

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°C)

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°C	°C
Storage Temperature	T_{stg}	-40 ~ +85°C	°C
Lead Soldering Temperature(*1)	T_{sol}	260	°C
Power Dissipation at (or below) 25°C Free Air Temperature	P_D	75	mW

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

Electro-Optical Characteristics (Ta=25°C)

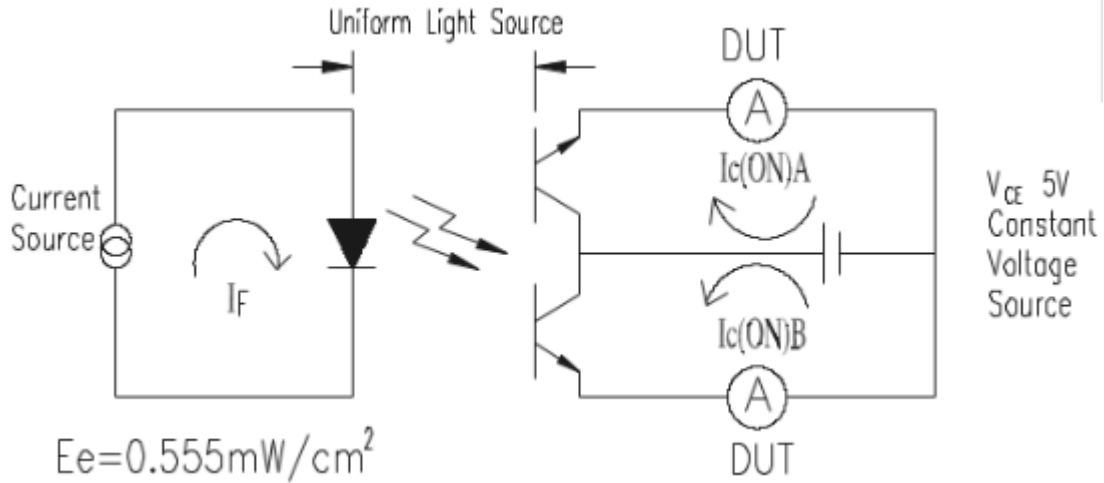
Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Collector – Emitter Breakdown Voltage	BV_{CEO}	30	-----	-----	V	$I_C=100\mu A$ $E_e=0mW/cm^2$
Emitter-Collector Breakdown Voltage	BV_{ECO}	5	-----	-----	V	$I_E=100\mu A$ $E_e=0mW/cm^2$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-----	-----	0.4	V	$I_C=2mA$ $E_e=1mW/cm^2$
Rise Time	t_r	-----	15	-----	μS	$V_{CE}=5V$ $I_C=1mA$ $R_L=1000\Omega$
Fall Time	t_f	-----	15	-----		
Collector Dark Current	I_{CEO}	-----	-----	100	nA	$E_e=0mW/cm^2$ $V_{CE}=20V$
On State Collector Current	$I_{C(on)}$	129	-----	1085	μA	$E_e=0.555mW/cm^2$ $V_{CE}=5V$
Rang Of Spectral Bandwidth	λ_P	-----	940	-----	nm	----
Wavelength of Peak Sensitivity	$\lambda_{0.5}$	760	-----	1100	nm	----

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 [$I_{C(on)}$]

Unit : μA



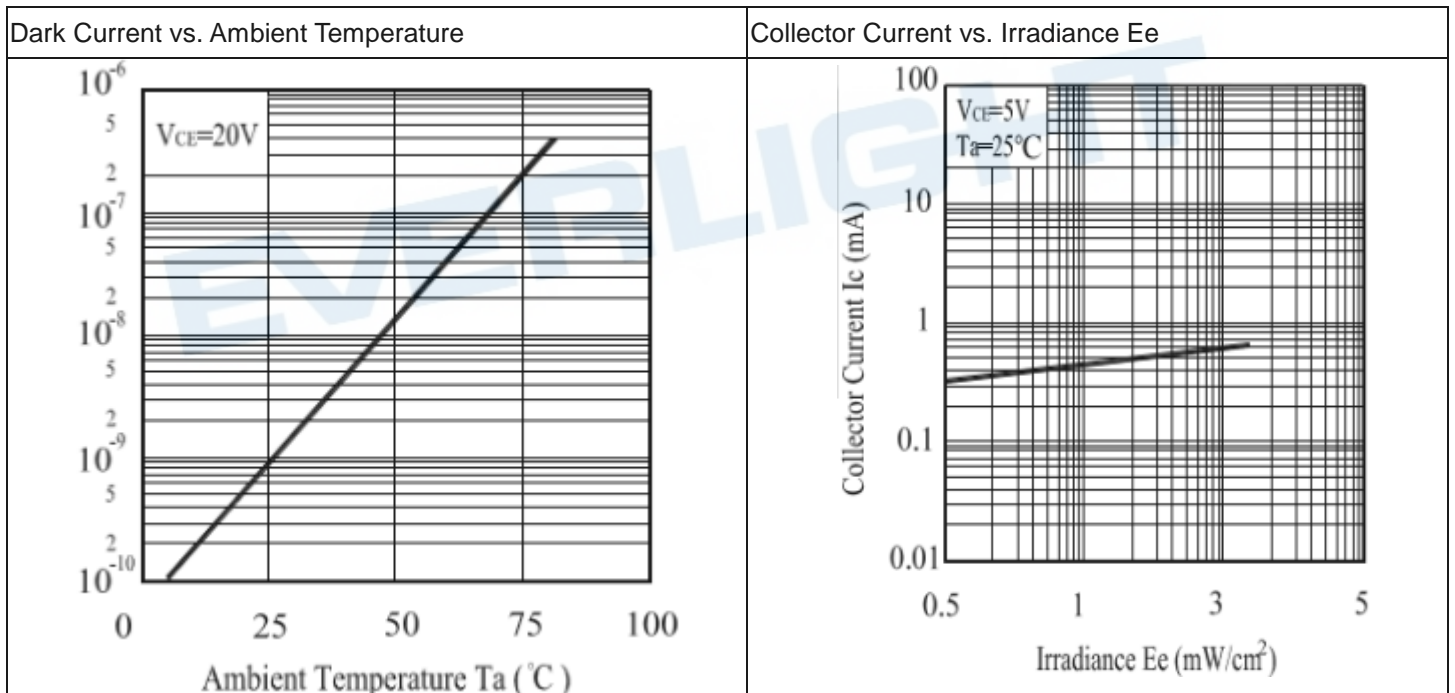
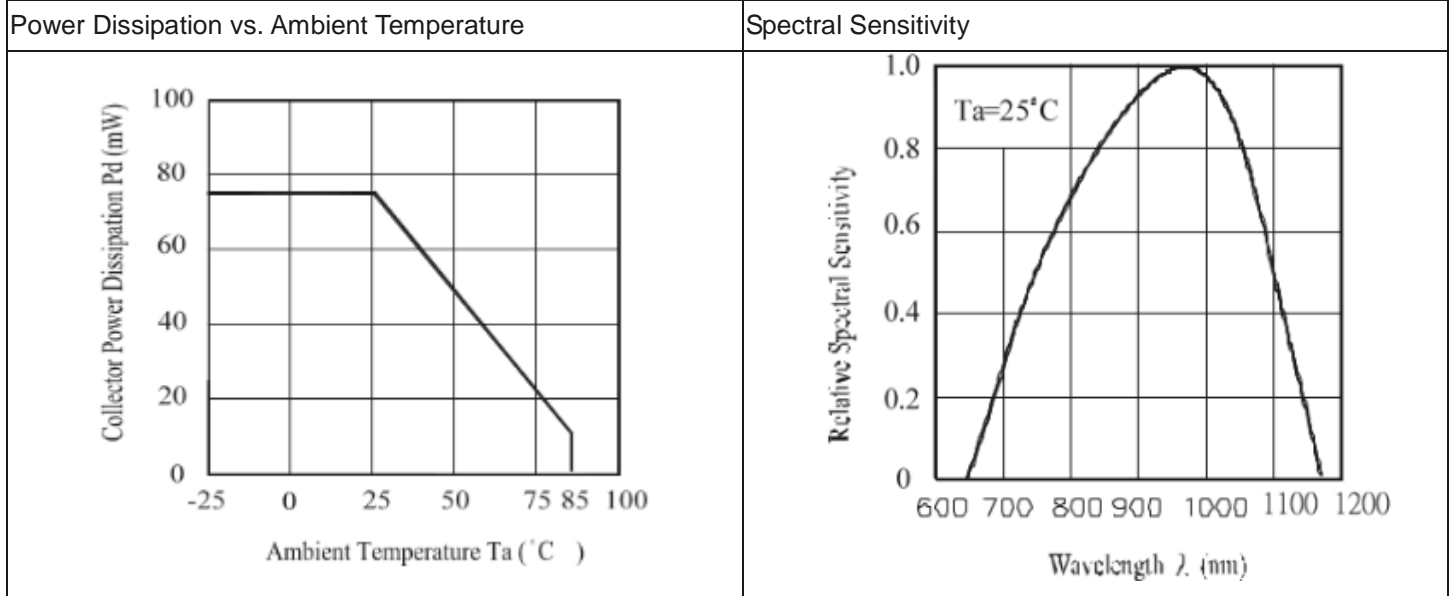
To Distinguish Intensity:

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

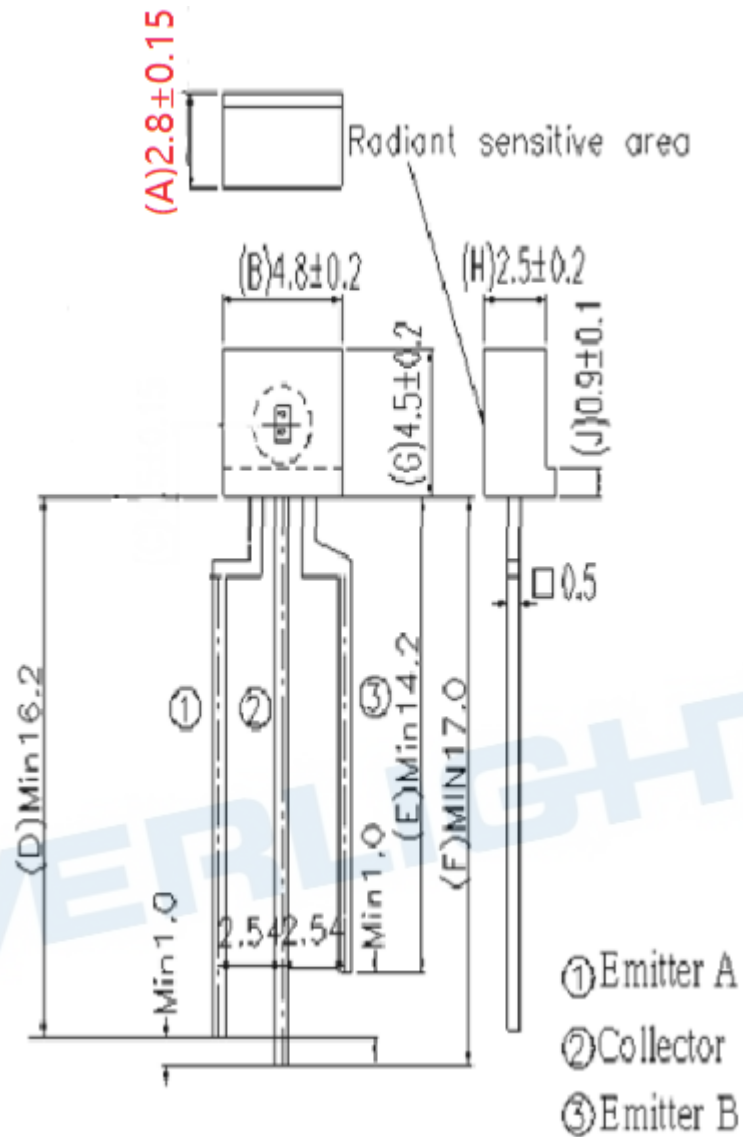
Ranks

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

Typical Electro-Optical Characteristics Curves



Package Dimension



Note: Tolerances unless dimensions ± 0.25 mm

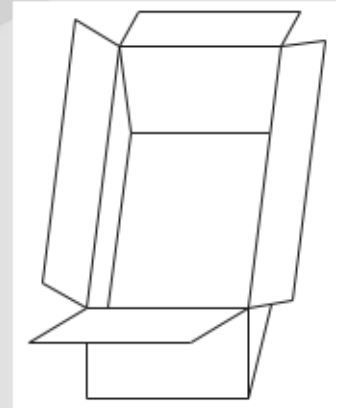
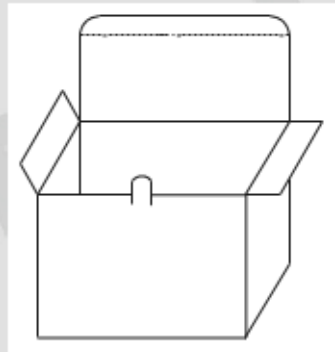
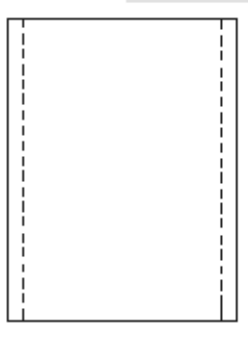
Packing Quantity Specification

Packing Specification

■ PE bag

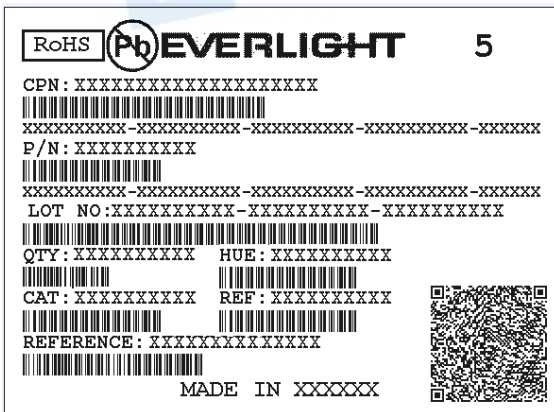
■ Inner Carton

■ Outside Carton



1. 1000PCS/1Bag,4Bags/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
- X: Month
- Reference: Identify Label Number

Notes

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