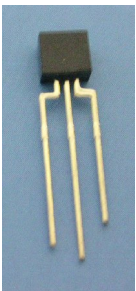




**THE DATASHEET OF  
PT5529B/L2-F**



### Side Face Silicon Phototransistor PT5529B/L2-F



#### Features

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

#### Description

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

#### Applications

- Mouse
- Optoelectronic Switch
- Photo Interrupter

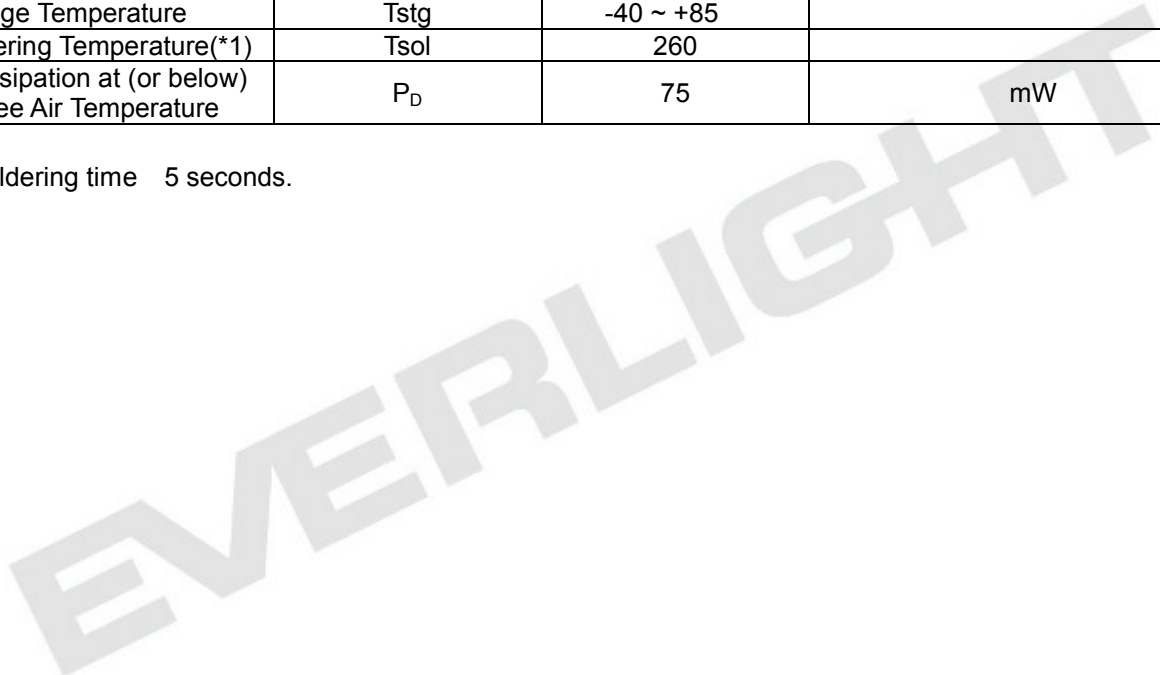
**Device Selection Guide**

Chip Materials	Lens Color
Si	Black

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

Parameter	Symbol	Rating	Unit
Collector-Emitter Voltage	$V_{CEO}$	30	V
Emitter-Collector-Voltage	$V_{ECO}$	5	V
Collector Current	$I_C$	20	mA
Operating Temperature	$T_{opr}$	-25 ~ +85	
Storage Temperature	$T_{stg}$	-40 ~ +85	
Lead Soldering Temperature(*1)	$T_{sol}$	260	
Power Dissipation at (or below) 25 Free Air Temperature	$P_D$	75	mW

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



Electro-Optical Characteristics (Ta=25 )

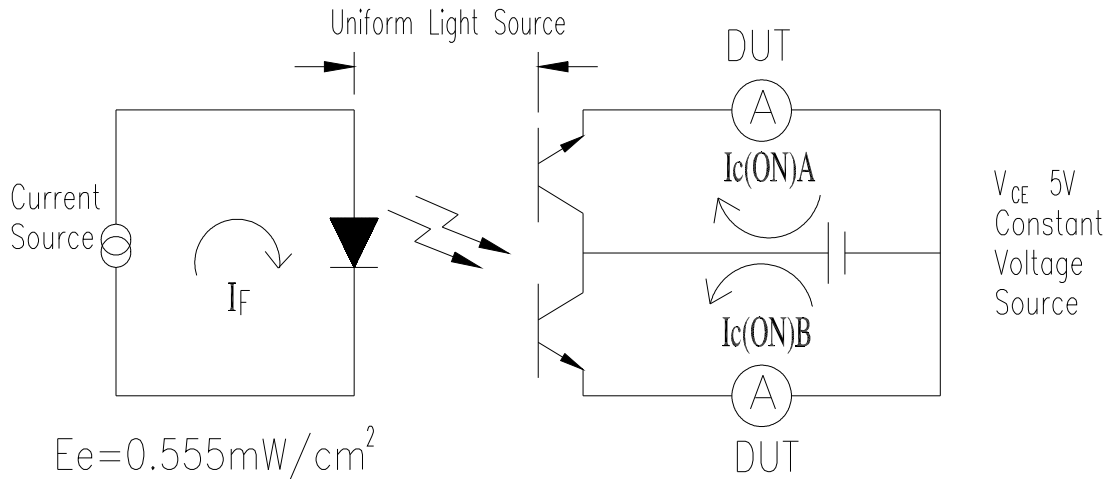
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Collector – Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=100\mu A$ $E_e=0mW/cm^2$	30	---	---	V
Emitter-Collector Breakdown Voltage	$BV_{ECO}$	$I_E=100\mu A$ $E_e=0mW/cm^2$	5	---	---	V
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2mA$ $E_e=1mW/cm^2$	---	---	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

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

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

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

Unit :  $\mu\text{A}$



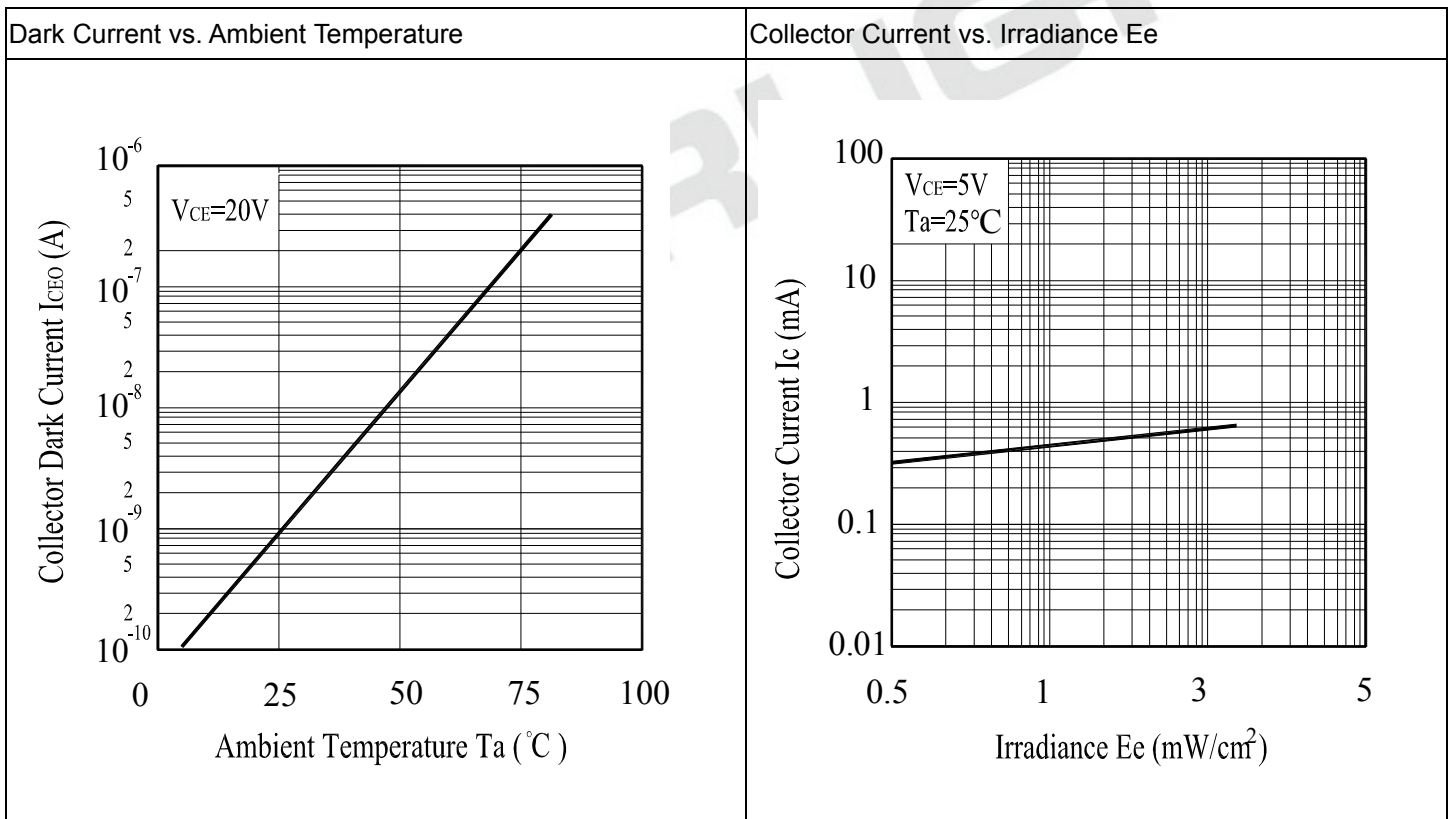
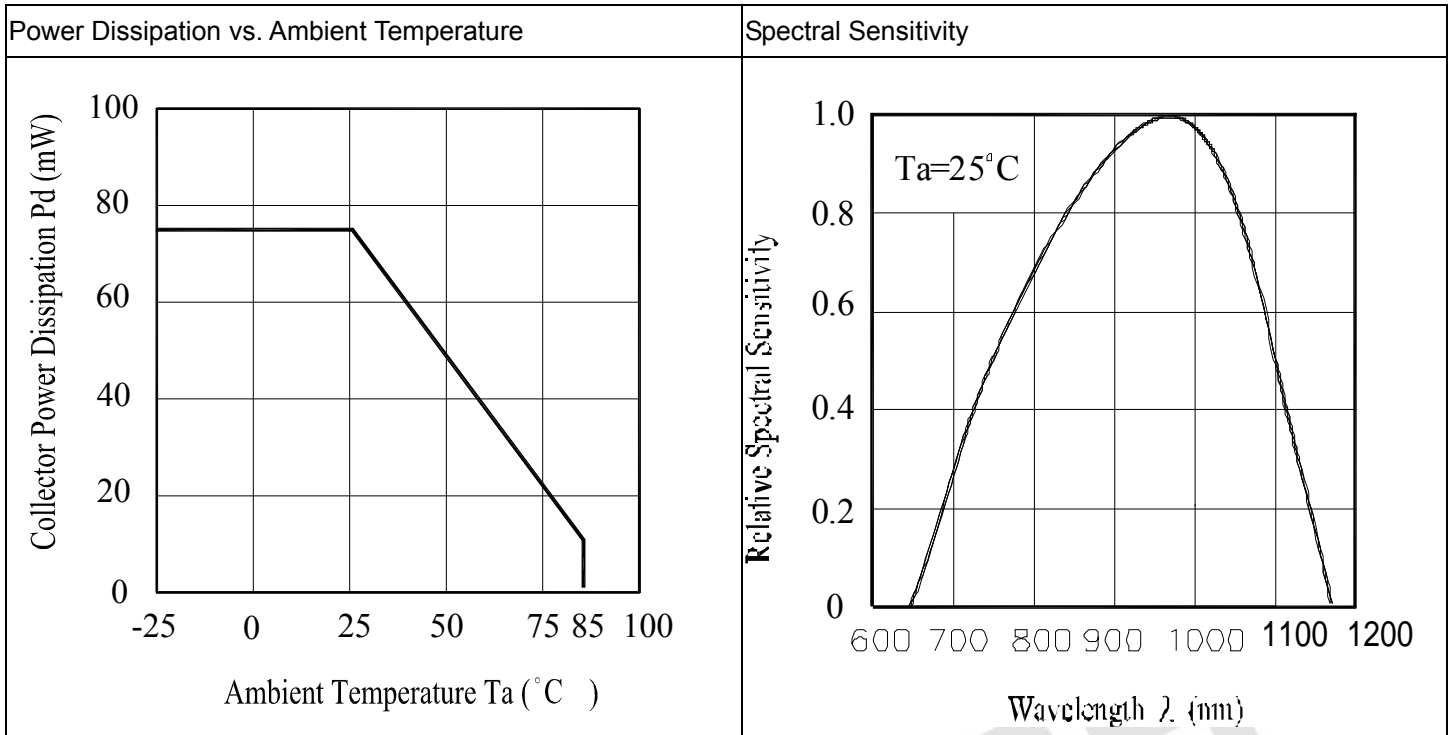
**To Distinguish Intensity:**

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

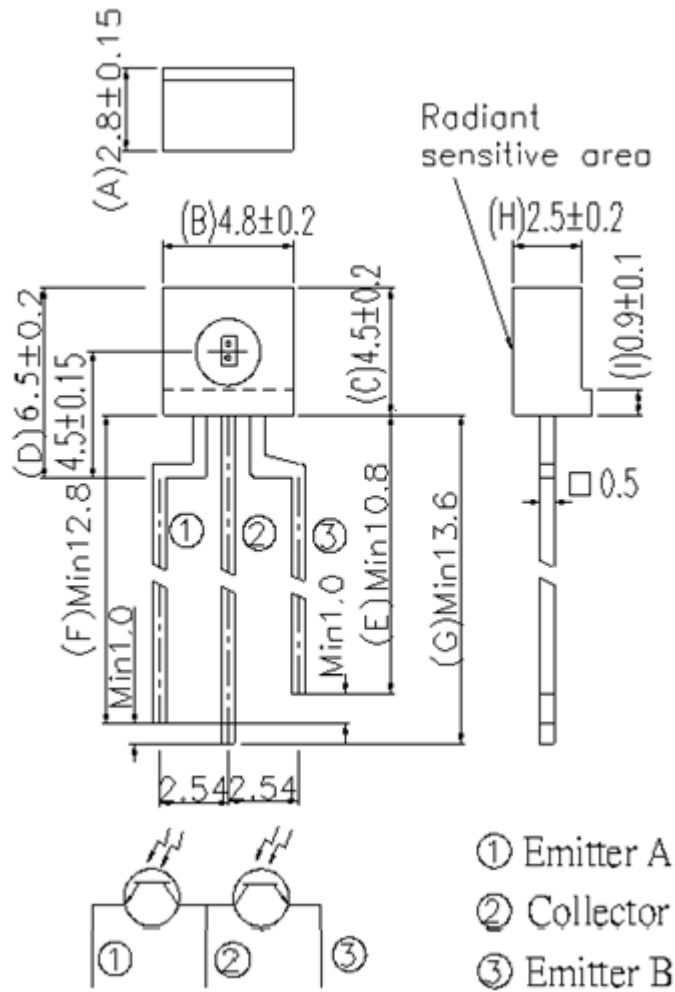
Ranks

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

Typical Electro-Optical Characteristics Curves



Package Dimension

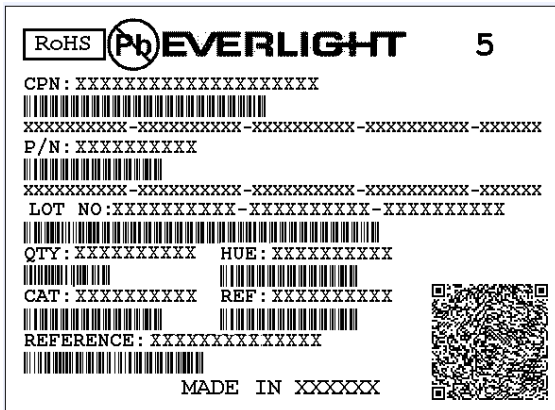


Note: Tolerances unless dimensions ±0.25mm

**Packing Quantity Specification**

1. 1000PCS/1Bag,6Bag/1Box
2. 10Boxes/1Carton

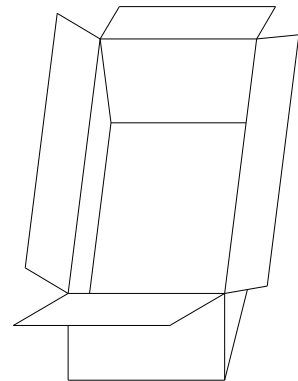
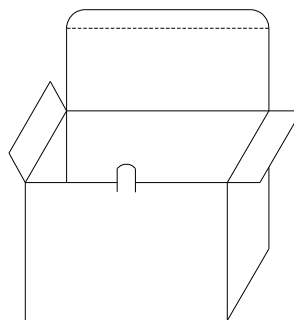
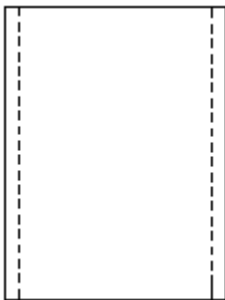
**Label Form Specification**



- CPN: Customer's Product Number
- P/N: Product Number
- QTY: Packing Quantity
- CAT: Luminous Intensity Rank
- HUE: Dom. Wavelength Rank
- REF: Forward Voltage Rank
- LOT No: Lot Number
- Reference: Identify Label Number

**Packing Specification**

- PE bag
- Inner Carton
- Outside Carton



**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 instruction 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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- [Everlight Electronics Co Ltd Information](#)

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- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management