

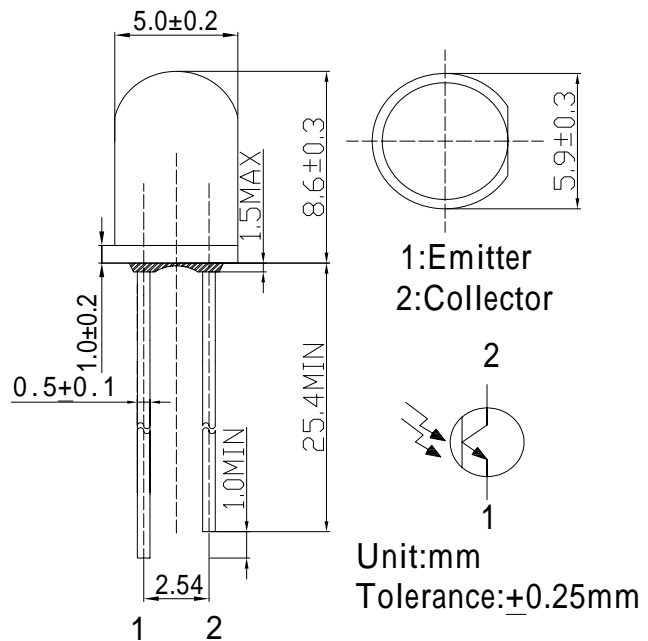
## Features

- Fast response time
- High photo sensitivity
- Superior Weather-resistance
- Pb free
- The product itself will remain within RoHS compliant version.
- Black Lens Type

## Applications

- Infrared applied system
- Camera
- Printer
- Optoelectronic switch

## Outline Dimension



## Absolute Maximum Rating (Ta=25 °C)

Item	Symbol	Value	Unit
DC Forward Current	$I_C$	20	mA
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Collector-Voltage	$V_{ECO}$	5	V
Power Dissipation	$P_C$	75	mW
Operating Temperature	$T_{opr}$	-30 ~ +85	
Storage Temperature	$T_{stg}$	-40 ~ +100	
Lead Soldering Temperature	$T_{sol}$	260 / 5sec	-

\*Pulse width Max.10ms Duty ratio max 1/10

## Electrical -Optical Characteristics (Ta=25 °C)

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Collector – Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=100\mu A$ $E_e=0mW/cm^2$	30	--	--	V
Emitter-Collector Breakdown Voltage	$BV_{ECO}$	$I_E=100\mu A$ $E_e=0mW/cm^2$	5	--	--	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2mA$ $E_e=1mW/cm^2$	--	--	0.4	V
Rang Of Spectral Bandwidth	0.5	---	840	--	1200	nm
Wavelength Of Peak Sensitivity	$\lambda_p$	---	-	980	---	nm
Rise Time	$t_r$	$V_{CE}=5V$ $I_C=1mA$ $R_L=1000$	-	15	-	$\mu S$
Fall Time	$t_f$		-	15	-	
Collector Dark Current	$I_{CEO}$	$E_e=0mW/cm^2$ $V_{CE}=20V$	-	-	100	nA
On State Collector Current	$I_{C(on)}$	$E_e=1mW/cm^2$ $V_{CE}=5V$	0.7	2.0	--	mA

\*1 Tolerance of dominant wavelength is ±1nm

\*2 Tolerance of luminous intensity is ±15%



## Typical Electro-Optical Characteristics Curves

Fig.1 Collector Power Dissipation vs. Ambient Temperature

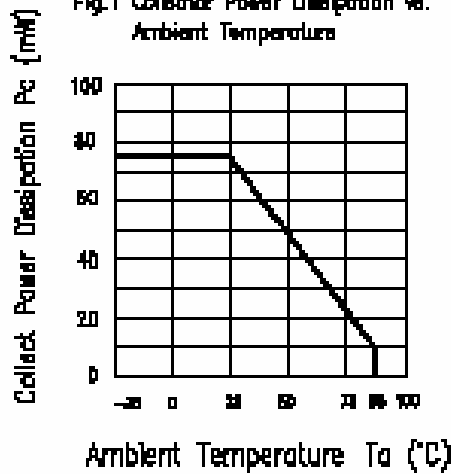


Fig.2 Collector Dark Current vs. Ambient Temperature

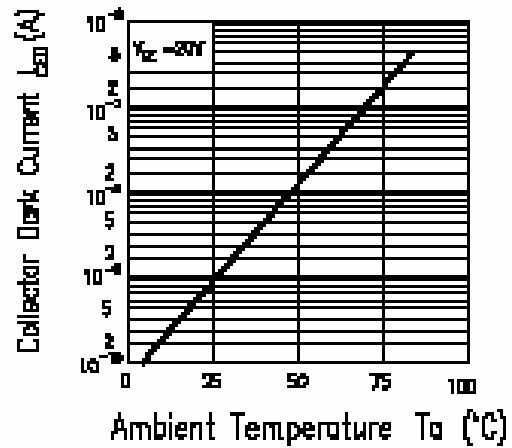


Fig.3 Relative Collector Current vs. Ambient Temperature

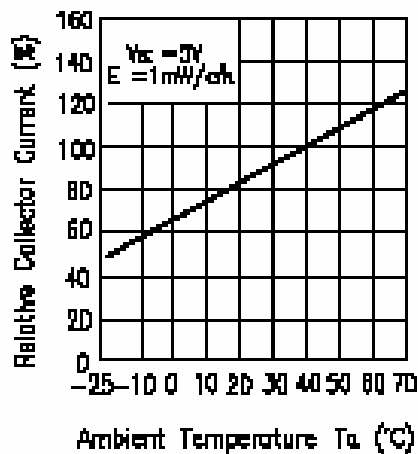


Fig.4 Collector Current vs. Irradiance

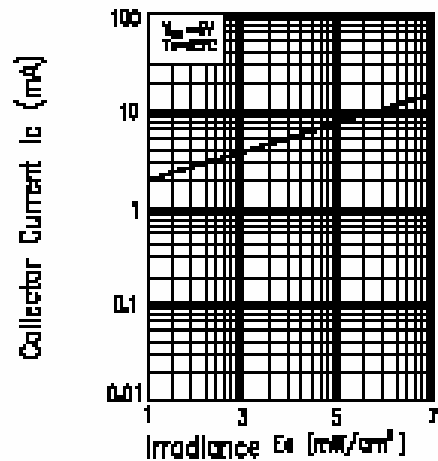


Fig.5 Spectral Sensitivity

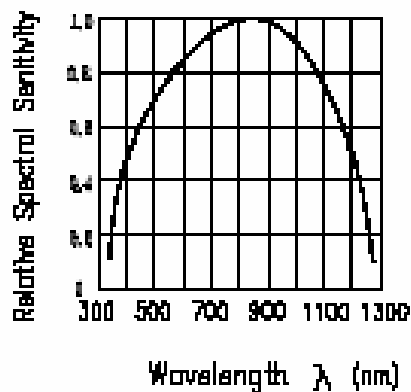
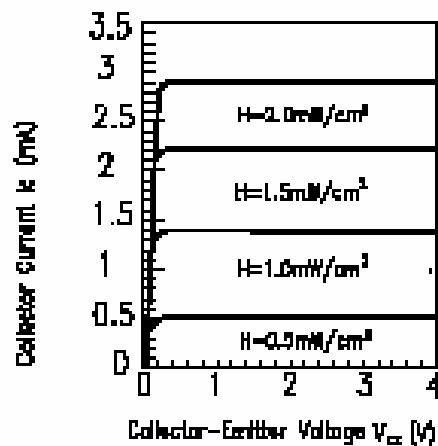


Fig.6 Collector Current vs. Collector-Emitter Voltage



**■ Reliability Test Item And Condition**

The reliability of products shall be satisfied with items listed below.

Confidence level:90%

LTPD:10%

NO.	Item	Test Conditions	Test Hours/ Cycles	Sample Size	Failure Judgement Criteria	Ac/Re
1	Solder Heat	TEMP : 260°C ± 5 °C	5 secs	22 pcs	$I_{c(on)} \leq L \times 0.8$ L :Lower specification limit	0/1
2	Temperature Cycle	H : +85°C    30 mins $\updownarrow$ 5 mins $\updownarrow$ L : -55°C    30 mins	50 cycles	22 pcs		0/1
3	Thermal Shock	H : +100°C    5 mins $\updownarrow$ 10 secs $\updownarrow$ L : -10°C    5 mins	50 cycles	22 pcs		0/1
4	High Temperature Storage	TEMP. : +100°C	1000 hrs	22 pcs		0/1
5	Low Temperature Storage	TEMP. : -55°C	1000 hrs	22 pcs		0/1
6	DC Operating Life	V <sub>CE</sub> =5V	1000 hrs	22 pcs		0/1
7	High Temperature / High Humidity	85°C / 85% R.H.	1000 hrs	22 pcs		0/1



**OptoSupply**

*Light It Up*

**5mm Round Phototransistor**

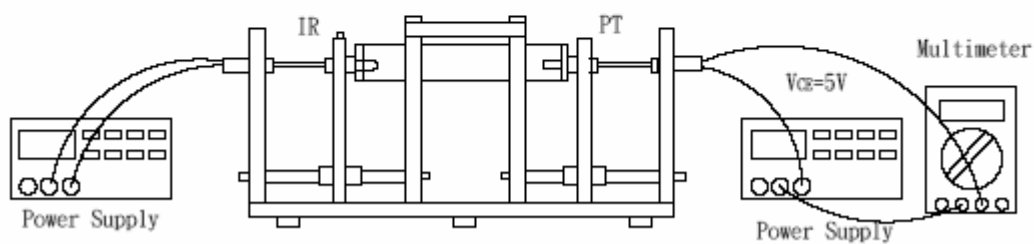
**OSIRPT5114A**

■ **Test Method For On State Collector Current :**

Condition :  $E_e=1\text{mW/cm}^2$  ,  $V_{CE}=5\text{V}$

Test Item : Collector Current [ $I_{C(on)}$ ]

Unit : mA



**LED & Application Technologies**



**REACH**  
The new EU chemicals legislation

