■ FEATURES

- High speed signal transmission
  (8 Mbps, NRZ signal)
- Input TTL compatible
- +3V low voltage single power supply
- Low power consumption

■ 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 transmitt light signal by plastic fiber.

The unit is operated at single +3V 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 connector. The unit has high performance at low dissipation current, steady light output and efficient light coupling.

■ APPLICATIONS

- Audio equipment
- Automobile.
- DVD player
- CD player
- Light repeater.
- Light selector.
- Electric / light Transformer unit..
- PC sound card.

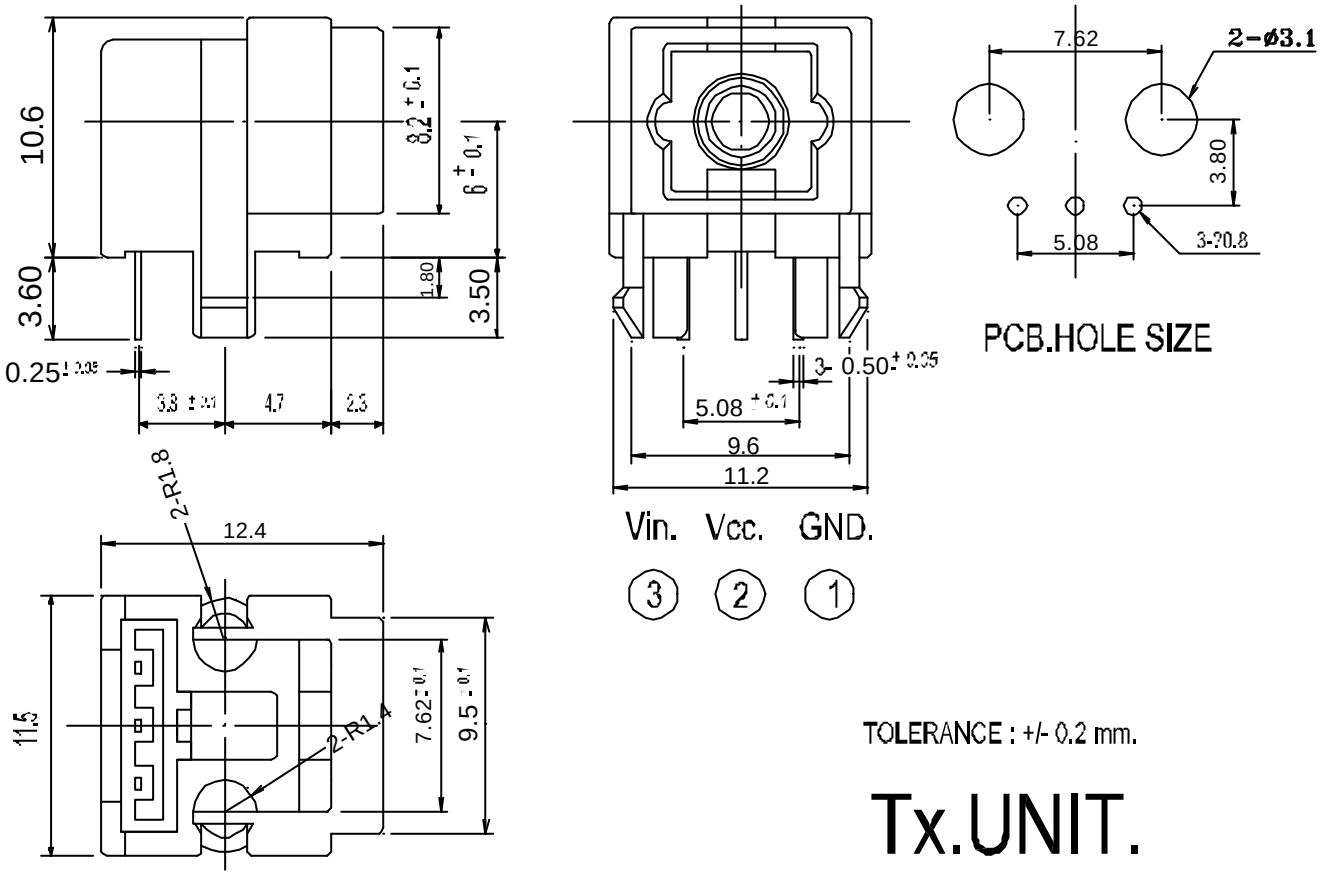
MARK	REVISION	DATE	SIGN	APPO
7				
6				
5				
4				
3				
2				
1				

APPROVED BY	CHECKED BY	DESIGNED BY	DRAWN BY

FINISHED	
COLOR	
THICKNESS	
PROCESS	
MATERIAL	
TOLERANCE	
SCALE	
UNIT	mm

PARK NO	
DESCRIPTION.	TRANSMITTER UNIT
DRAWN NO	ZL-3000
SHEEL	1/6

■ PACKAGE DIMENSIONS



TOLERANCE : +/- 0.2 mm.

Tx.UNIT.

DESCRIPTION.	DRAWN NO	SHEET
TRANSMITTER UNIT	ZL-3000	2

■ ABSOLUTE MAXIMUM RATINGS(Ta = 25℃)

Parameter	Symbol	Rating	Unit
Supply Voltage	Vcc	-0.5 to 7	V
DC Input Voltage	Vin	-0.5 to Vcc +0.5	V
Power Dissipation	P	40	mW
Storage Temperature	Tstg	-30 to +80	℃
Operating Temperature	Topr	-20 to +70	℃
Soldering Temperature	Tsol	260*	℃

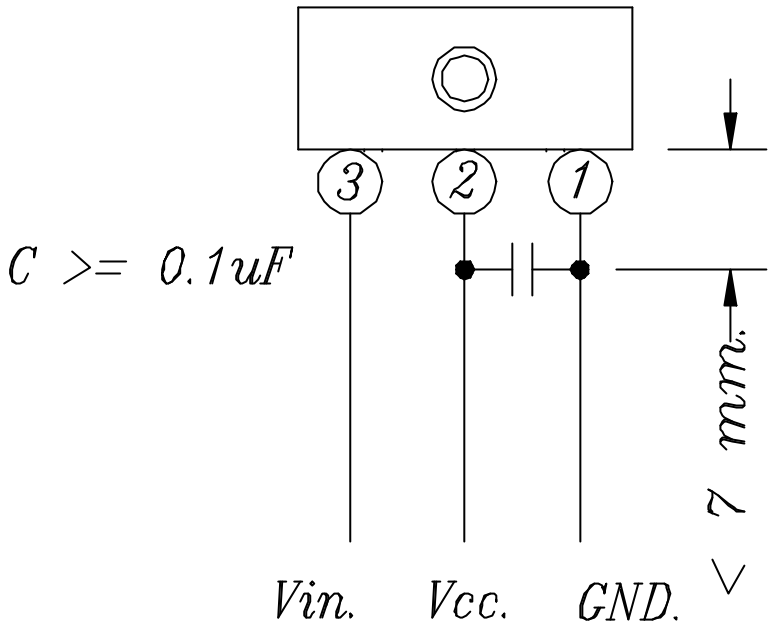
* Soldering time ≤ 10 s.

■ ELECTRO-OPTICAL CHARACTERISTICS

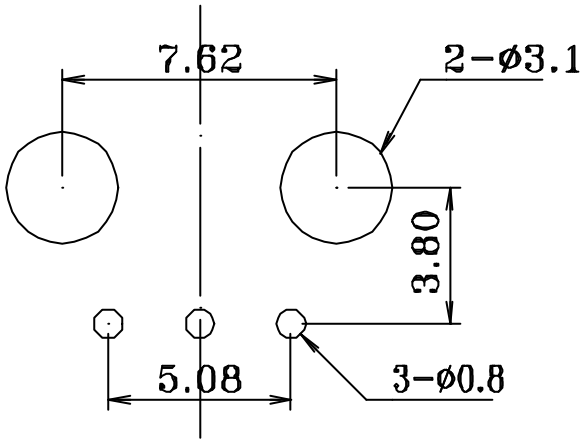
(Vcc=3V +/- 0.05 V, Topr.= 25 ℃)

Parameter	Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Operating Voltage	Vcc		**2.7**	**3.00**	**3.3**	V
Peak Emission Wavelength	λp		630	660	690	nm
Transmission Speed		NRZ signal	DC	-	**8**	Mbps
Transmission Distance		Using APF	0.2	-	20	m
Fiber Coupling Light Output	Pf	*1	**-21**	**-17**	**-15**	dBm
Dissipation Current	Icc	*2	-	8	12	mA
High Level Input Voltage	V_{IH}		2.1	-	-	V
Low Level Input Voltage	V_{IL}		-	-	0.8	V
Low to high delay time	T_{PLH}	*3			100	ns
High to low delay time	T_{PHL}	*3			100	ns
Pulse width distortion	Δtw	*3	- 25		+ 25	ns
Jitter	Δtjr	*3		1	30	ns

■ METHOD OF USE



■ PCB LAYOUT for ELECTRICAL CIRCUIT



PCB.HOLE SIZE

Unit : mm
Dimension Tolerance : ±0.1mm
Substratc Thockncss : 1.6mm

■ RELIABILITY TEST PARAMETERS

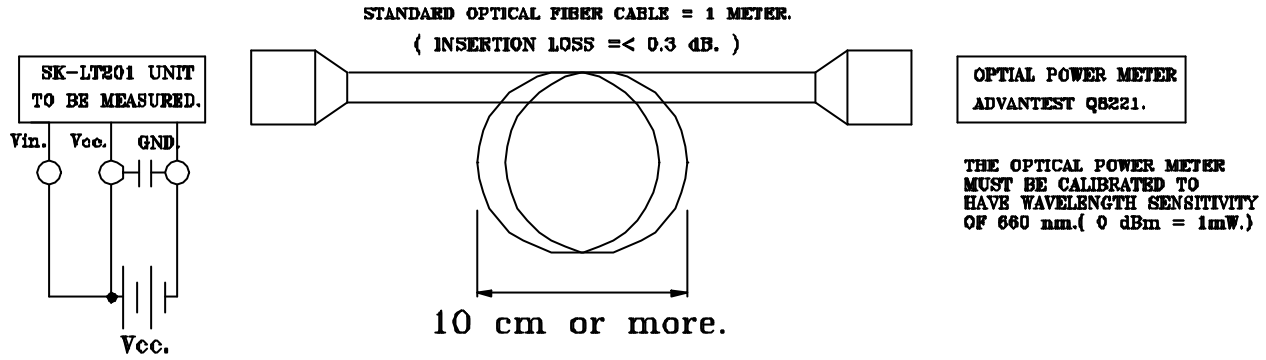
(Vcc=3V +/- 0.05 V, Topr.= 25 ℃)

No.	Item	Test Condition	Test Hour/Cycle	Sample Size (piece)	AC/RE
1	Soldering Heat	260℃ ± 5℃	10 seconds	154	0/1
2	Operation Life Test(3)	Vcc = 3V, Ta = 25℃ Vin signal: 8 Mbps(NRZ)	1000	22	0/1
3	Operation Life Test(2)	Vcc = 3V, Ta = 25℃ I = 20 mA	1000	22	0/1
4	High Temp. Storage	Ta = 80℃	1000	22	0/1
5	Low Temp. Storage	Ta = -30℃	1000	22	0/1
6	High Temp.& Humidity. Test	Ta = 80℃, RH 85%	1000	22	0/1
7	Temperature Cycle Test	-30℃ 25℃ 80℃ (30min) (5min) (30min)	100	22	0/1
8	Thermal Shock Test	-30℃ ~~~~ 80℃ (3min) (10sec) (3min)	100	22	0/1

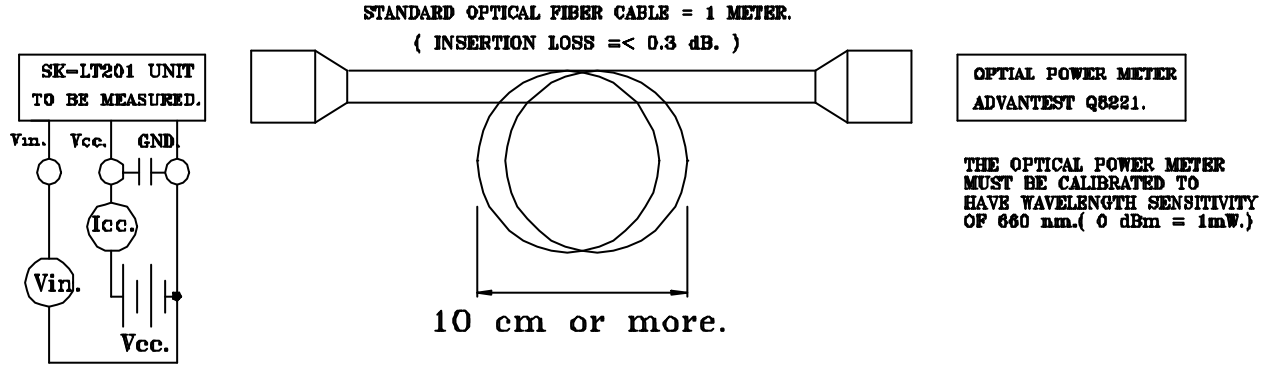
Judgement Method : no open & no short circuits.

■ MEASURING METHOD

1.) MEASURING METHOD OF OPTICAL OUTPUT COUPLING FIBER.



2.) INPUT VOLTAGE / POWER DISSIPATION MEASURING METHOD.



3.) PULSE RESPONSE MEASURING METHOD.