

#### **Features**

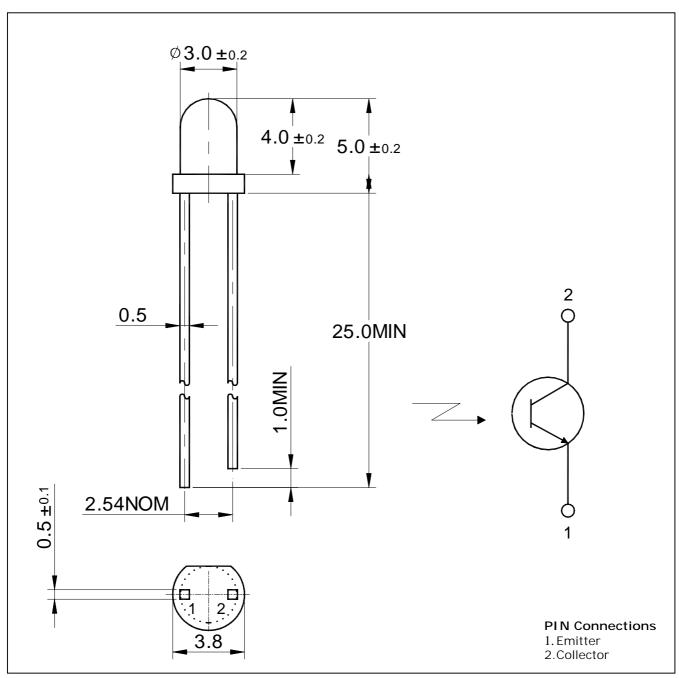
- \$\phi 3mm(T-1) all plastic mold type
- Visible light cut-off type

### **Features**

- VCR, Camcorders
- Floppy disk drivers
- Optical detectors

### **Outline Dimensions**

unit: mm



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# **Absolute maximum ratings**

Characteristic	Symbol	Ratings	Unit	
Collector-Emitter Voltage	$V_{CEO}$	35	V	
Emitter-Collector Voltage	$V_{ECO}$	6	V	
Collector Current	I <sub>c</sub>	20	mA	
Collector Power Dissipation	$P_{D}$	75	mW	
Operating Temperature	$T_{opr}$	-25 85		
Storage Temperature	$T_{stg}$	-30 100		
*1Soldering Temperature	$T_{sol}$	260 for 5 seconds		

<sup>\*1.</sup>Keep the distance more than 2.0mm from PCB to the bottom of Photo TR package

### **Electrical Characteristics**

Charac	cteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Current Dark Cu	rrent	I <sub>CEO</sub>	$V_{CEO}=10V$ , $E_e=0$	-	0.05	0.5	uA
*3Light Current		I <sub>CEL</sub>	$V_{CE}$ =5V, $E_{e}$ 1mW/cm <sup>2</sup>	-	4.5	-	mA
Current-Emitter	Saturation Voltage	V <sub>CE(sat)</sub>	$I_{\rm C}$ =0.5mA, $E_{\rm e}$ 1mW/cm <sup>2</sup>	-	0.2	-	V
Switching Time	Rise Time	t <sub>r</sub>	$V_{CC}=10V$ , $I_{C}=1mA$ $R_{1}=100\Omega$	-	2.5	-	us
	Fall Time	t <sub>f</sub>			3.8		
Spectral Sensitivity			-	700 ~ 1000		nm	
Peak Sensitivity Wavelength		Р	-	-	880	-	nm
Half angle		θ1/2	I <sub>F</sub> = 20mA	-	±20	-	deg

<sup>\*1.</sup> Tolerance =  $\pm 30\%$ 

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## **Characteristic Diagrams**

Fig. 1  $I_{CEL}$  -  $E_e$ 

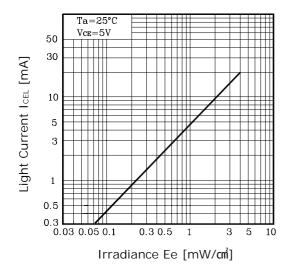


Fig. 2  $I_{\text{CEL}}$  -  $V_{\text{CE}}$ 

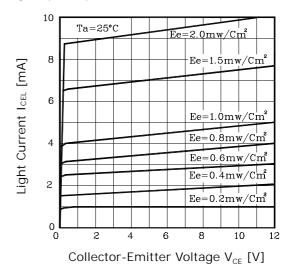
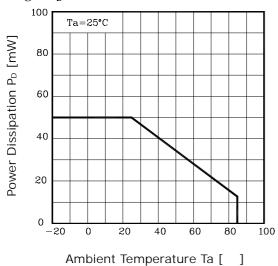


Fig.  $3 P_D - Ta$ 



 $Fig.4 I_{CEO} - Ta$ 

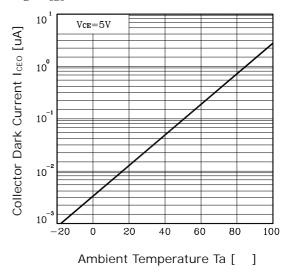


Fig. 5 Spectrum Sensitivity

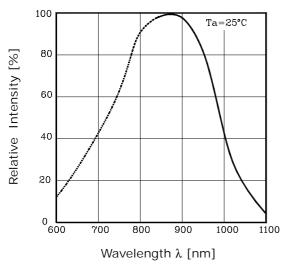
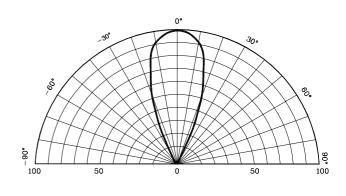


Fig. 5 Sensitivity Diagram



Relative Luminous Intensity Iv [%]

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