

#### Features

- Fast response time
- High photo sensitivity
- Pb free
- This product itself will remain within RoHS compliant version.

#### Descriptions

- PT5529B/L2/H2-F is a high speed and high sensitive dual phototransistor molded in a black plastic package with plat side view.
- The device is spectrally matched with IR emitters.

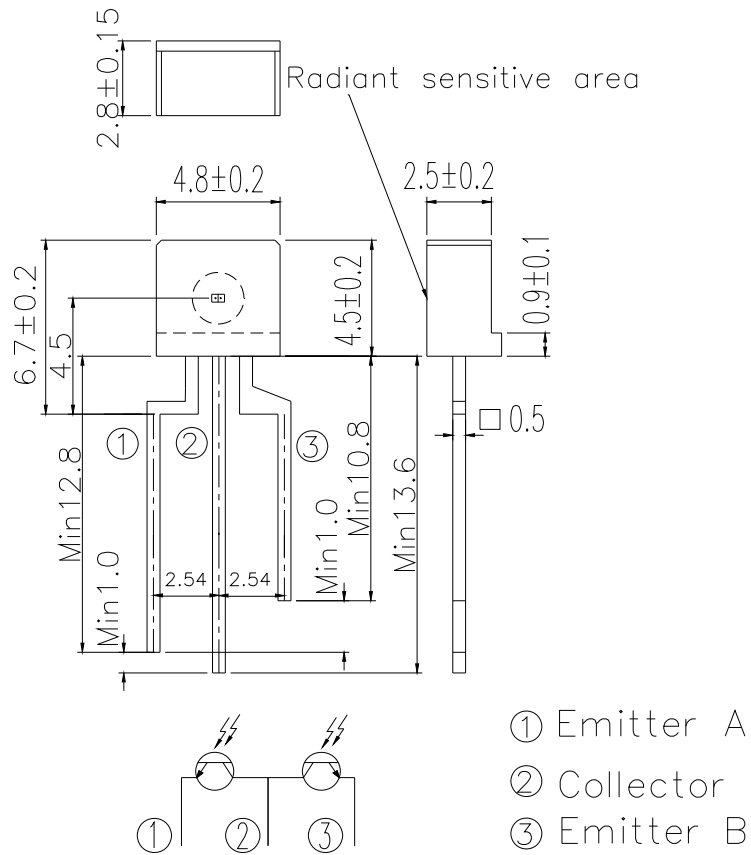
#### Applications

- Mouse
- Optoelectronic Switch
- Photo Interrupter

#### Device Selection Guide

LED Part No.	Chip	Lens Color
	Material	
PT	Silicon	Black

**Package Dimensions**



- Notes:** 1.All dimensions are in millimeters  
 2.Tolerances unless dimensions ±0.25mm

**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Rating	Units
Collector-Emitter Voltage	V <sub>CEO</sub>	30	V
Emitter-Collector-Voltage	V <sub>ECO</sub>	5	V
Collector Current	I <sub>C</sub>	20	mA
Operating Temperature	T <sub>opr</sub>	-40 ~ +85°C	°C
Storage Temperature	T <sub>stg</sub>	-40 ~ +85°C	°C
Lead Soldering Temperature(*1)	T <sub>sol</sub>	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P <sub>D</sub>	75	mW

**Notes:** \*1:Soldering time ≤ 5 seconds.

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

Parameter	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
Rise Time	$t_r$	$V_{CE}=5V$ $I_C=1mA$ $R_L=1000\Omega$	---	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	$I_{C(on)}$	$V_{CE}=5V$ , $E_e=0.555mW/cm^2$	129	---	1085	$\mu A$
Wavelength of Peak Sensitivity	$\lambda_p$	---	---	940	---	nm
Rang of Spectral Bandwidth	$\lambda_{0.5}$	---	760	---	1100	nm

**Typical Electro-Optical Characteristics Curves**

Fig.1 Power Dissipation vs. Ambient Temperature

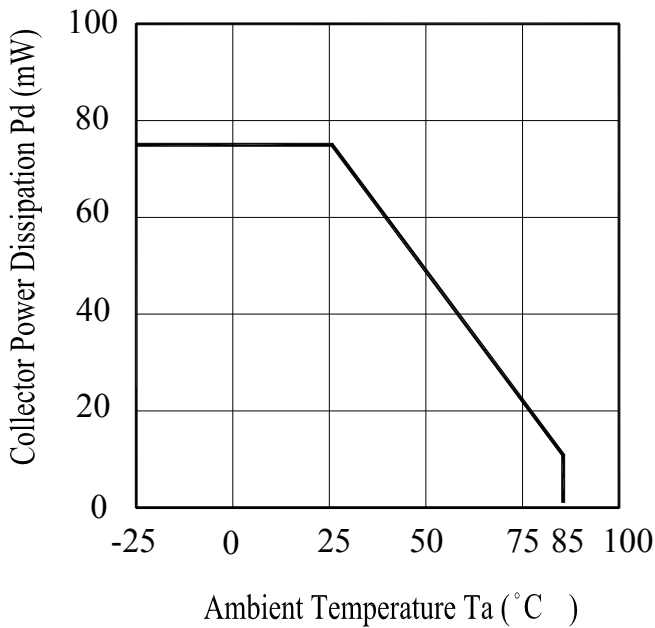


Fig.2 Spectral Sensitivity

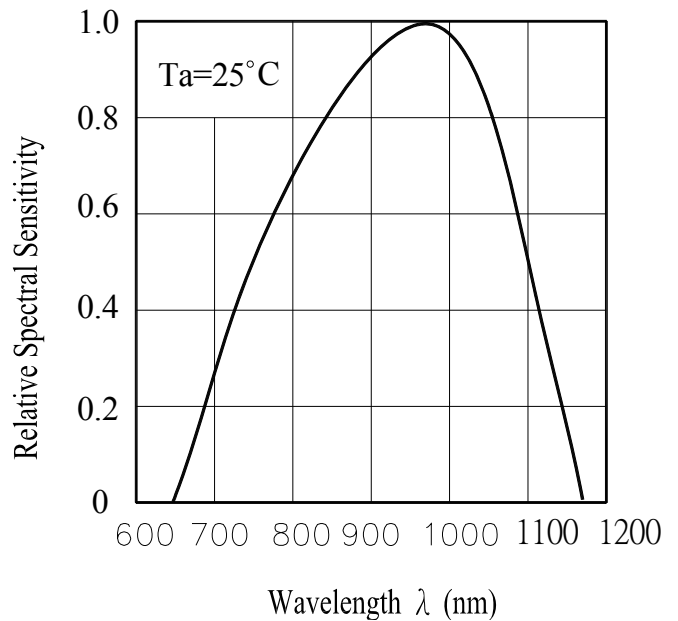


Fig.3 Dark Current vs. Ambient Temperature

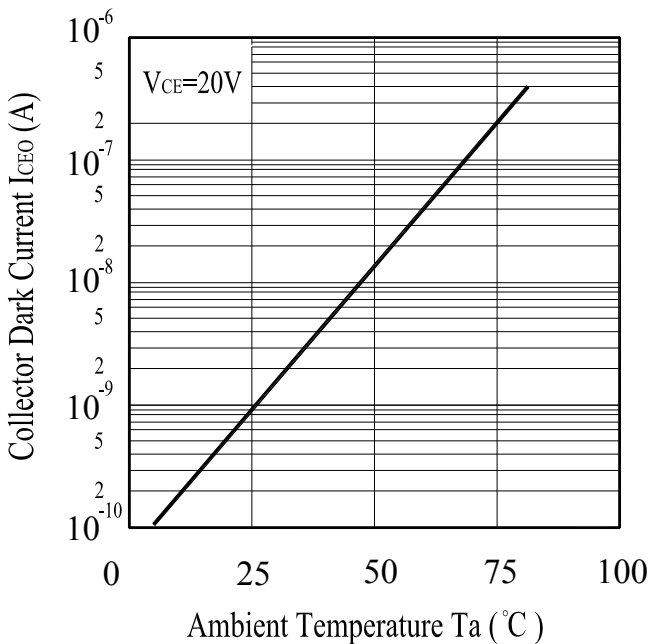
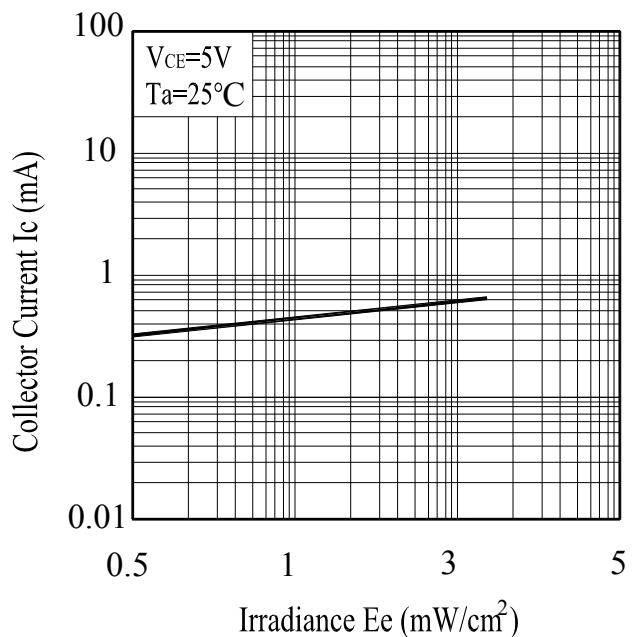


Fig. 4 Reverse Light Current vs.  $E_e$

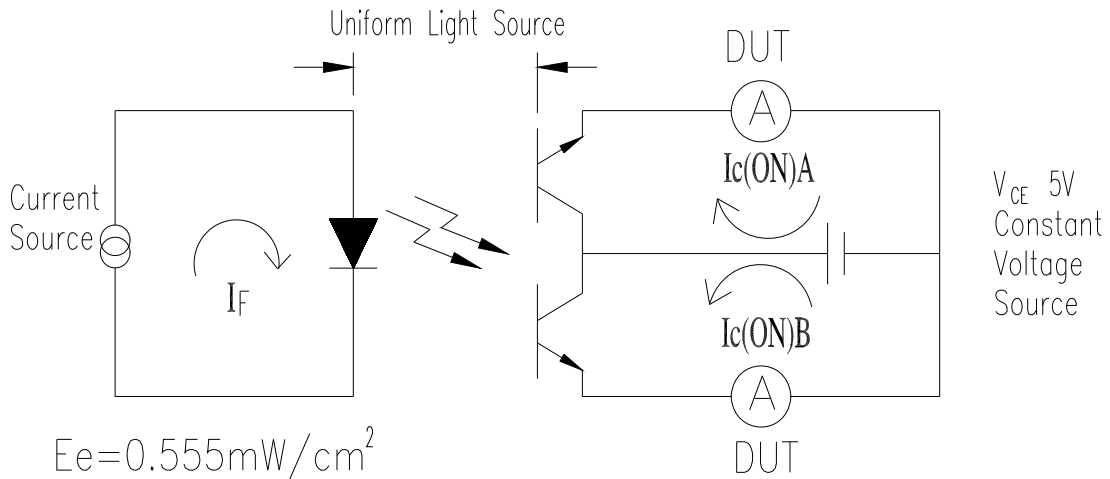


**Test Method For On State Collector Current :**

Condition :  $E_e=0.555\text{mW}/\text{cm}^2$  ,  $V_{CE}=5\text{V}$

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

Unit :  $\mu\text{A}$



**To Distinguish Intensity:**

**Condition:**  $V_{CE}:5\text{V}$   $E_e:0.555\text{mW}/\text{cm}^2$

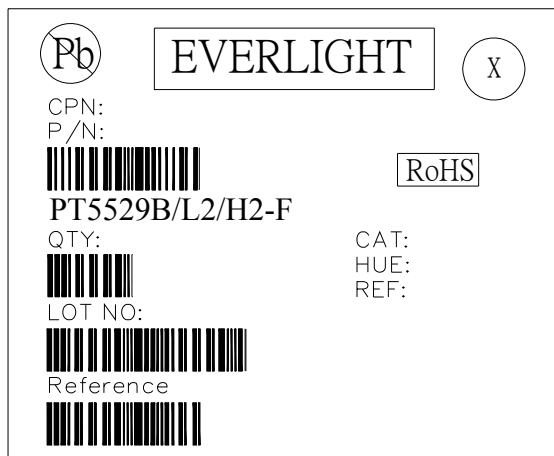
**A Ranks**

Ranks	Symbol	Min	Typ	Max	Unit	Test Condition
A1	$I_{C(\text{ON})}$	129	---	226	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A2	$I_{C(\text{ON})}$	195	---	306	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A3	$I_{C(\text{ON})}$	262	---	380	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A4	$I_{C(\text{ON})}$	330	---	461	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A5	$I_{C(\text{ON})}$	398	---	544	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A6	$I_{C(\text{ON})}$	468	---	625	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A7	$I_{C(\text{ON})}$	536	---	703	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A8	$I_{C(\text{ON})}$	604	---	785	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A9	$I_{C(\text{ON})}$	673	---	862	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A10	$I_{C(\text{ON})}$	742	---	944	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A11	$I_{C(\text{ON})}$	812	---	1018	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$
A12	$I_{C(\text{ON})}$	882	---	1085	$\mu\text{A}$	$E_e=0.555\text{mW}/\text{c m}^2$ $V_{CE}=5\text{V}$

### Packing Quantity Specification

1. 1000Pcs/1Bag , 8Bags/1Box
2. 10Boxes/1Carton

### Label Form Specification



CPN: Customer's Production Number  
P/N : Production Number  
QTY: Packing Quantity  
CAT: Ranks  
HUE: Peak Wavelength  
REF: Reference  
LOT No: Lot Number  
X: Month  
Reference: Identify Label Number

### Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using 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.
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