



规格书

SPECIFICATION

CUSTOMER NAME	客户名称:	
CUSTOMER NO.	客户编号:	
SERIES	系 列:	光钎插座接收端
MODEL NO.	型 号:	XB-0J series
DRAWING NO.	图 形 号:	Optical Jack Receiver

If specification of this product meets your request, please confirm all the items of it and return to us with signature and stamp, it will be basis of our production and record. Thanks your cooperation in advance!

若此产品规格符合贵司要求，敬请确认此规格书内所有项目
并签名和盖章后回传给我司，以作我司产品制作之
依据和存档之用，多谢合作！

EXAMINE & APPROVAL 审批

APPROVE 接受	NOT APPROVE 不接受
SIGNATURE 签署 STAMP 盖章 DATE 日期	

PREPARED BY.制表人	CHECKED BY.校对	APPROVED BY.审核	APPROVAL BY.批准
研发部	品质部	工程部	总经办
戴海明	黄自清	庞军	吴量
2022. 06. 08	2022. 06. 08	2022. 06. 08	2022. 06. 08

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Quality core! Afterburner for Made in China!

Features

- High PD sensitivity for red light
- High speed up to 16Mbps
- Low power consumption and current dissipation
- +3 power source

Descriptions

The light receiving unit is a opto-electric component packaged with PD and I/V amplifier IC. The function of unit changes the light signal into electric signal.

The unit is operated at single+3V and the input signal is TTL compatible. The HLP-1180A-R has a maximum operating speed of 16 Mbps.

Applications

- Audio equipment
- DVD player
- PC, Notebook
- Sound card

Device Selection Guide

Chip		Operating Voltage (Vcc)	Dissipation Current(mA)	Fiber Coupling Light Output (dBm)		
IC Material	LED λ p(nm)			Min.	Typ.	Max.
Si	700	3.0	3	-24	-	-14.5

Absolute Maximum Ratings(Ta = 25°C)

Parameter	Symbol	Rating	Unit
Supply Voltage	Vcc	6	V
Storage Temperature	Tstg	-30 to 80	°C
Operating Temperature	Topr	-20 to 70	°C
Soldering Temperature	Tsol	260*	°C

- Soldering time $\leq$ 5s / 2 times.

Electro-Optical Characteristics

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating Voltage	Vcc	-	3	-	3.6	V
Peak Detective Wavelength	λ p	-		700		nm

Transfer Speed		NRZ signal	0.1	-	16	Mbps
Receiving Distance		Using APF*	0.2	-	20	m
Pulse Width Distortion	Δtw	16 Mbps NRZ Signal	-15	-	15	ns
Fiber Coupling Light Output	Pi	*1	-24	-	-14.5	dBm
Dissipation Current	Icc	*2	-	-	15	mA
High Level Output Voltage	VOH		2.4	-	-	v
Low Level Output Voltage	VOL		-	-	0.4	v
Rise Time	t_r	*3	-	-	25	ns
Fall Time	t_f	*3	-	-	25	ns
Low→ High propagation delay time	t_{PLH}	*3	-	-	100	ns
High→ Low propagation delay time	t_{PHL}	*3	-	-	100	ns
Jitter	Δtj	*3	-	1.5	15	ns

*Light output after APF should satisfy Pf range

The HLP-1180A-R light transmitting unit satisfies EIAJ CP-1201 digital audio interface standard.

Reliability Test Items

No.	Item	Test Condition	Test Hour/Cycle	Samples	Number (n) Failure (c)
1	Soldering Heat	260℃±5℃	5 sec./2times	22	n=22, c=0
2	High temp. & Hum. storage	Ta=40℃, 90%RH	500	22	n=22, c=0
3	High temp. storage	Ta=80℃	500	22	n=22, c=0
4	Low Temp. storage	Ta=-30℃	500	22	n=22, c=0
5	Temp. cycling	-30℃ ~ 80℃ (30min) (30min)	20	22	n=22, c=0
6	High Temp. Operation life	Ta=60℃, Vcc=5V ON	500	22	n=22, c=0

7	Repeated operation	500 times	Coupling force < 2 kg 0.4kg<Detaching force <2kg	22	n=22, c=0
8	Terminal Strength(tension)	Weight: 500 g 30 sec./each terminal		22	n=22, c=0
9	Terminal Strength(bending)	Weight: 500 g 2 times/each terminal		22	n=22, c=0
10	Mechanical Shock	Acceleration: 1000m/s ² Pulse width: 6 ms 3 times/ X,Y,Z direction		22	n=22, c=0
11	Vibration	Frequency range: 10~55 Hz /sweep 1 min Overallamplitude:1.5 mm 2H./X,Y,Z direction		22	n=22, c=0

I_{cc} (dissipation current): CURRENT ATTENUATE DIFFERENCE < 20%

P_f (fiber coupling light output): BRIGHTNESS ATTENUATE DIFFERENCE < 20%

T_{PLH} (propagation L → H delay time): DELAY TIME DIFFERENCE < 20%

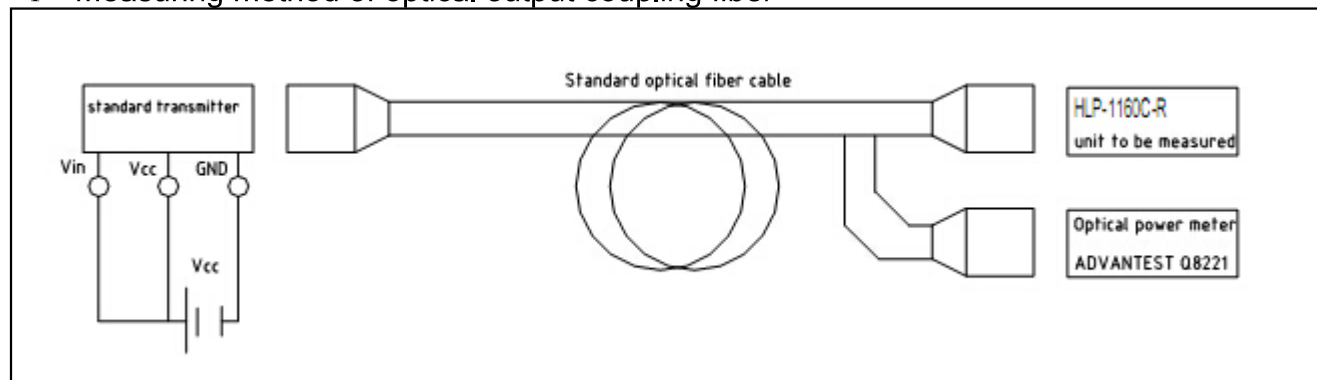
T_{PHL} (propagation H → L delay time): DELAY TIME DIFFERENCE < 20%

T_r (rise time): TIME DIFFERENCE < 20%

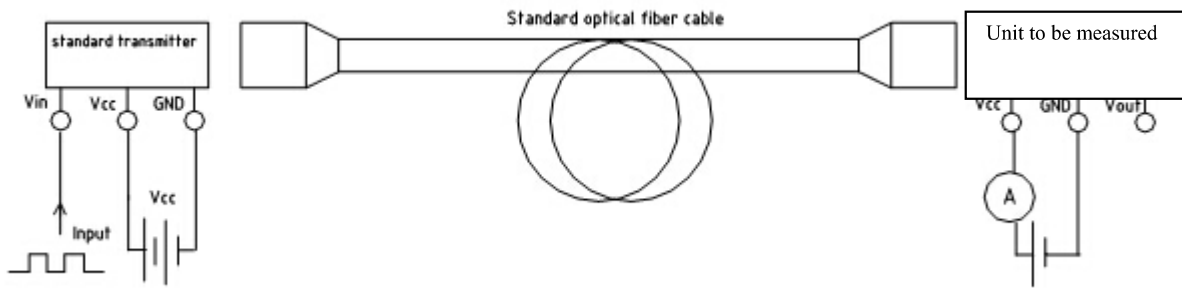
T_f (fall time): TIME DIFFERENCE < 20%

Measuring Method

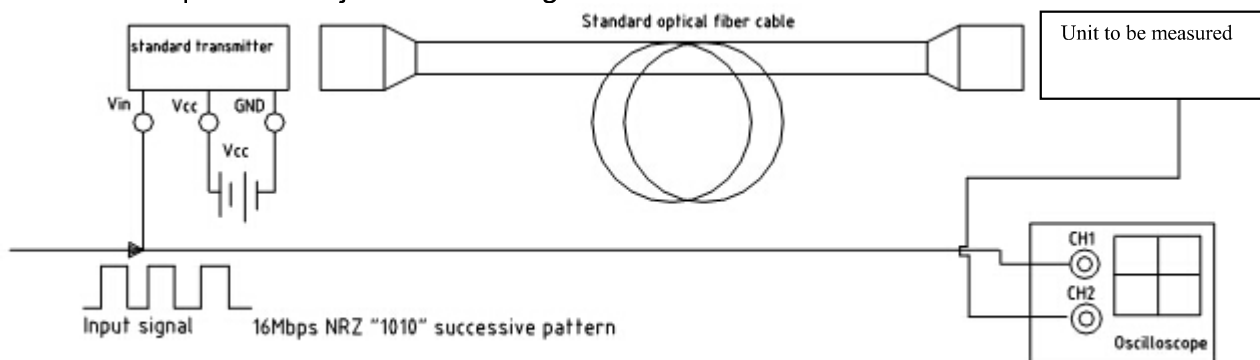
*1 Measuring method of optical output coupling fiber



*2 Current dissipation measuring method



*3 Pulse response and jitter measuring method



Precautions for Using Method

1. Connect a by-pass capacitor (0.1uF) close to the HLP-1180A within 7 mm of the unit lead frame.
2. Take proper electrostatic-discharge (ESD) precautions while handling these devices. These devices are sensitive to ESD.

