemi.com

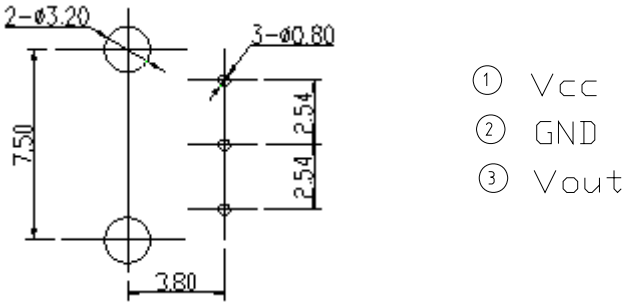
Features:

1.Uni-directional data transmission using plastic fiber,comform 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:



Recommended drilling as viewd from the soldering face



NOTES:

1) All dimensions are in millimeters.
2)Tolerance :0<L≤5 ±0.1mm, 5<L≤10 ±0.2mm, L>10±0.3mm,unless otherwise noted.

Absolute Maximum Ratings(Ta=25℃)

@ TA=25℃

Parameter	Symbol	Rating	Unit
Supply voltage	Vcc	-0.5 to + 5.5	V
Input voltage	V_O	Vcc+0.3V	V
Operating temperature	Topr	-20 to +70	℃
Storage temperature	Tstg	-30 to +80	℃
Soldering temperature *1	Tsol	260*	℃

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

● Recommended Operating Conditions:

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

● Electro-Optical Characteristics:

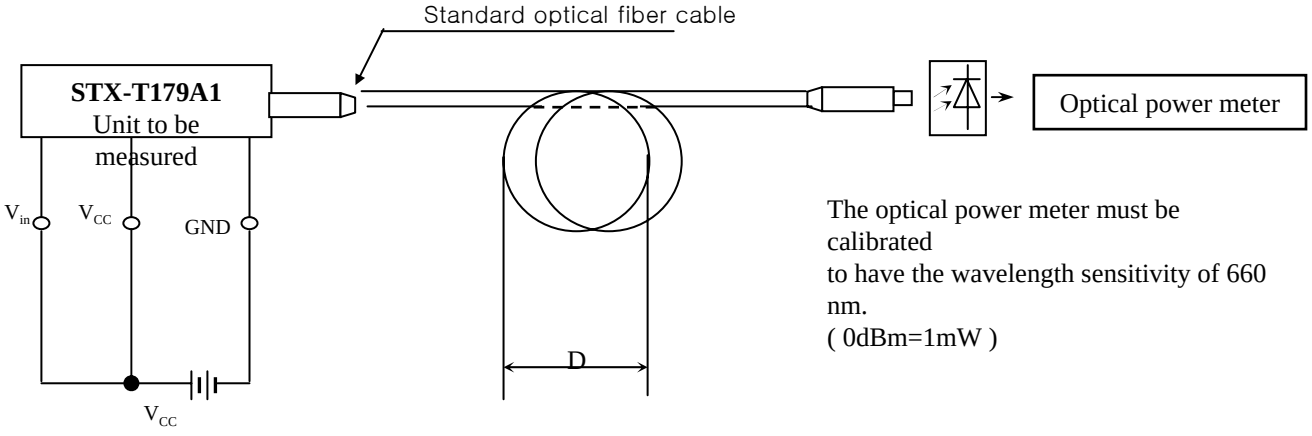
(Ta=25℃, Vcc=3V,CL=5pf,Ip=660nm)

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	---	8	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_{tj}	Refer to Fig. 3	---	1	+15	ns

● Mechanical Characteristics(Ta=25℃)

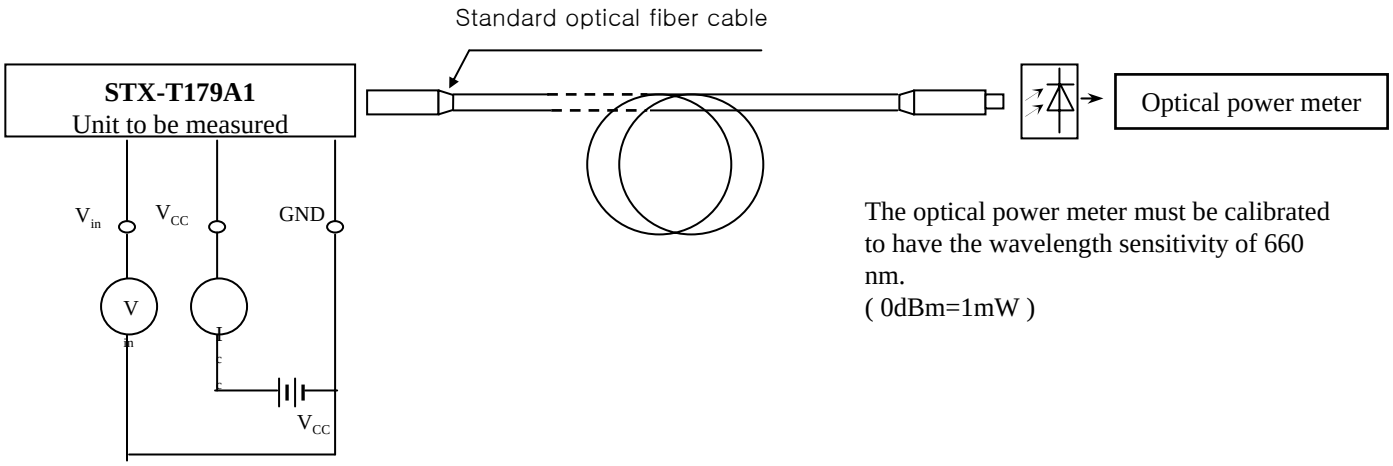
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Insertion and Withdrawal Force	Fp	* 1	3.9	–	40	N

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



Notes (1)Vcc=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 Intput Voltage and Supply Current



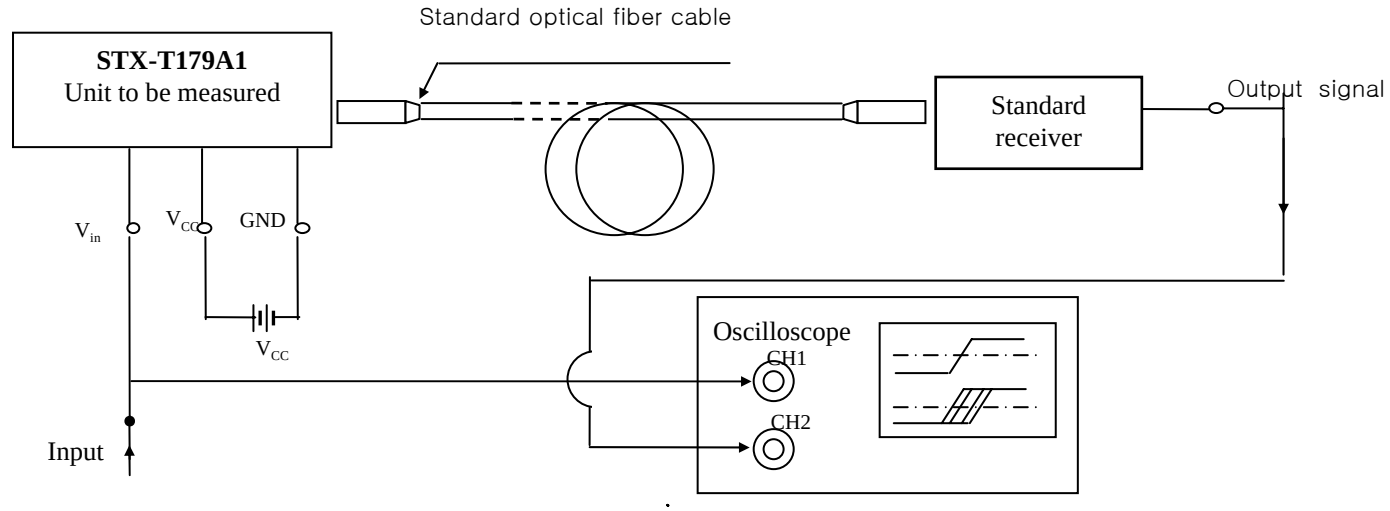
The optical power meter must be calibrated to have the wavelength sensitivity of 660 nm.
(0dBm=1mW)

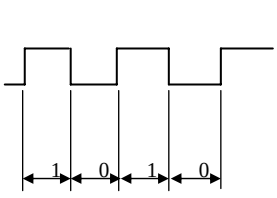
Input conditions and judgement method

Conditions	Judgement method
Vin=2.0V or more	-21dBm<=Pc<=-15dBm, Icc=7mA or less
Vin=0.8V or less	Pc < =-36dBm, Icc=7mA or less

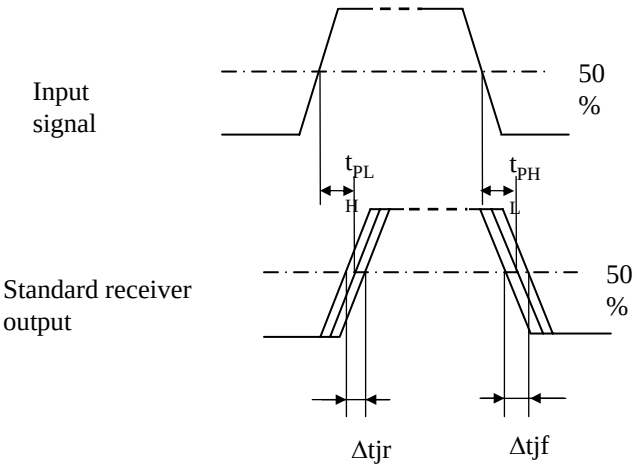
Note: Vcc=5.0V (State of operating)

● Fig.3 Measuring Method of Pulse Response and Jitter





13.2Mbps NRZ signal



●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 theabove prescriptions
Pulse width distortion	Δτω	$\Delta\tau\omega=t_{PHL}-t_{PLH}$
Low →High Jitter	Δtjr	Set the trigger on the rise of input signal to measure the jitter of the rise of output
High →Low Jitter	Δtjf	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) Vcc=5.0

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

● **RELIABILITY:**

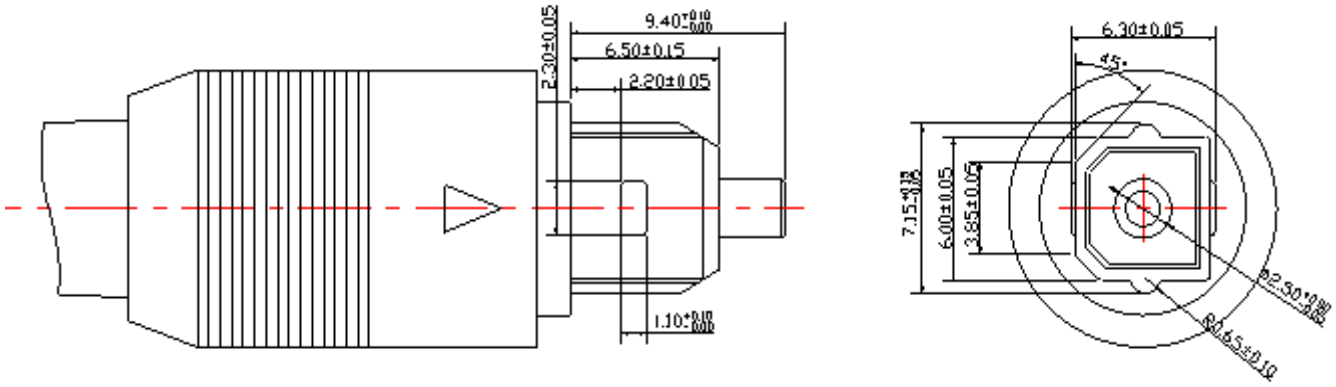
NO.	TEST ITEMS	TEST CONDITIONS	JUDGEMENT CRITERIA	SAMPLE NUMBER(n) / SAMPLE FAILURE(c)
1	Life Test	Vcc=5V , 500H	Electro-Optical Characteristics NO.2~9 Shall be satisfied	N=10,c=0
2	High Temperature Storage	Ta=80℃±5 ℃, RH=85% Time=48Hrs		N=10,c=0
3	Low Temperature Storage	Ta=-30℃±5 ℃, Time=48Hrs		N=10,c=0
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 I 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

● RECOMMENDED:

BE SUIT WITH THIS OPTICAL DIGITAL CABLE



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