RECOMMEND P.C.B LAYOUT(SUBSTRATE THICKNESS: $\pm 1.6\text{mm}$)

PIN FUNCTION

- △ 1 VOUT
△ 2 GND
△ 3 VCC

1	220202	-
ISS.	DATE	C/N
APPROVED: TED T		
CHECKED: MIKE M		
DRAWN:		
CUSTOMER REF:		
ASSEMBLY DRG:		

NOTES:

- ALL TOLERANCES ARE ± 0.25 UNLESS OTHERWISE STATED.
- THIS CONNECTOR IS SUPPLIED WITH A PROTECTIVE CAP.

OBSOLETE

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TOLERANCES

X $\pm 1\text{mm}$
XX $\pm 0.25\text{mm}$
XXX $\pm 0.10\text{mm}$
XXXX $\pm 0.01\text{mm}$
ANGLES = °
UNLESS STATED

MATERIAL:

SEE ABOVE

FINISH: SEE ABOVE

S/AREA: mm²

TITLE:

MINI SIZE TOSLINK R/A
PCB MOUNT TRANSMITTER

DRAWING NUMBER:

TLT-1000008

SHT
1
OF
1

HARWIN INC
U.S.A.

TEL: (812)542 2546
FAX: (812)542 2541

HARWIN PLC
U.K.

TEL: 023 9237 0451
FAX: 023 9231 4590

HARWIN PTE LTD
SINGAPORE

TEL: 65 6779 4909
FAX: 65 6779 3868

(2)FEATURES

- *HIGH SPEED SIGNAL TRANSMISSION
(6Mbps,NRZ SIGNAL)
- *INPUT TTL COMPATIBLE
- *+5V SINGLE POWER SOURCE

2-1. DESCRIPTIONS

THE LIGHT TRANSMITTER UNIT IS ASSEMBLED WITH CONNECTOR AND OPTO-ELECTRIC COMPONENT PACKAGED WITH ALGAAS LED AND DRIVE IC. THE FUNCTION OF UNIT CHANGES THE ELECTRIC SIGNAL INTO LIGHT SIGNAL AND BE TRANSMITTED BY PLASTIC FIBER.

THE UNIT IS OPERATED AT SINGLE +5V AND THE INPUT SIGNAL IS TTL COMPATIBLE. THE LIGHT INTENSITY EMITS FROM LED IS CONTROLLED BY DRIVE IC. THE LIGHT SIGNAL IS COUPLED INTO PLASTIC FIBER BY CONNECOR THE UNIT HAS HIGH PERFORMANCE AT LOW DISSIPATION CURRENT STERDY LIGHT OUTPUT AND EFFICIENT LIGHT COUPLING.

2-2. APPLICATIONS

- *AUDIO EQUIPMENT
- *AUTOMOBILE
- *DVD PLAYER

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(3) Absolute Maximum Ratings (TA=25°C)


Parameter	Symbol	Rating	Unit
Supply Voltage	Vcc	−0.5 to 7	V
Storage Temperature	Tstg	−40 to 70	°C
Operating Temperature	Topr	−20 to 70	°C
Soldering Temperature	Tsol	260	°C
High Level Output Current	10H	−1	mA
Low Level Output Current	10L	5	mA

Note: Soldering time <10 Seconds

3-1. ELECTRO-OPTICAL CHARACTERISTICS

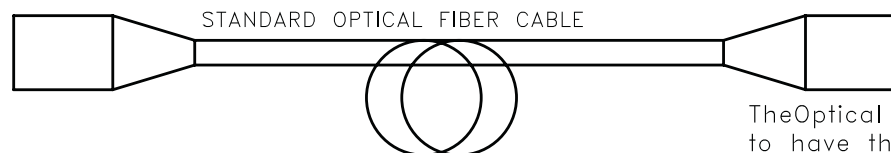
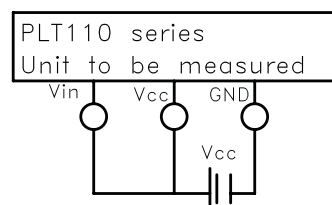
Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating Voltage	Vcc		4.75	5.00	5.25	V
Transmission Speed		NRZ signal	0.1	–	6.8	Mb/s
Transmission Distance		Using APF	0.2	–	5	m
Pulse Width Distortion	?TW	Pulse Width=147ns Pulse Cycle=294ns CL=10pF	−25	–	25	ns
Maximum Receivable Power	P max	6.8Mb/s, Using ADF	−14.5	–	–	dBm
Maximum Receivable Power	P max	6.8Mb/s, Using ADF	–	–	−22	dBm
Current Consumption	Icc	Vcc=+v	–	22	40	mA
High Level Input Voltage	VIH		3.6	4.0	–	V
Low Level Input Voltage	VIL		–	0.2	0.4	V

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				S/AREA: mm ²			

3-2. MEASUERING METHOD

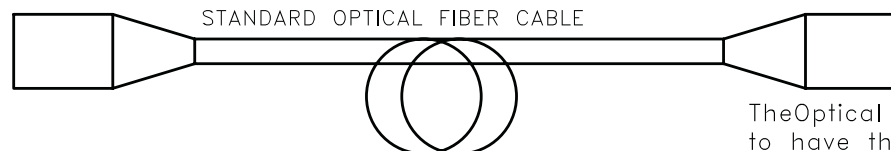
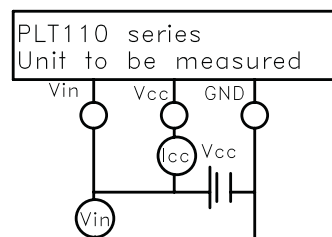
*1 Measuring method of optical output coupling fiber



Optical power meter

The Optical Power meter must be calibrated
to have the wavelength sensitivity of 661nm
(0dBm=1mW)

*2 Input voltage/power dissipation measuring method



Optical power meter

The Optical Power meter must be calibrated
to have the wavelength sensitivity of 661nm
(0dBm=1mW)

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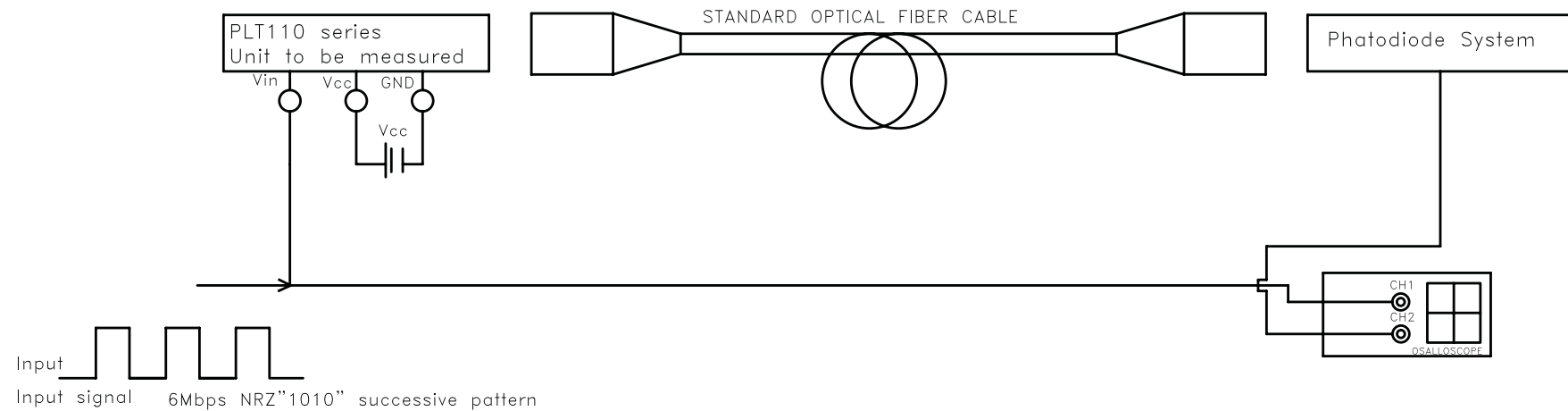
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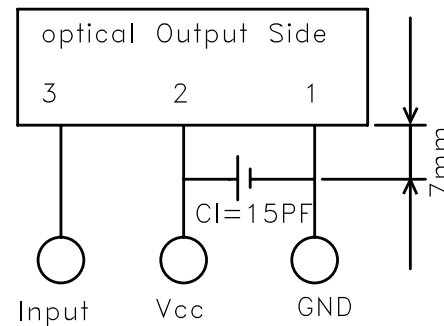
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*3 Pulse response measuring method



(4) USING METHOD



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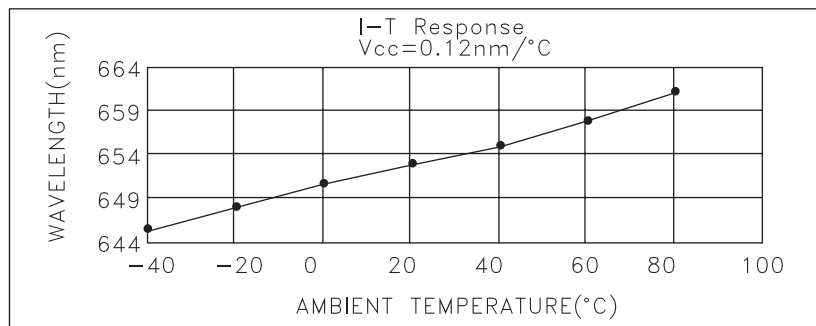
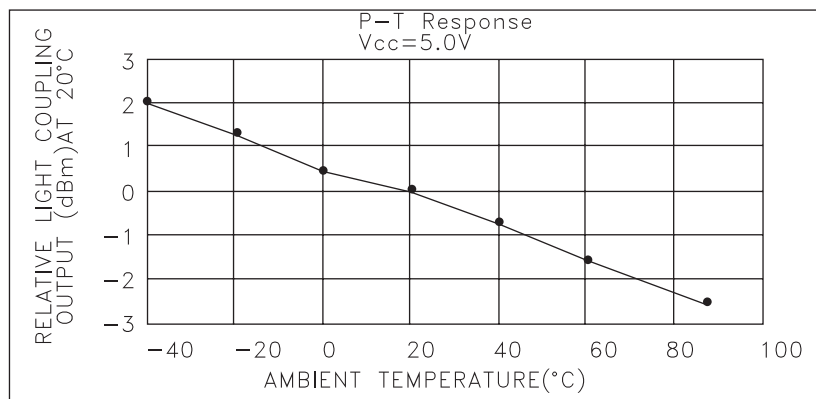
(5) RELIABILITY TEST ITEMS

NO.	ITEM	TEST CONDITION	TEST HOUR/CYCLE	SAMPLE SIZE (piece)	AC/RE
1	SOLDERING HEAT	260°C±5°C	10 seconds	154	0/1
2	ROOM TEMP. TEST(1)	Vcc=5V,Ta=25°C Vin signal:6Mbps(NRZ)	1000	22	0/1
3	ROOM TEMP. TEST(2)	Vcc=5V,Ta=25°C Vin signal:DC(5v)	1000	22	0/1
4	HIGH TEMP. TEST	Vcc=5V,Ta=85°C Vin signal:6Mbps(NRZ)	1000	22	0/1
5	LOW TEMP. TEST	Vcc=5V,Ta=-40°C Vin signal:6Mbps(NRZ)	1000	22	0/1
6	HIGH TEMP. & HUMI. TEST	Ta=85°c,RH85%	1000	22	0/1
7	TEMPERATURE CYCLE TEST	-55°C~~~~85°C (30min)(5min)(30min)	100	22	0/1
8	THERMAL SHOCK TEST	-10°C~~~~~ 100°C (5min)(10sec)(5min)	100	22	0/1

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				S/AREA: mm ²			

(6) TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES



1	220202	-
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