

Features

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

Descriptions

- PT5529B/L2-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

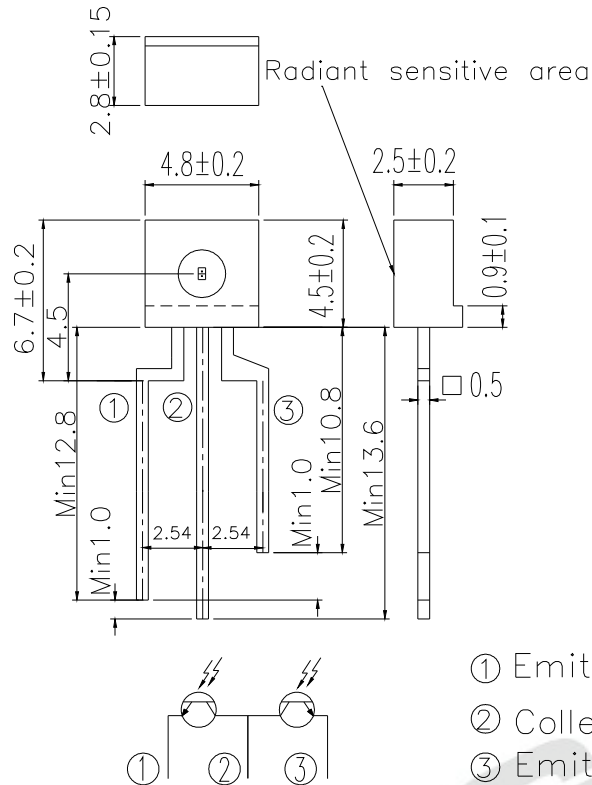
- Mouse
- Optoelectronic Switch
- Photo Interrupter

Device Selection Guide

LED Part No.	Chip	Lens Color
	Material	
PT	Silicon	Black

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Package Dimensions



- Notes:**
1. All dimensions are in millimeters
 2. Tolerances unless dimensions $\pm 0.25\text{mm}$

Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Units
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	---	μS
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	μA
Wavelength of Peak Sensitivity	λ_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

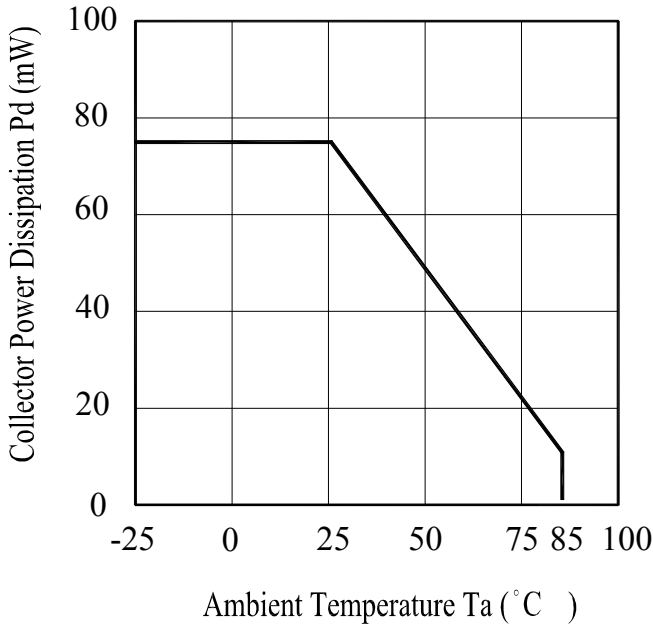


Fig.2 Spectral Sensitivity

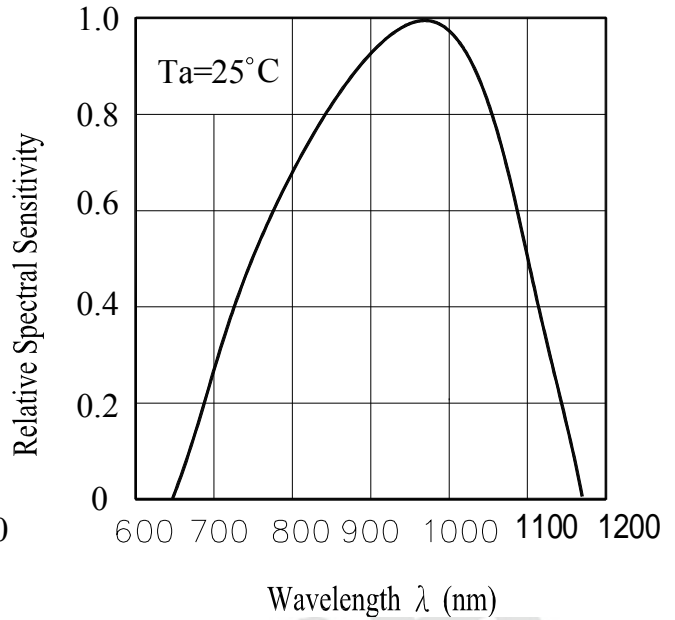


Fig.3 Dark Current vs. Ambient Temperature

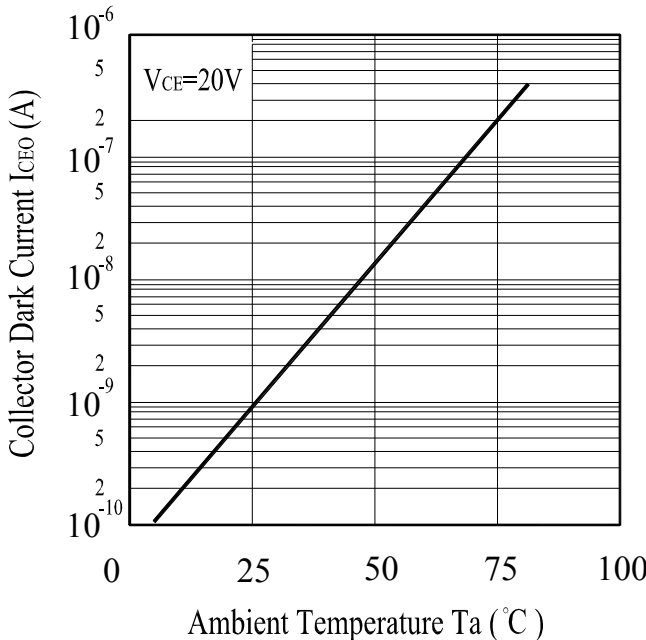
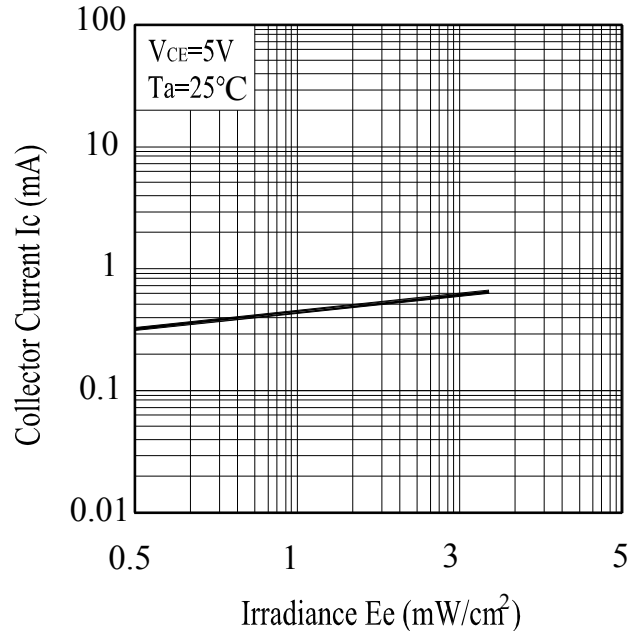


Fig. 4 Reverse Light Current vs. E_e

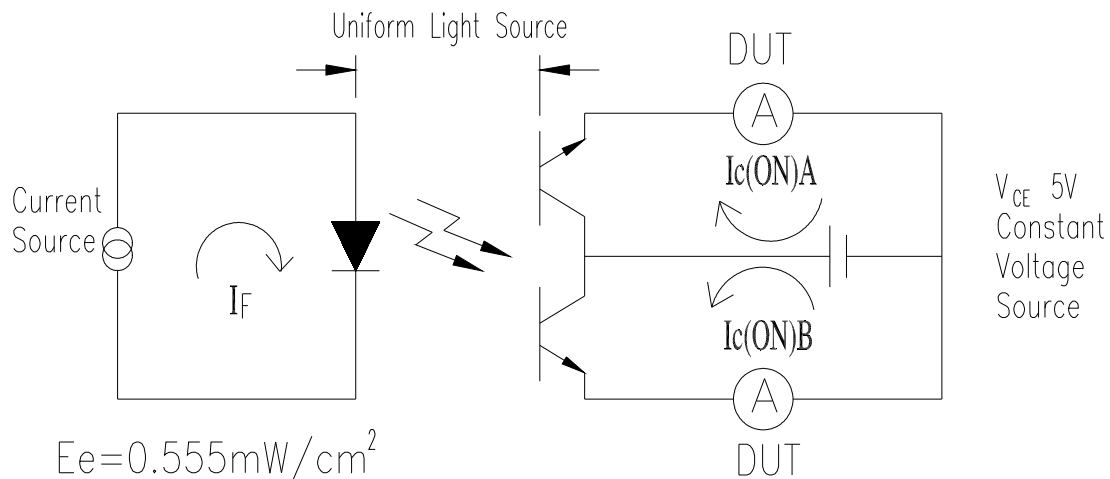


Test Method For On State Collector Current :

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

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

Unit : μA



To Distinguish Intensity:

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

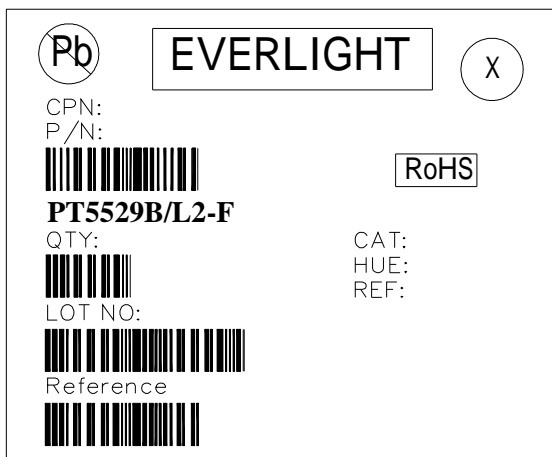
A Ranks

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

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.
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