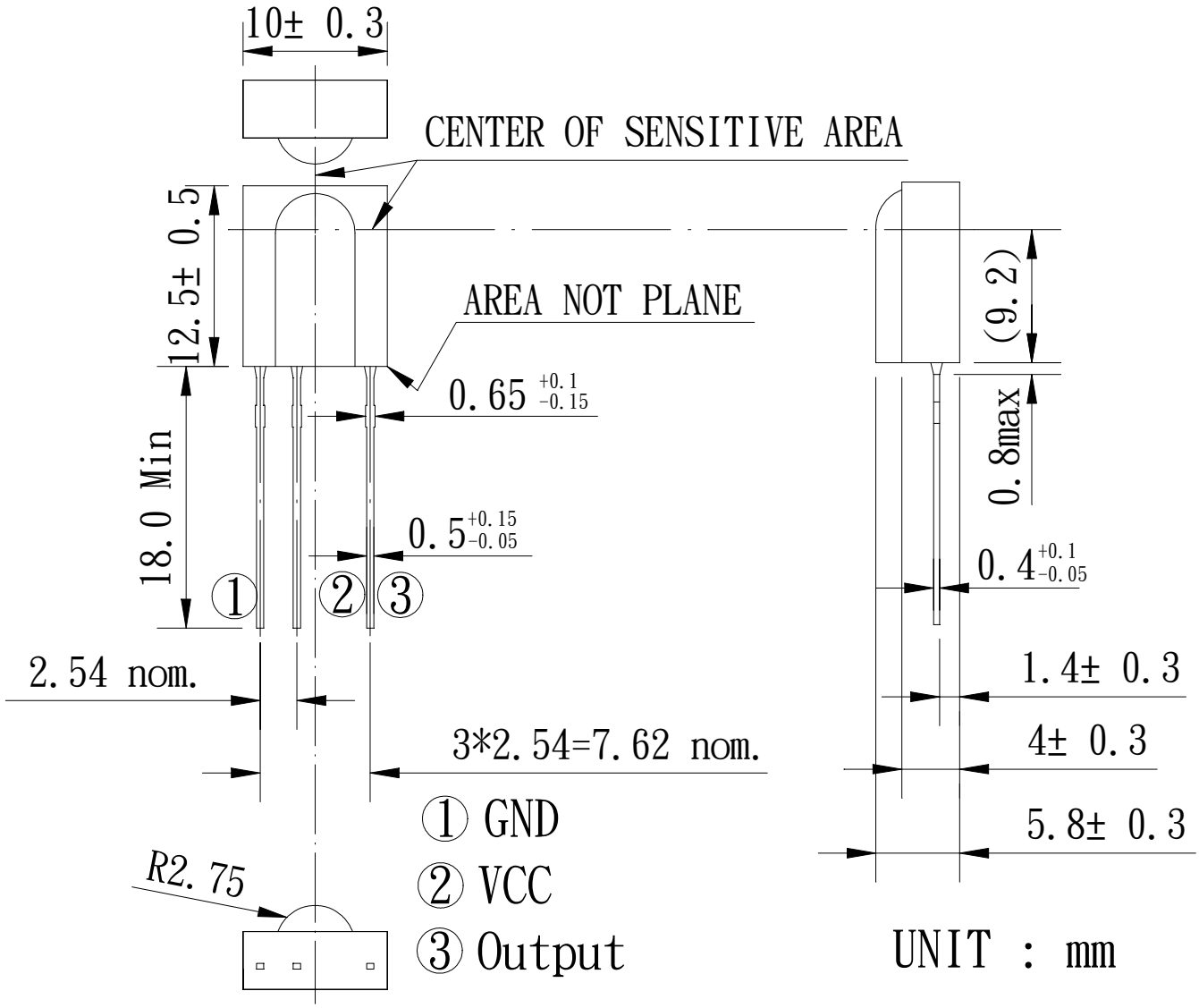
PACKAGE DIMENSIONS :



Office: NO 25,Lane.76, Chung Yang Rd., Sec.3, Tucheng, Taipei 236, Taiwan, R.O.C.
TEL: 886-2-2267-2000,2267-9936(22Lines)
FAX: 886-2-2267-6189
http: //www.everlight.com

NOTES：

1. This drawing measure is a standard value. All dimensions are in millimeter.
2. In case of designation is tolerance ± 0.3mm.
3. Lead spacing is measured where the lead emerges from the package.
4. Protruded resin under flange 0.8mm Max.
5. Lens color: Black.
6. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
7. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT consent.
8. When using this produce, please observe the absolute maximum ratings and the instructions for use outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.

Description：

The device is a miniature type infrared remote control system receiver which has been developed and designed by utilizing the most updated IC technology. PIN diode and preamplifier are assembled on lead frame, the epoxy package is designed as IR filter. The demodulated output signal can directly be decoded by a microprocessor.

Feature：

- Low voltage and low power consumption.
- Photodiode with integrated circuit.
- High sensitivity.
- TTL and CMOS compatibility.
- High immunity against ambient light.
- High protection ability to EMI and metal case can be customized.
- Long reception distance.
- High sensitivity.

Application：

1. Light detecting portion of remote control
   - TV
   - VCR
   - Audio equipment
   - Air conditioner
   - CATV set top box
   - Electric fan
   - Multi-media equipment
2. Optical switch

Absolute maximum ratings：

(Ta=25℃)

Parameter	Symbol	Ratings	Unit	Notice
Supply Voltage	Vcc	0～5.5	V	
Operating Temperature	Topr	-20～+75	℃	
Storage Temperature	Tstg	-25～+85	℃	
Soldering Temperature	Tsol	260	℃	4mm from mold body less than 5 seconds

Electro Optical Characteristics：

(Ta=25℃)

Parameter	Symbol	MIN	TYP	MAX	Unit	Condition
Supply Voltage	Vcc	4.7	5	5.3	V	DC voltage
Supply Current	Icc	0.4	0.63	0.9	mA	No signal input
B.P.F Center Frequency	fo	-	38	-	KHz	-
Peak Wavelength	λ p	-	940	-	nm	-
Reception Distance	D	10	14	-	m	At the ray axis *1
		5	7			
Half Angle	1/2 θ	-	± 45	-	deg	-
High Level Pulse Width	T_H	400	-	800	μs	600 μS Pulse
Low Level Pulse Width	T_L	400	-	800	μs	0.4 Duty Cycle
High Level Output Voltage	V_H	4.7	4.94	-	V	-
Low Level Output Voltage	V_L	-	0.1	0.3	V	-

*1:The ray receiving surface at a vertex and relation to the ray axis in the range of ϕ= 0° and ϕ=45°.

■ Performance：

The specified electro-optical characteristics is satisfied under the following conditions at the controllable distance.

①Measurement place

A place that is nothing of extreme light reflect in the room.

②External light

Project the light of ordinary white fluorescent lamps which are not high frequency lamps and must be less then 10 Lx at the module surface.

③Standard transmitter

A transmitter whose output is so adjusted as to Vo=400mVp-p and the output Wave form shown in Fig.-1.According to the measurement method shown in Fig.-2 is specified as the standard transmitter.

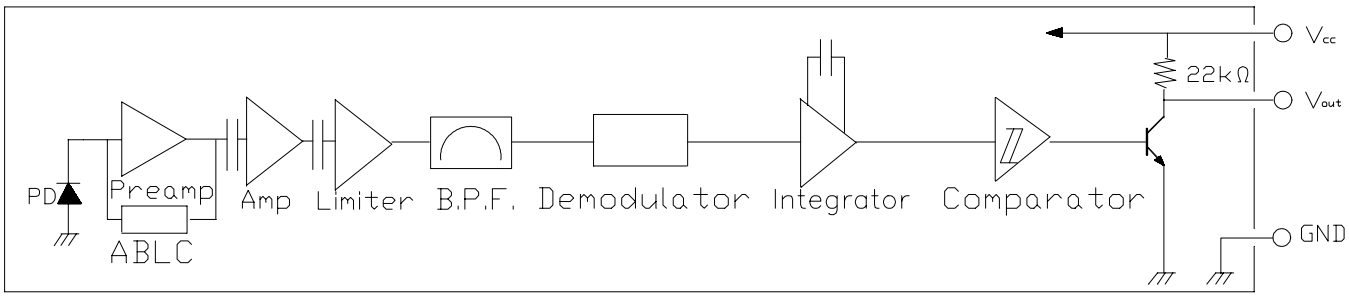
However , the infrared photodiode to be used for the transmitter should be λp=940nm,Δλ=50nm.

(Standard light / Light source temperature 2856°K).

④Measuring system

According to the measuring system shown in Fig.-3

■ Block Diagram：



■ Application Circuit：

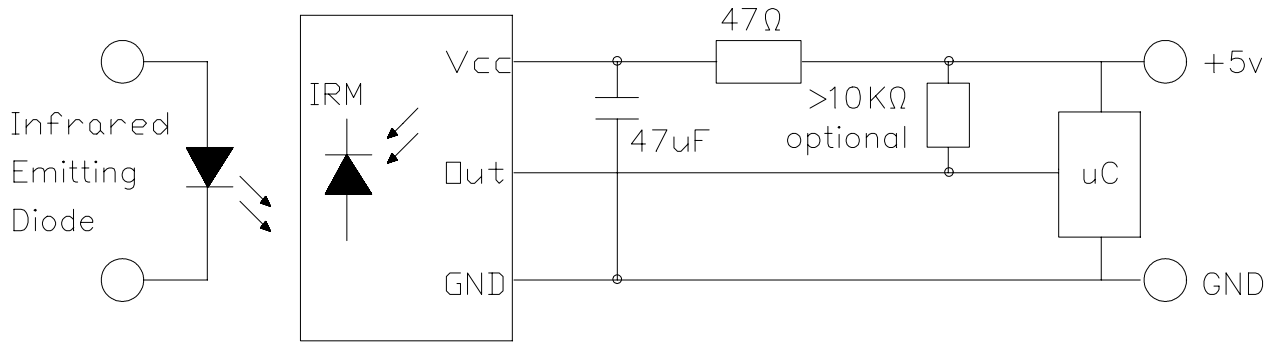
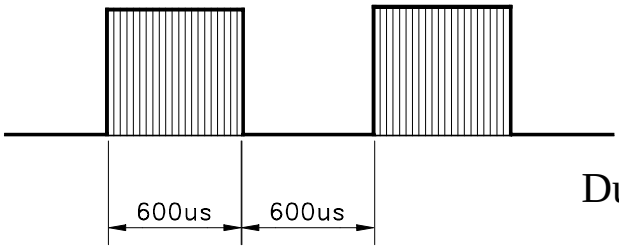
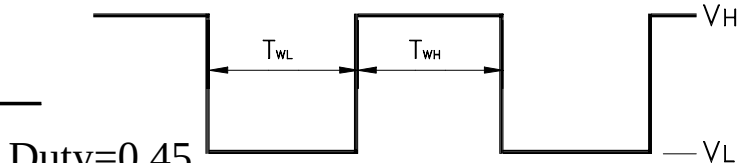


Fig.-1 Transmitter Output



D.U.T output Pulse



Duty=0.45

Fig.-2 Measuring Method

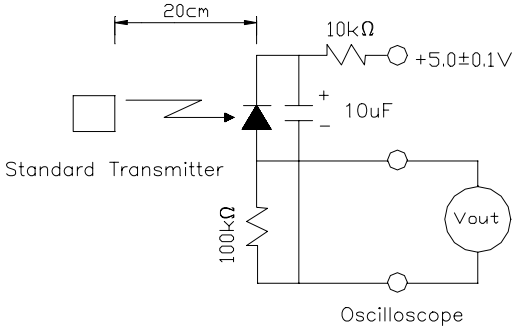
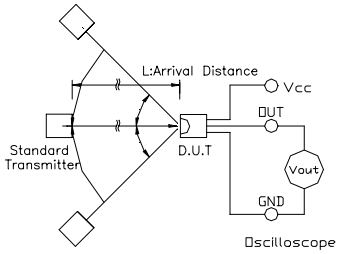


Fig.-3 Measuring System



TYPICAL ELECTRICAL/OPTICAL/CHARACTERISTICS CURVES

Fig.-4 Relative Spectral Sensitivity vs. Wavelength

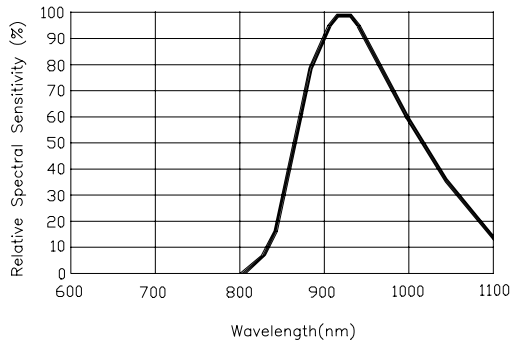


Fig.-5 Relative Transmission Distance vs. Directive

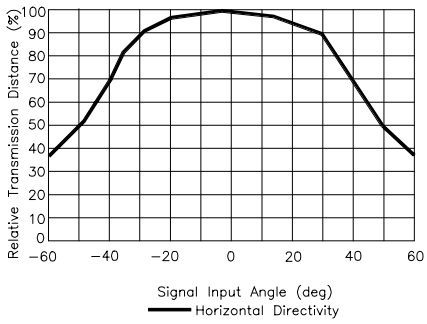


Fig.-6 Output Pulse Length vs. Arrival Distance

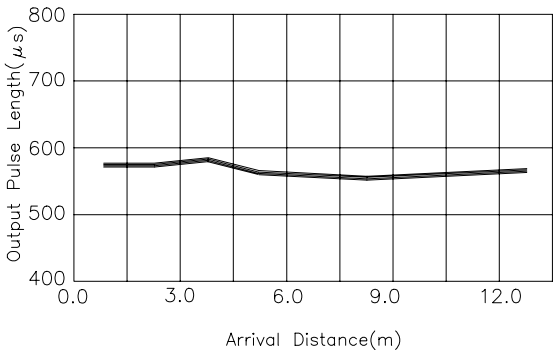


Fig.-7 Arrival Distance vs. Supply Voltage

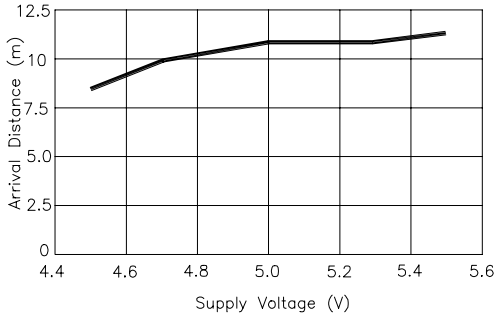


Fig.-8 Relative Transmission Distance vs. Relative Transmission Distance

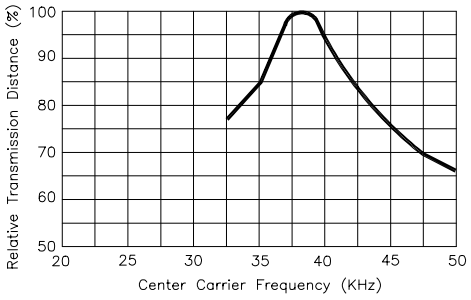
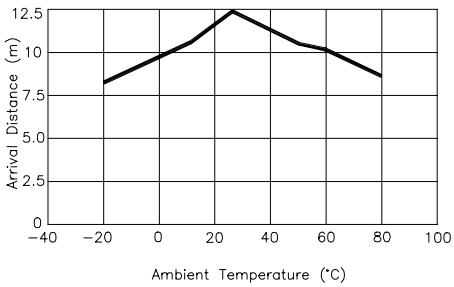


Fig.-9 Arrival Distance vs. Ambient Temperature



Reliability test item and condition：

No	Item	Test Conditions	Test Hours/Cycle	Sample Size	Ac/Re
1	Solder Heat	TEMP.：260°C±5°C	5 Sec	76PCS	0/1
2	Temperature Cycling	85°C ↓ 30min, 25°C ↓ 5min, -55°C ↓ 30min, 25°C ↓ 5min	50 Cycle	76PCS	0/1
3	Thermal Shock	H：+100°C 5min ↕ 10sec L：–10°C 5min	50 Cycle	76PCS	0/1
4	High Temperature Storage	TEMP：85°C	1000 Hrs	76PCS	0/1
5	Low Temperature Storage	TEMP：–40°C	1000 Hrs	76PCS	0/1
6	DC Operating Life	Vcc=5V	1000 Hrs	76PCS	0/1
7	High Temperature/ High Humidity	TA=85°C RH=85%	1000 Hrs	76PCS	0/1

Inspection standard

Among electrical characteristics, total number shall be inspected on items blow.

@Front distance between emitter & detector.

@Supply current.

@H level output voltage.

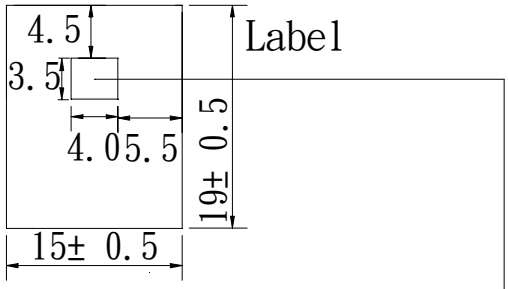
@L level output voltage.

items except above mentioned are not inspected particularly , but shall fully satisfy the standard value.

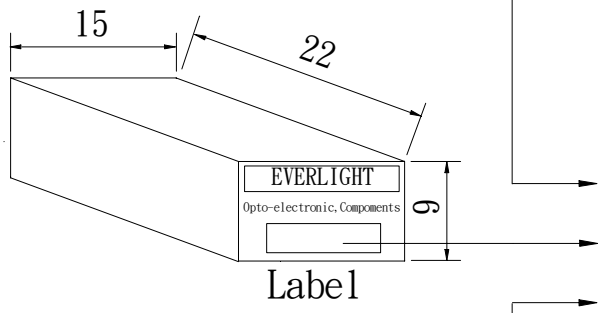
	Critical defect(CR)	Major defect(MA)	Minor defect(MI)
AQL	0.1	0.65	1.5

Packing Specifications

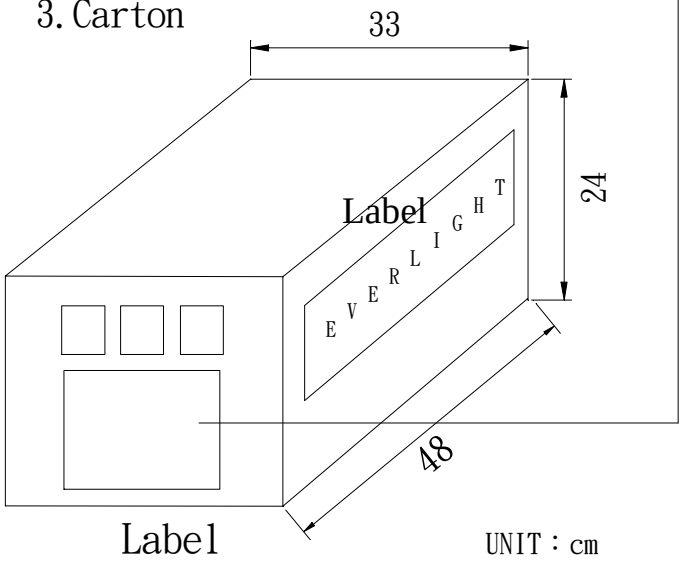
1. Bag



2. Box



3. Carton



CPN：Customer's Production Number
P/N：Production Number
QTY：Packing Quantity
CAT：Ranks
HUE：Peak Wavelength
REF：Reference
LOT NO：Lot Number
MADE IN TAIWAN：Production place

Packing Quantity Specification

1. 150 Pcs/1Bag，6 Bags/1Box
2. 10 Boxes/1Carton