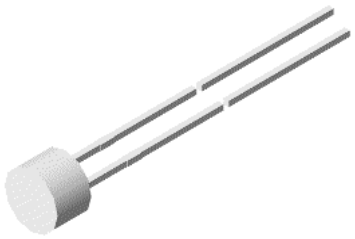
5mm Round Flat Top Ambient Light Sensor

OE T528

Features

- High sensitivity and small junction capacitance
- Excellent linearity across wide illumination range
- High speed and high sensitive silicon NPN material
- High reliability standard LED package with water clear lens
- CDS substituted
- Remain within RoHS compliant



Applications

- Ambient light monitoring device for daylight
- Automatic contrast enhancement for electronic signboard
- Automatic residential and commercial management

RoHS

Pb
pb-free

Absolute Maximum Rating T(amb) =25℃,unless otherwise specified

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	-0.5 ~ 6.0	V
Operating Temperature Range	T_{opr}	-40 ~ +85	℃
Storage Temperature	T_{stg}	-40 to +100	℃
Power Dissipation	P_D	70	mW
Soldering Temperature	T_{sol}	260+/-10	℃

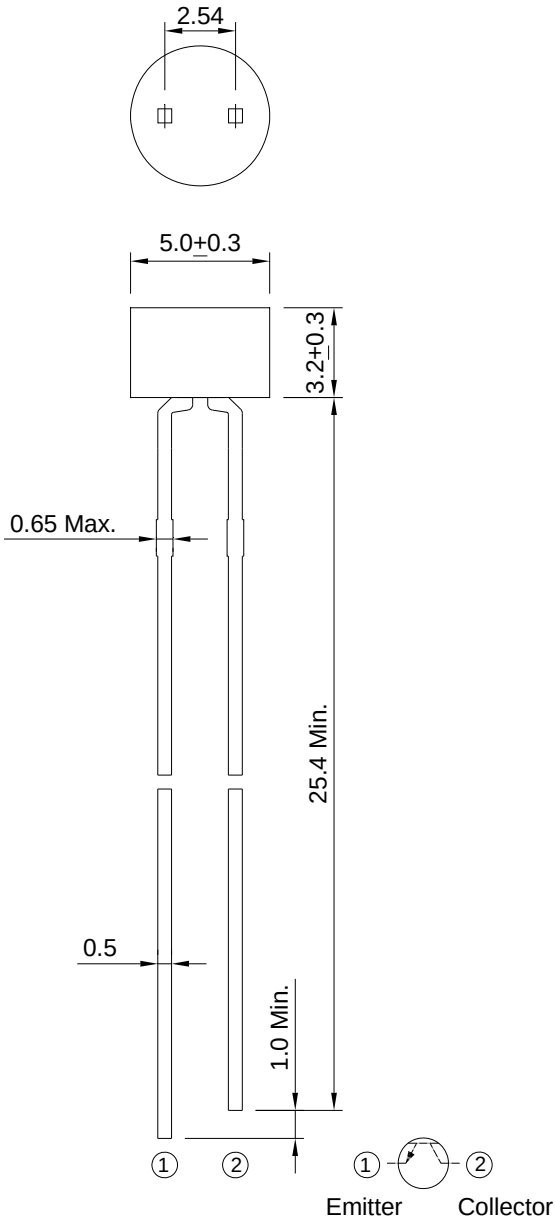
Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specified ratings in this table will result degradation of LED life-span and may cause LED to fail.

Recommended Operating Conditions

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	2.5 ~ 5.5	V
Operating Temperature	T_{opr}	-40 ~ +85	℃

Package Dimension:

unit: mm



Notes:

1. All dimensions are millimeters.
2. Tolerance is ± 0.2mm unless otherwise specified.
3. Specifications are subject to change without notice.

Optical Characteristics Tamb=25℃,unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Emitter-Collector Saturation Voltage	I_C = 2mA Ev= 0 Lux	$V_{EC(sat)}$	-	---	0.4	V
Saturation Output Voltage	I_C = 100uA Ee= 0mW/cm^2	Vo	4.5	4.6	---	V
Photocurrent Ratio	V_{CE} = 5V Ev = 1000Lx	I_{PH3}/I_{PH2}	---	0.1	0.4	V
Peak Sensitivity Wavelength	---	λ p	---	630	--	nm
Light Current	V_{CE} = 5V Ev = 100Lx **(note1)**	I_{PH1}	7	10	---	uA
	V_{CE} = 5V Ev = 1000Lx**(note2)**	I_{PH2}	200	230	---	uA
	V_{CE} = 5V Ev = 1000Lx**(note2)**	I_{PH3}	950	1100	---	uA
Rise Time	Vcc=5V R_L=7.5KΩ	Tr	--	0.11	--	nm
Rise Time	Vcc=5V R_L=7.5KΩ	Tr	--	0.22	--	nm
Sensitivity Wavelength Range	---	λ_p	390	--	700	nm
Angle of Half Sensitivity	I_F=20mA	2θ 1/2	--	140	--	Deg

Notes:

(1) White Fluorescent light is used as light source (Color Temperature @ 6500k)

(2) Illuminati by CIE stand illuminant-A / 2856k.

Typical Electro-optical Characteristics Curves