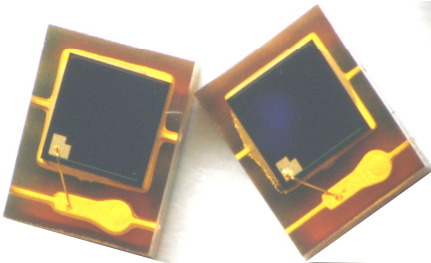


Ambient Light Sensor

Single Photo Diode Type

OP16NF



Description

The OP16NF is COB type Ambient Light Sensor using hi-speed, hi-sensitive photo diode chip on PCB.

Features

- High speed sensitivity
- Wide angular response

Applications

- mobile devices-mobile phones,PDA's computing devices
- TFT LCD TV, plasma TV, video camera, digital still camera

Absolute Maximum Ratings

Ta=25°C

Parameter	Symbol	Ratings	Unit
Reverse Breakdown Voltage	bVR	30	V
Junction Temperature	T _J	150	°C
Operating temperature	T _{OPR}	-25 ~ +80	°C
Storage temperature	T _{STG}	-30 ~ +90	°C

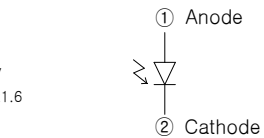
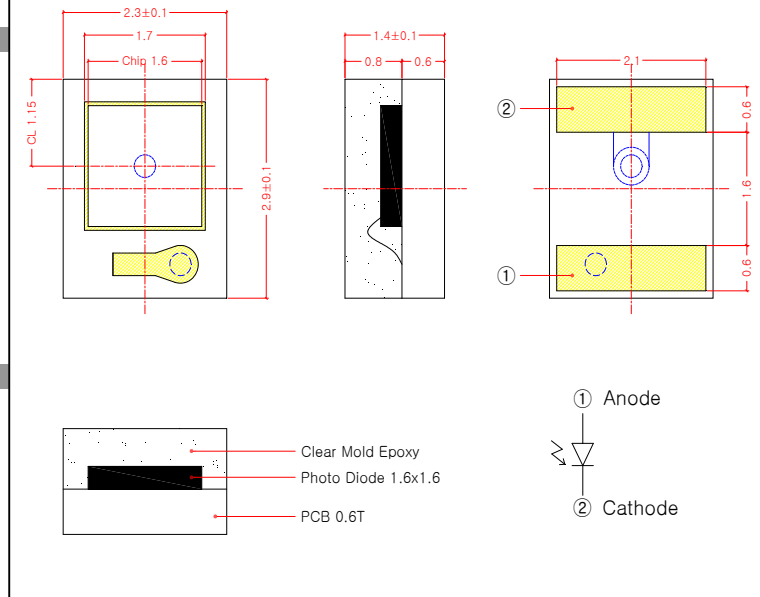
Electro-Optical Characteristics

Ta=25°C

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Open Circuit Voltage	V _{oc}	Ev=1,000lux*1	0.3	0.32	-	V
Short Circuit Current	I _{sc}	Ev=1,000lux*1	-	20	-	μA
Dark current	I _d	V _R =10V	-	-	100	nA
Junction capacitance	C _j	V _R =10V, f=1MHz	-	30	50	pF
Spectral response range	λ	-	450	-	1100	nm
Peak sensitivity wavelength	λ _P	-	-	940	-	nm
Half angle	Δθ	-	-	±60	-	deg.

*1 : Parallel light of 1,000lux illumination is applied by a tungsten lamp of 2856K

PACKAGE DIMENSIONS



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ISO 9001/14001 TS-16949

RAYTRON CO.,

■ Typical electrical / Optical characteristic curves (Ta=25 °C)

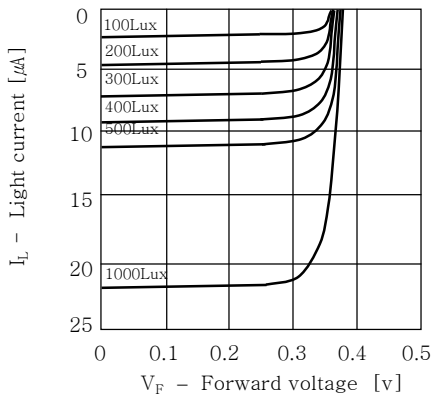


Fig.1 Light current vs. Forward voltage

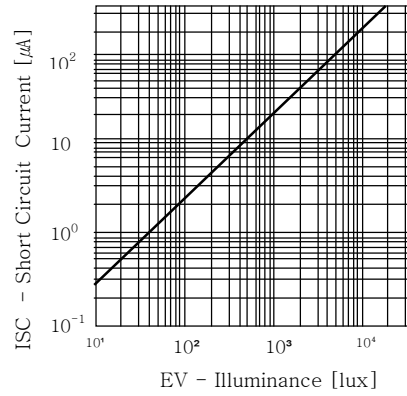


Fig.2 Short Circuit Current vs. Illuminance

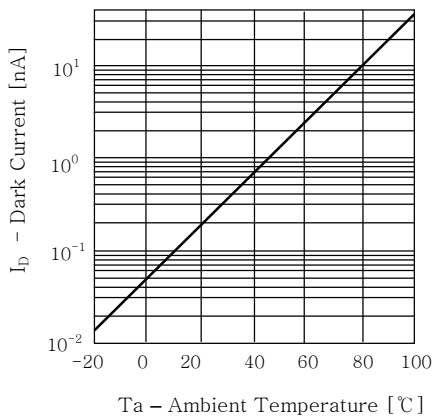


Fig.3 Dark current vs. Ambient temperature

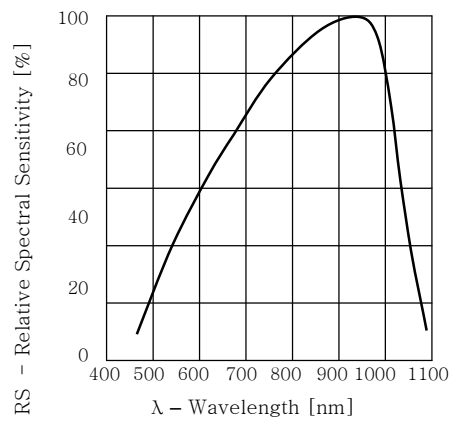


Fig.4 Relative spectral sensitivity vs. wavelength

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