

**Features**

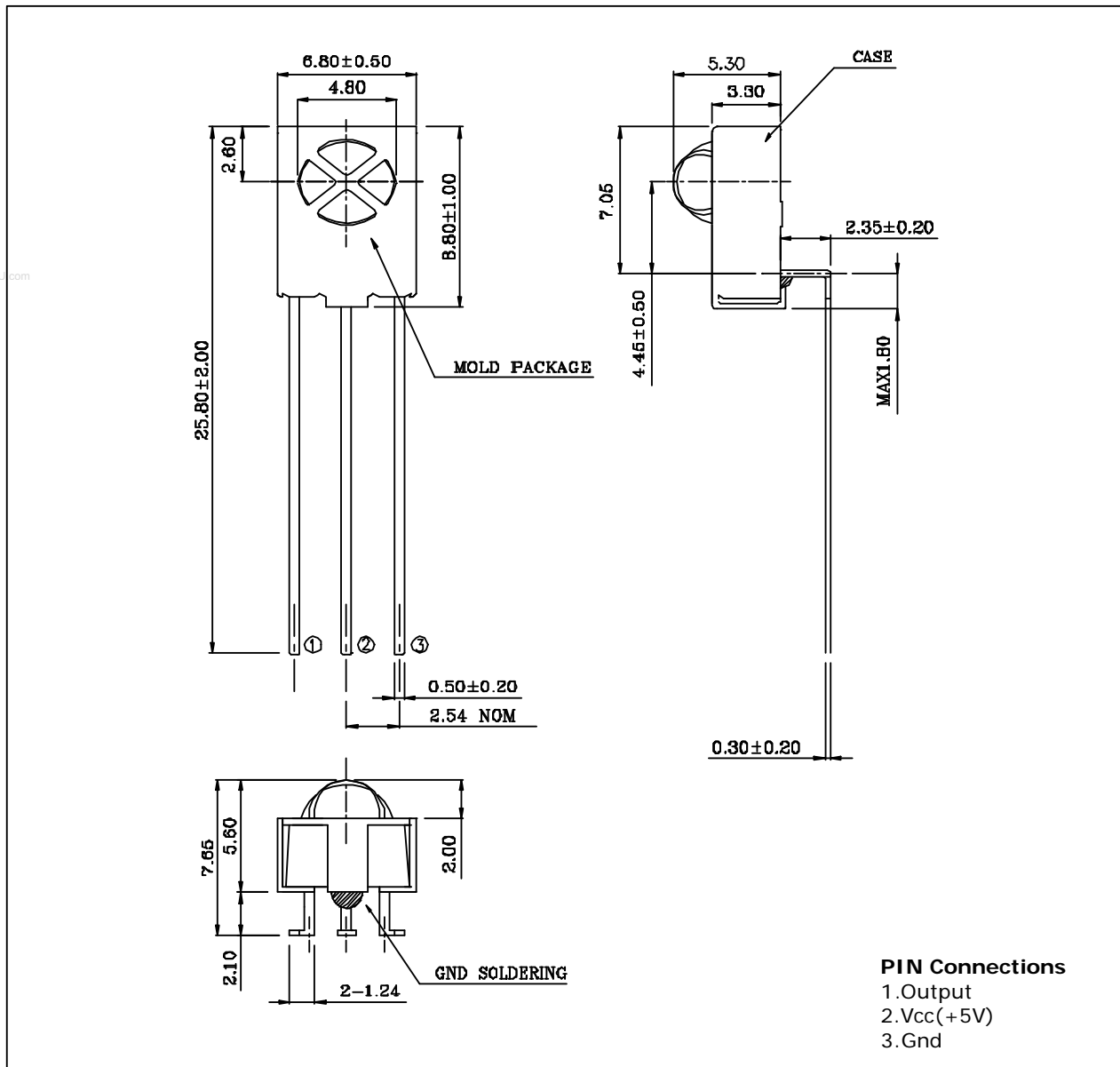
- Photo detector and preamplifier in one package
- Enhanced immunity against all kinds of disturbance light
- High performance photo diode and built-in I.C
- High speed response and output
- Low power consumption and easy use

**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	
*1 Soldering Temperature	$T_{sol}$	260 within 5 seconds	

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

## Electrical Characteristics

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

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	$\lambda_p$	-	-	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

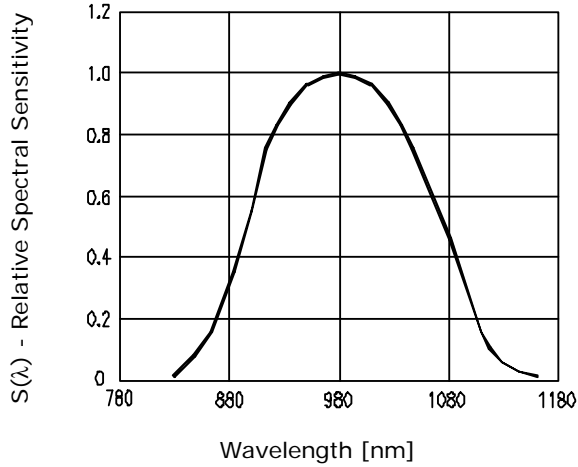
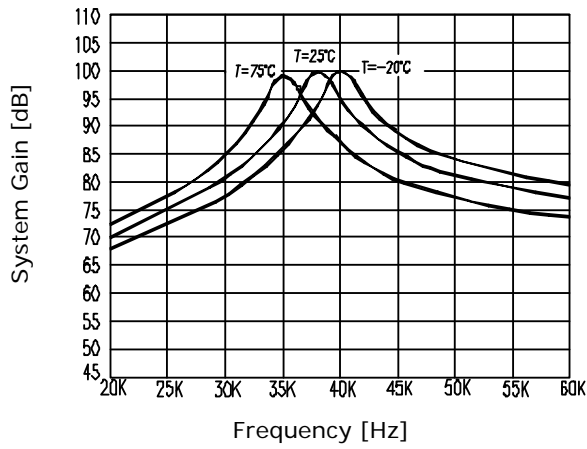
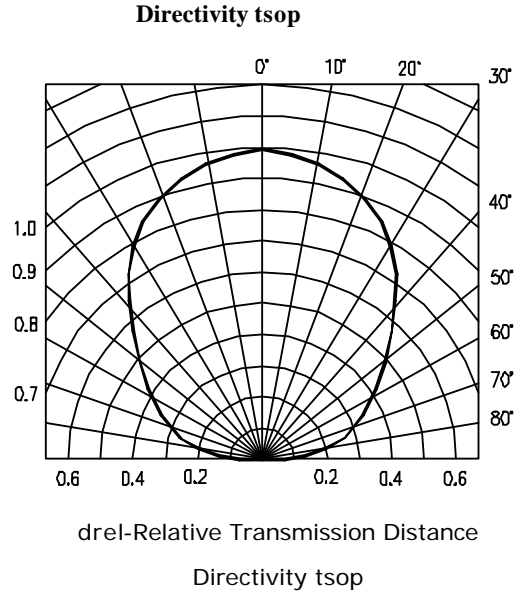


Fig. 2 drel-Relative Transmission Distance



# 1. No input signal.

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

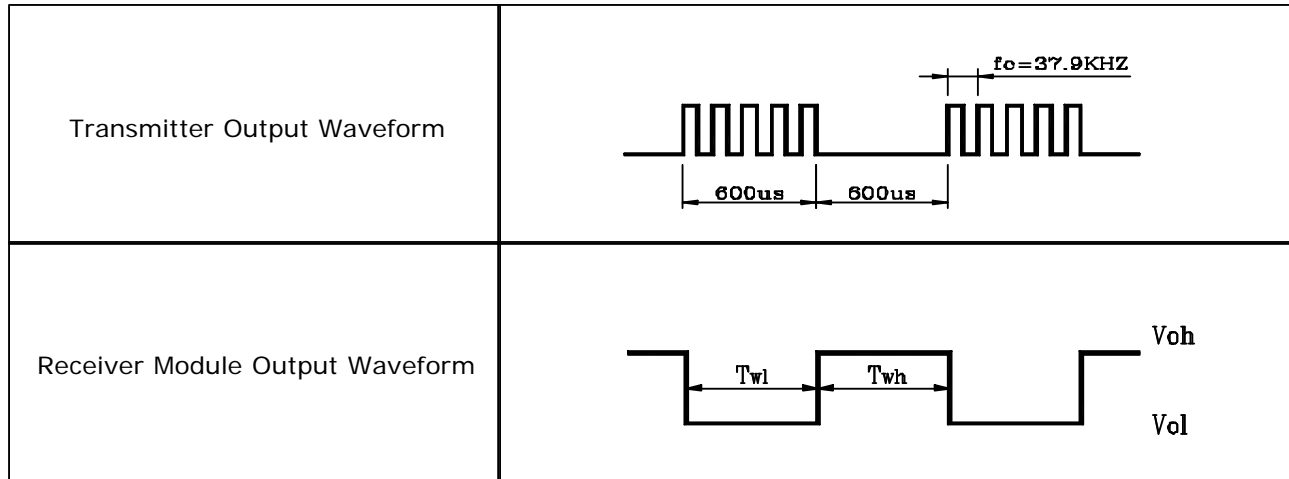
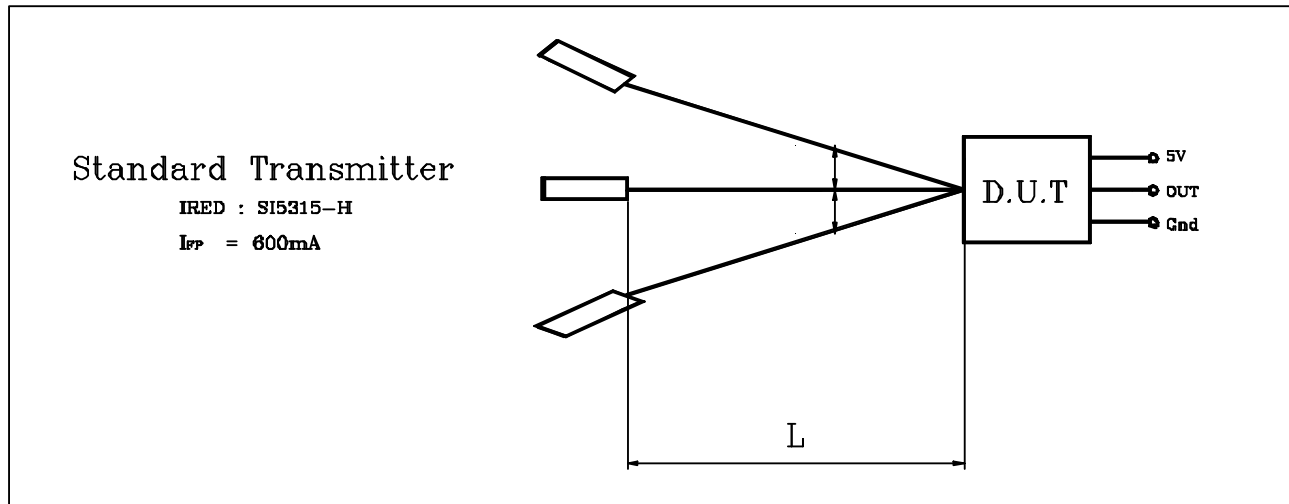


Fig 1. Transmitter & Receiver wave forms

# 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.

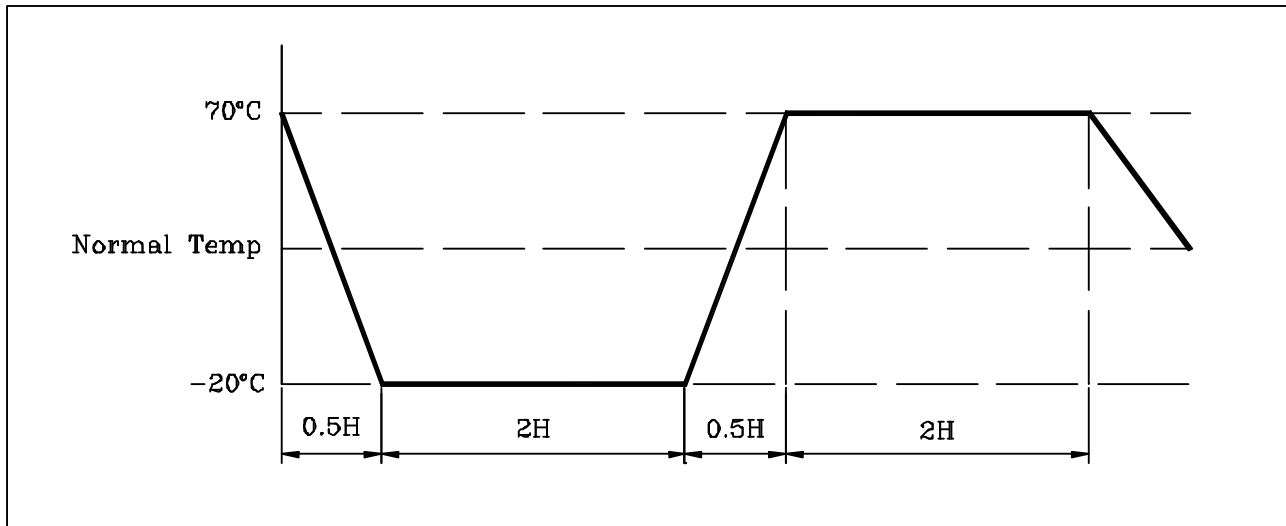


Fig 2. Heat cycle test

#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  $\mu$ F electrolytic capacitance in line as follows.

