

Photo Transistor

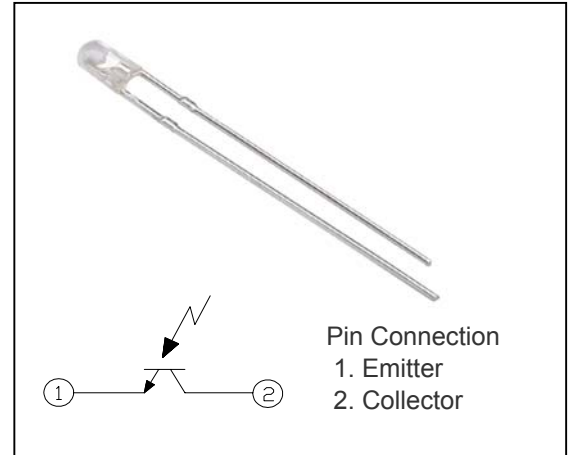
KDT3001A

Description

The KDT3001A is a high-sensitivity NPN silicon phototransistor mounted in Φ 3mm(T-1) all plastic mold type.

Features

- Φ 3mm(T-1) all plastic mold type
- Colorless transparency lens
- Single phototransistor output



RoHS



Applications

- Optical detectors/switch
- VCR, Camcoders
- Floppy disk drivers
- Tape End sensor

Absolute Maximum Ratings

[T_A = 25°C]

Parameter	Symbol	Min.	Max.	Max.
Collector-Emitter Voltage	V _{CEO}	-	35	V
Emitter-Collector Voltage	V _{ECO}	-	6	V
Collector Current	I _C	-	20	mA
Collector Power Dissipation	P _C	-	75	mW
Operating Temperature	T _{opr.}	-20	85	°C
Storage Temperature	T _{stg.}	-30	85	°C
Soldering Temperature*1	T _{sol}	-	260	°C

*1 : MAX 5s

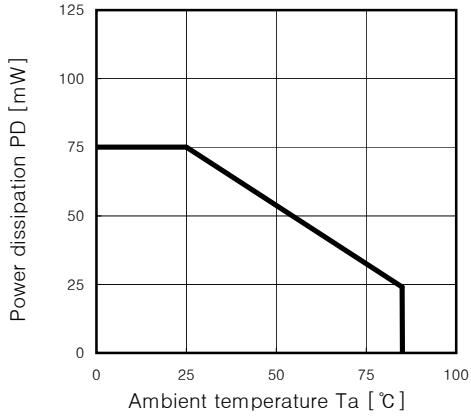
The contents of this data sheet are subject to change without advance notice for the purpose of improvement.
When using this product, would you please refer to the latest specifications.

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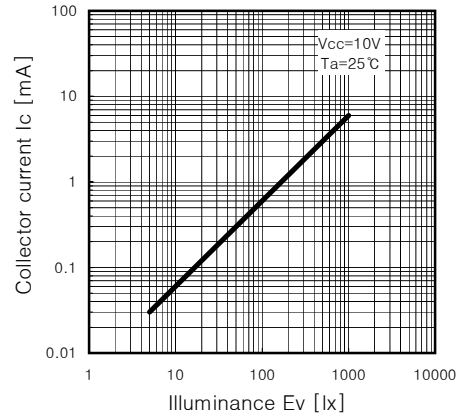
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Rating and Characteristic Curves

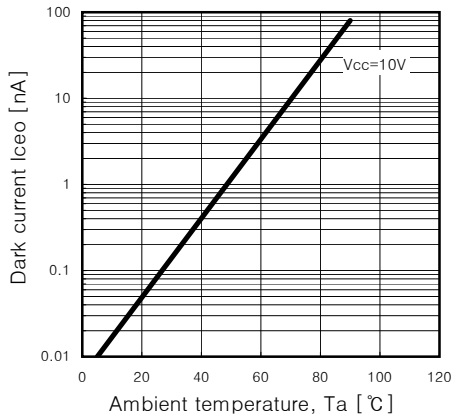
Power dissipation Vs. Ambient temperature



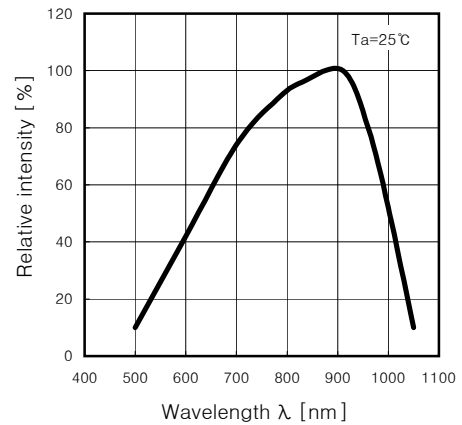
Collector current Vs. Illuminance



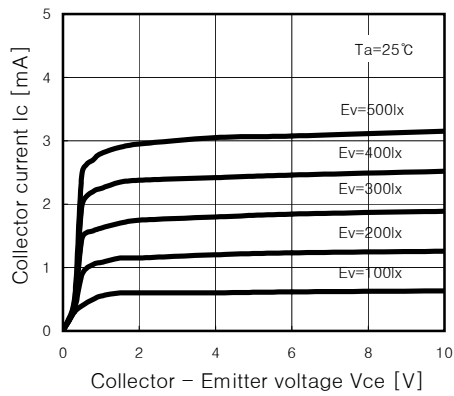
Dark current Vs. Ambient temperature



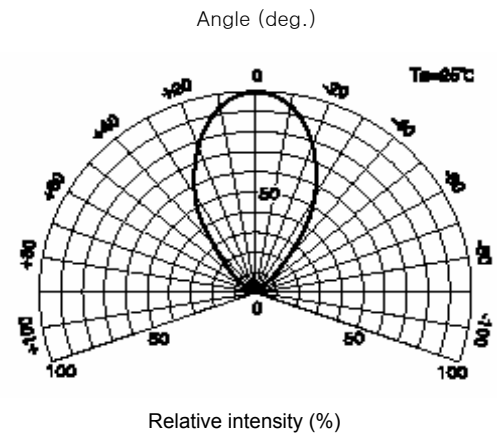
Relative intensity Vs. Wavelength



Collector current Vs. Collector - Emitter voltage



Radiant Pattern



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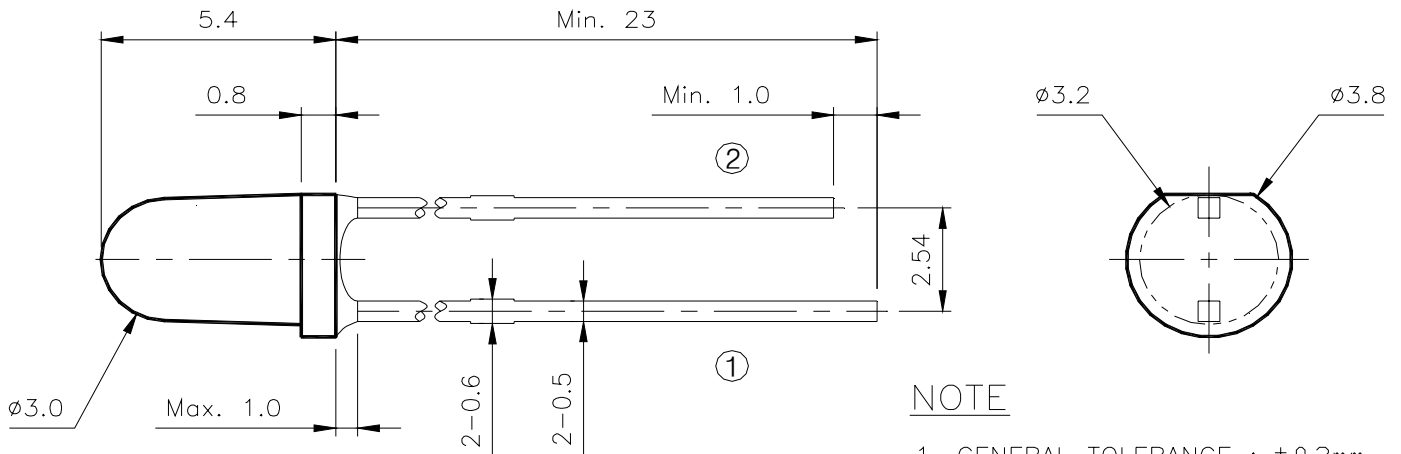
Electrical Characteristics

[T_A = 25°C]

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Dark Current	I _{CEO}	E _v =0, V _{CE} =10V	-	-	200	nA
Collector Current	I _{CEL}	E _e =1mW/cm ² , V _{CE} =5V	1.0	3.0	-	mA
Collector-Emitter Saturation Voltage	V _{CE(SAT)}	E _v =1,000lux, I _c =0.8mA	-	0.2	0.4	V
Spectral Sensitivity	λ	-	400	-	1050	nm
Peak Sensitivity Wavelength	λ _p	-	-	880	-	nm
Switching time (Rise time)	t _r	V _{CC} =10V, I _{CE} =1mA, R _L =100Ω	-	2.5	-	μs
Switching time (fall time)	t _f		-	4.7	-	μs
Half Angle	Δθ	-	-	±30	-	deg

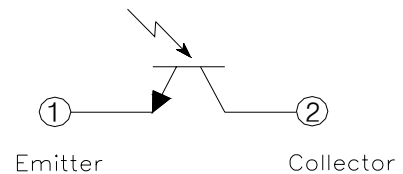
Package Outline Dimensions

(Unit : mm)



NOTE

1. GENERAL TOLERANCE : ±0.2mm
2. THICKNESS : 0.5mm
3. PIN CONFIGURATION



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