

Features

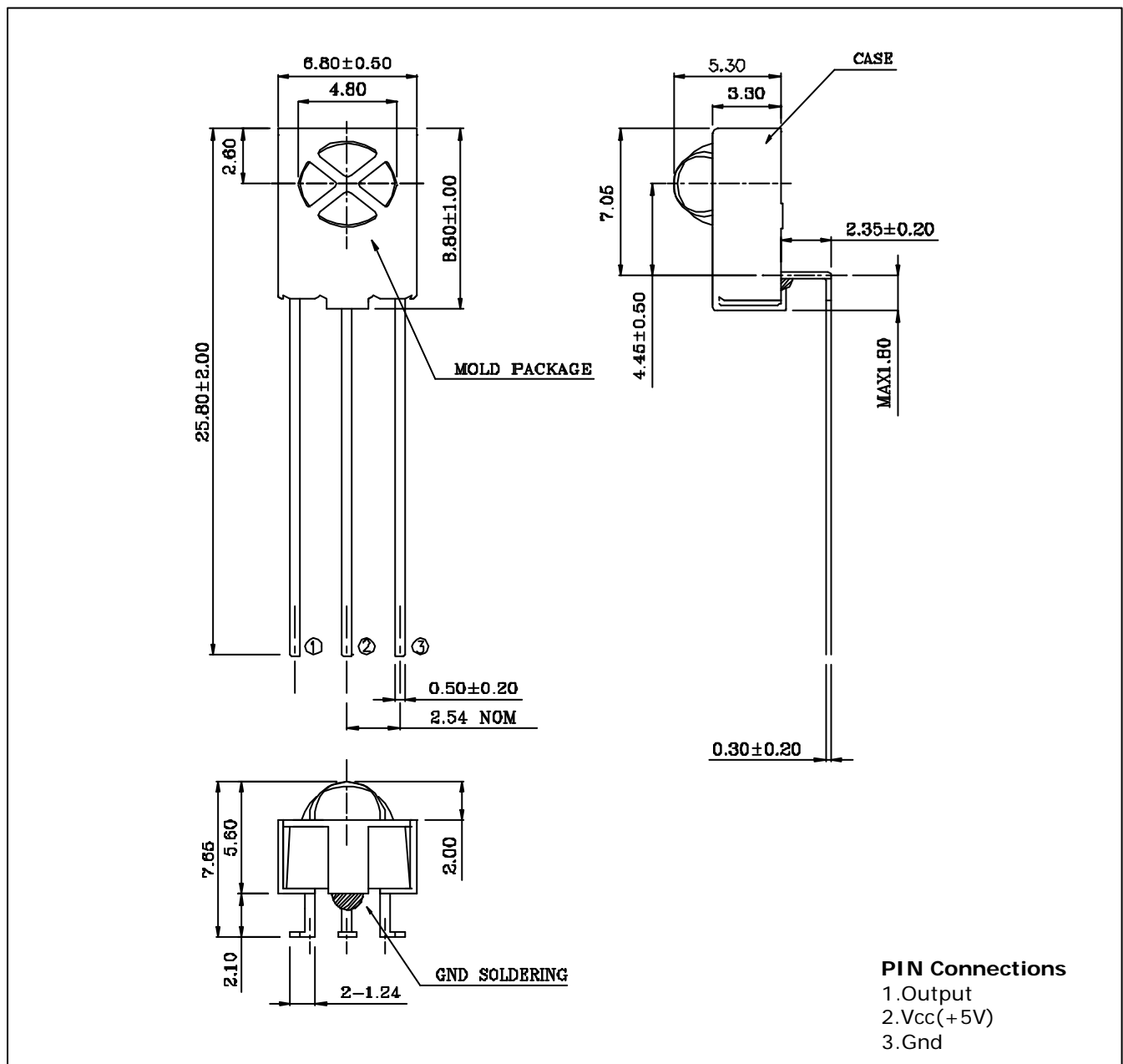
- Photo detector and preamplifier in one package
- Enhanced immunity against all kinds of disturbance light
- High performance photo diode and built-in I.C
- High speed response and output
- Low power consumption and easy use

Application

- Light detecting portion of remote control
- TVs, VCRs, Audio equipments, CATV Set Top boxes, Multi-media equipments

Outline Dimensions

unit : mm



Absolute maximum ratings

| Characteristic | Symbol | Ratings | Unit |
|-------------------------|-----------|----------------------|------|
| Supply Voltage | V_{CC} | 6.0 | V |
| Power Dissipation | P_D | 0.27 | W |
| Operating Temperature | T_{opr} | -10 ~ 60 | |
| Storage Temperature | T_{stg} | -20 ~ 75 | |
| *1Soldering Temperature | T_{sol} | 260 within 5 seconds | |

*1.Keep the distance more than 2.0mm from PCB to the bottom of package

Electrical Characteristics

($T_a=25^{\circ}C$)

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit | |
|-----------------------------|-------------|----------------|------------------|------|------|------|---|
| Supply Voltage | V_{CC} | - | 4.5 | 5.0 | 5.5 | V | |
| Current Consumption | I_{CC} | #1 | 0.3 | - | 1.5 | mA | |
| Resonance Frequency | f_C | - | - | 38 | - | KHz | |
| Peak sensitivity wavelength | λ_p | - | - | 980 | - | nm | |
| H level output voltage | V_{OH} | #2 | 4.5 | 5.0 | - | V | |
| L level output voltage | V_{OL} | | - | 0.2 | 0.4 | V | |
| H level pules width | T_{wh} | | 500 | - | 700 | us | |
| L level pules width | T_{wl} | | 500 | - | 700 | us | |
| Arrival distance | L | #2,3,4 | $\pm 0^{\circ}$ | - | 20 | - | m |
| | | | $\pm 30^{\circ}$ | - | 15 | - | |
| | | | $\pm 45^{\circ}$ | - | 10 | - | |
| Output form | Active low | | | | | | |

Characteristic Diagrams

Fig. 1 Relative Spectral Sensitivity - Wavelength

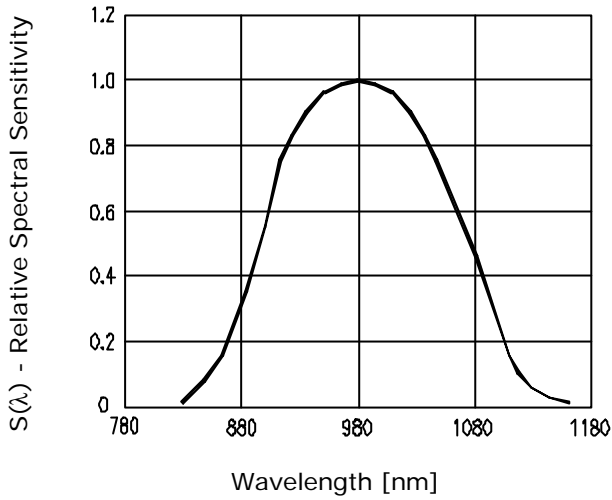
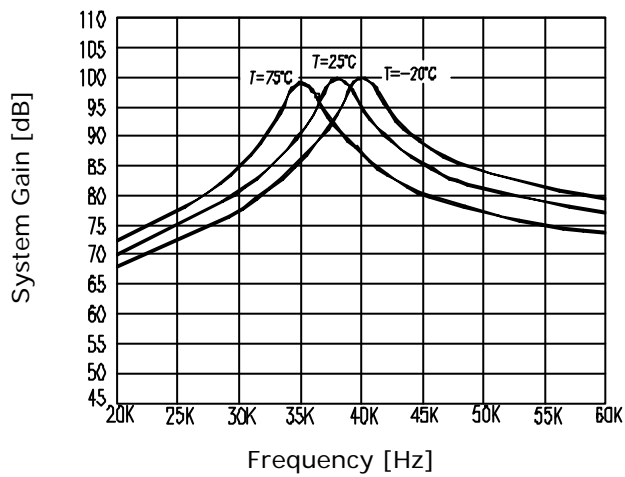
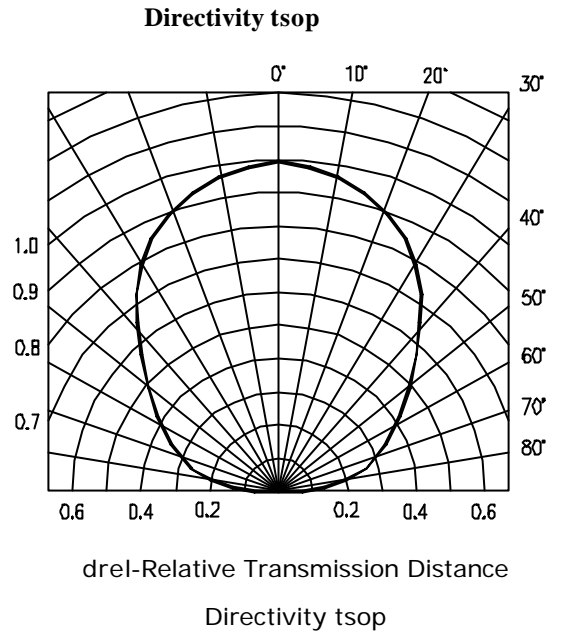


Fig. 2 drel-Relative Transmission Distance



1. No input signal.

2. The burst wave forms shown below in the Fig 1. Shall be transmitted by the standard transmitter.

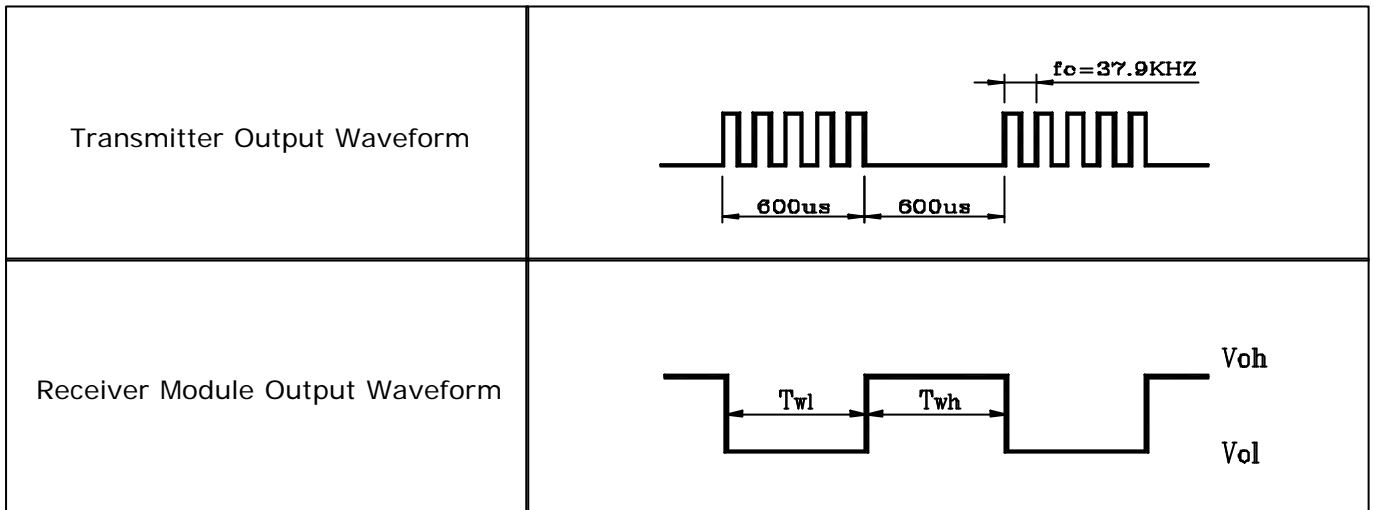
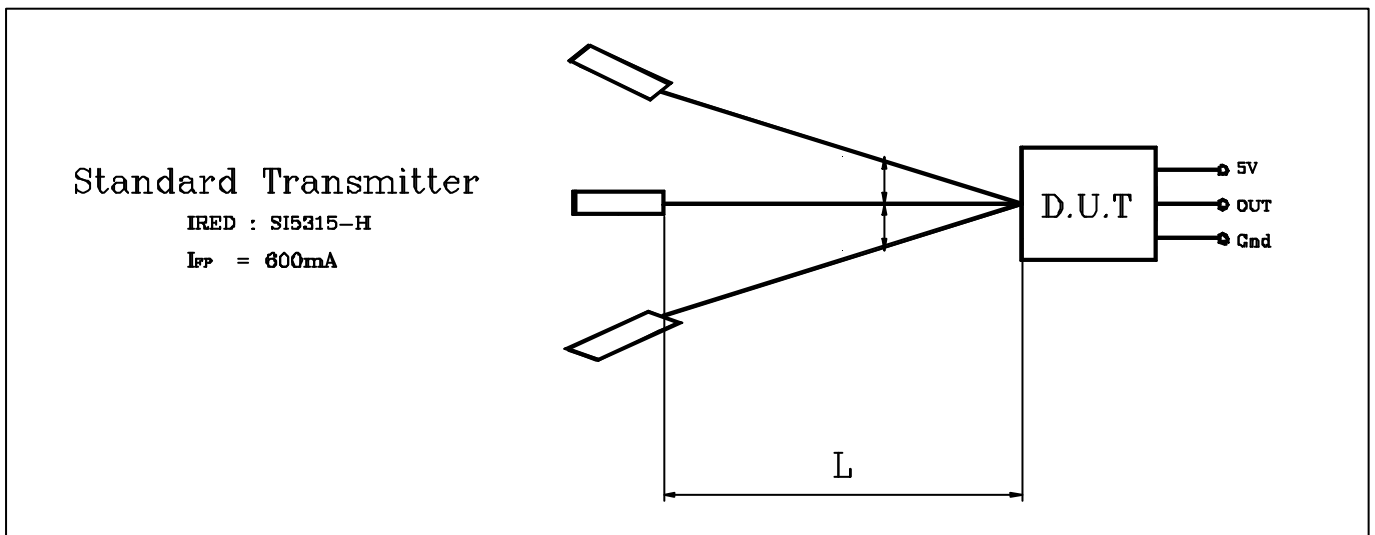


Fig 1. Transmitter & Receiver wave forms

3. The test condition of arrival distance.



#4. The arrival distance is measured in the darkness without disturbing noises.

Reliability Test

| Test items | Test condition | Remarks |
|------------------------|--------------------------|---------|
| High temp & High humid | Ta=40 , RH=90%, t=96Hr's | #1, 2 |
| Heat cycle | #2, 3 | - |
| Fall test | #4 | - |

#1. Supply voltage 5V at the load test.

#2. Electro-optical characteristics shall be satisfied after 2hr's at normal temperature.

#3. Heat cycle test as below Fig2. For 20 cycles under no load.

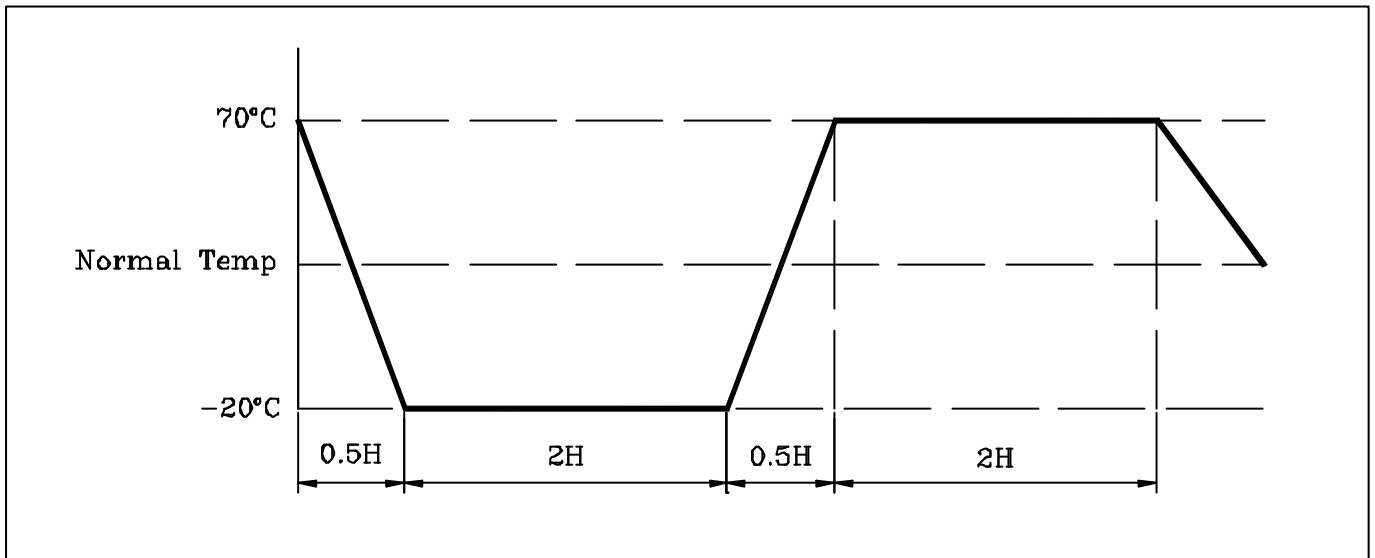


Fig 2. Heat cycle test

#4. Fall test

The test devices to fall three time onto hard wooden board from a level 75 cm

The others

In case of noisy power supply, please serially insert about 47 resistance an about 47 μ F electrolytic capacitance in line as follows.

