



LIGHTING FOREVER

## Surface - Mount Ambient Light Sensor

## ALS-PD70-01C/TR7

### Features

- Close to the human eye's response
- Low sensitivity variation across various light sources
- Operating temperature performance, -40°C to 85°C
- Wide supply voltage range, 2.5V to 5.5V
- Size : 4.4mm(L)\*3.9mm(W)\*1.2mm(H)
- RoHS compliant and Pb Free package



### Description

ALS-PD70-01C/TR7 Ambient Light Sensor Device, consisting of a photodiode in miniature SMD package, which is molded in water clear with flat top. It is a good effective solution to the power saving of display backlighting of mobile appliances, such as the mobile phones and PDAs. Due to the high rejection ration of infrared radiation, the spectral response of the ambient light sensor is close to that of human eyes.

### Applications

- Detection of ambient light for controlling the backlighting of TFT LCD display
- Automatic residential and commercial lighting management
- Automatic contrast enhancement for electronic signboard
- Ambient light monitoring device for daylight and artificial light

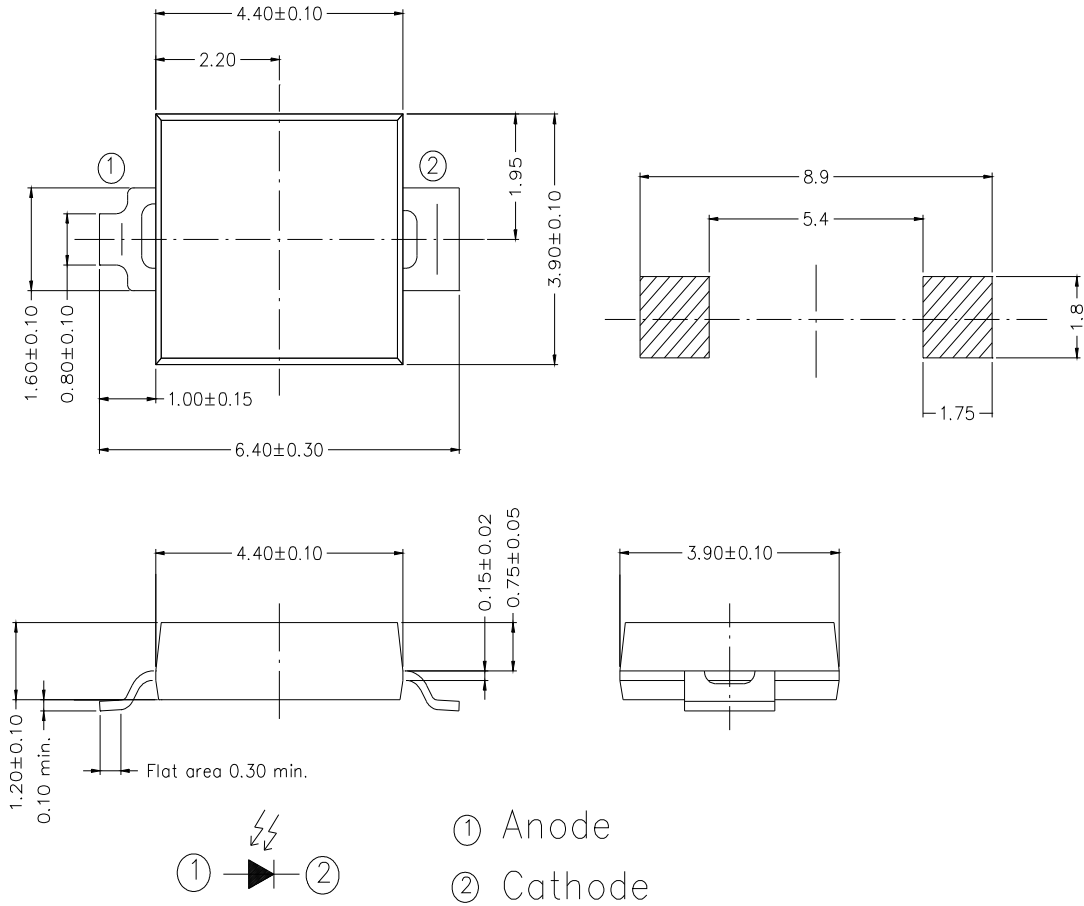


LIGHTING FOREVER

# Surface - Mount Ambient Light Sensor

## ALS-PD70-01C/TR7

### Package Dimensions



Unit: mm

Tolerances:  $\pm 0.1$ mm



LIGHTING FOREVER

**Surface - Mount  
Ambient Light Sensor**

**ALS-PD70-01C/TR7**

**Absolute Maximum Ratings (Ta=25°C)**

Parameter	Symbol	Condition	Rating	Units
Reverse Breakdown Voltage	V <sub>BR</sub>	I <sub>R</sub> = 100 μ A	35	V
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA	0.5~1.3	V
Operating Temperature	T <sub>opr</sub>	---	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	---	-40 ~ +85	°C
Soldering Temperature	T <sub>sol</sub>	---	260	°C

**Recommended Operating Conditions (Ta=25°C)**

Parameter	Symbol	Min.	Max.	Unit
Operating Temperature	T <sub>opr</sub>	-40	+85	°C



LIGHTING FOREVER

**Surface - Mount  
Ambient Light Sensor**

**ALS-PD70-01C/TR7**

**Electrical and Optical Characteristics (Ta=25°C)**

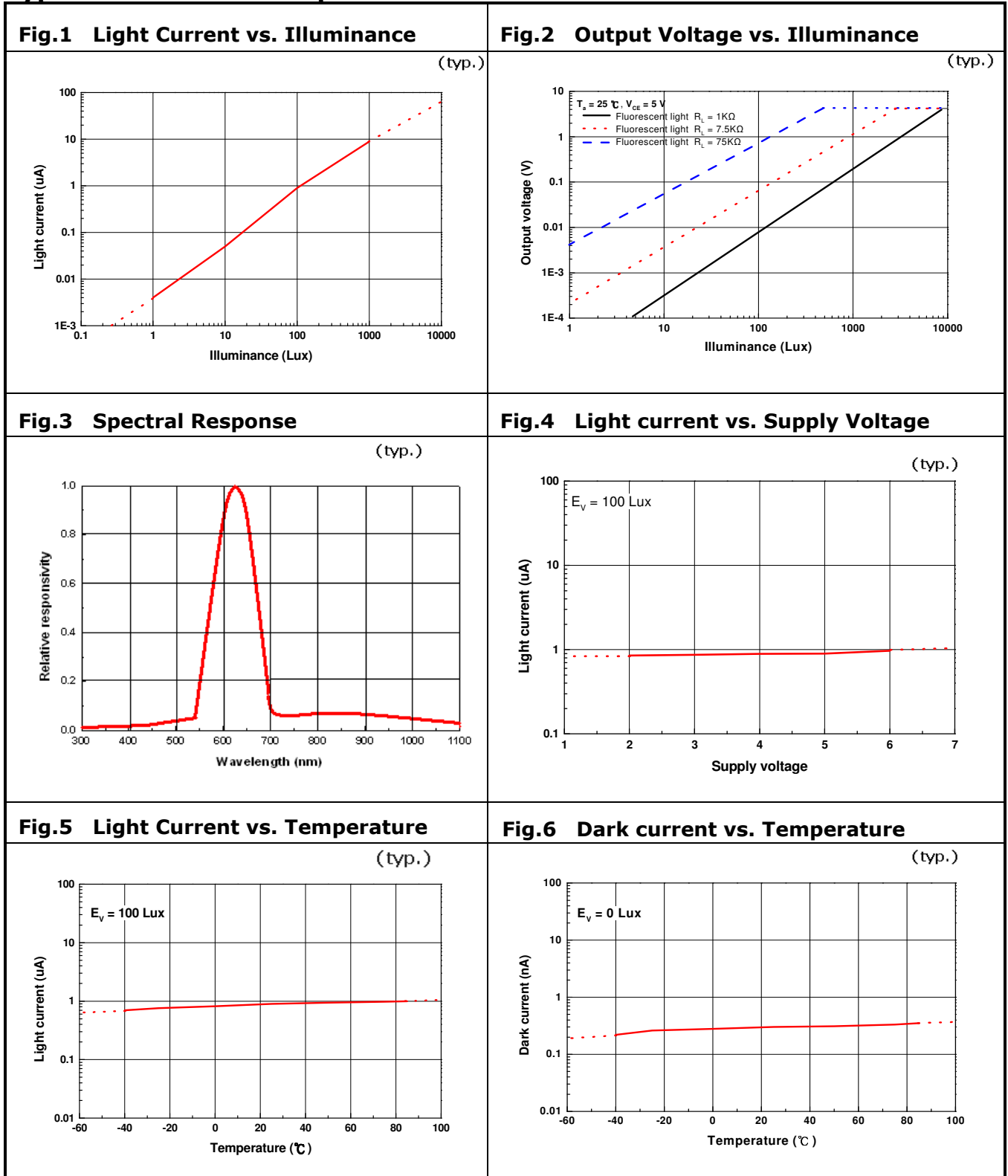
Parameter	Symbol	MIN.	TYP.	MAX.	Unit	Test Condition
Dark Current	$I_D$	---	2	10	nA	$V_R=5V, E_v= 0Lux$
Light Current	$I_{L1}$	---	1.1	---	uA	$V_R=5V, E_v= 100Lx$ [Note1]
	$I_{L2}$	---	9.5	---	uA	$V_R=5V, E_v= 1000Lx$ [Note1]
	$I_{L3}$	---	12	---	uA	$V_R=5V, E_v= 1000Lx$ [Note2]
Peak Sensitivity Wavelength	$\lambda_p$	---	630	---	nm	
Sensitivity Wavelength Range	$\lambda$	390	---	700	nm	

**Note:**

[1] : White Fluorescent light (Color Temperature = 6500K) is used as light source.

[2] : Illuminance by CIE standard illuminant-A / 2856K, incandescent lamp

Typical Electrical and Optical Characteristics Curves



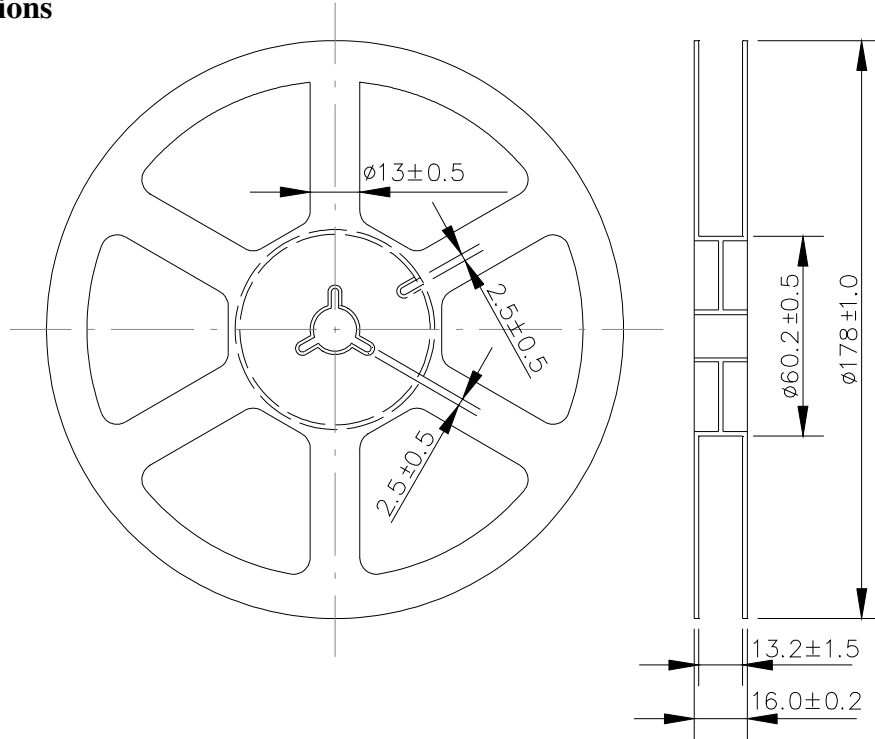


LIGHTING FOREVER

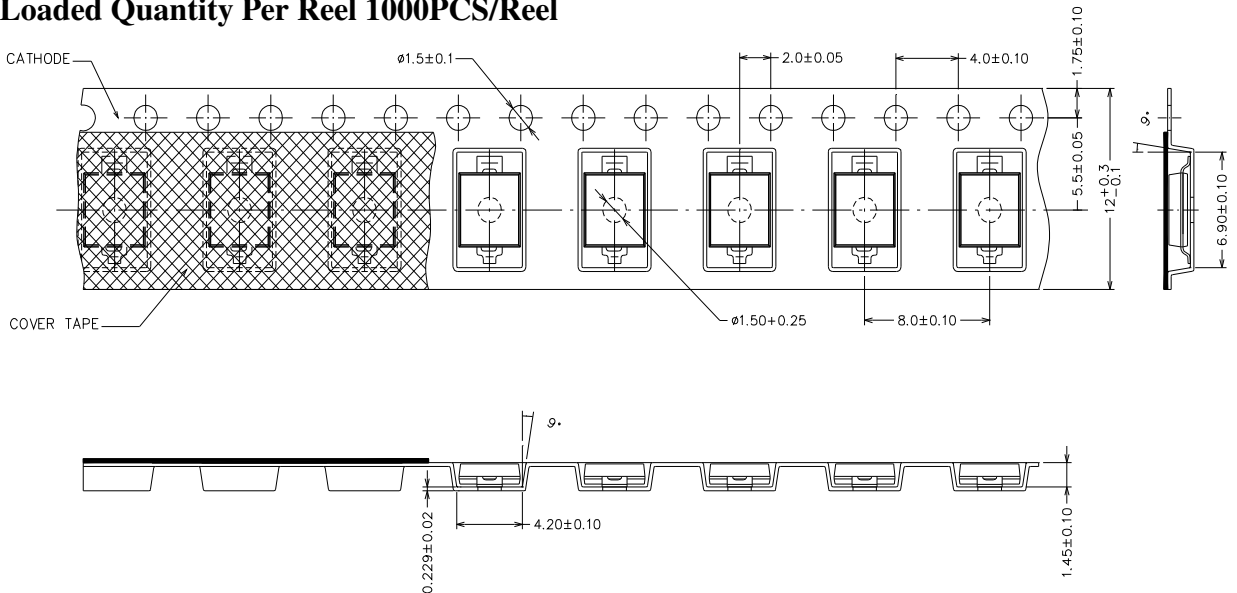
# Surface - Mount Ambient Light Sensor

## ALS-PD70-01C/TR7

### Package Dimensions



### Loaded Quantity Per Reel 1000PCS/Reel





LIGHTING FOREVER

## Surface - Mount Ambient Light Sensor

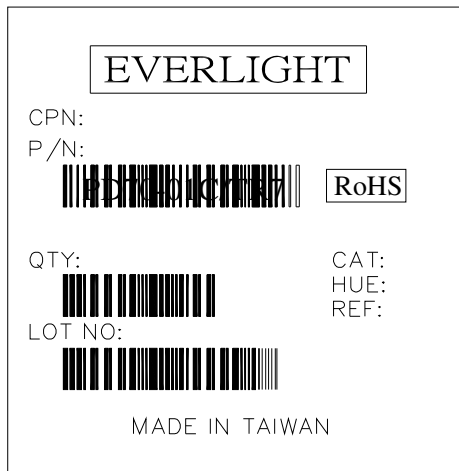
**ALS-PD70-01C/TR7**

### Packing Quantity Specification

1.1000Pcs/1Volume , 1Volume/1Bag

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

MADE IN TAIWAN: Production Place



LIGHTING FOREVER

## Surface - Mount Ambient Light Sensor

**ALS-PD70-01C/TR7**

---

### Note:

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
3. These specification sheets include materials protected under copyright of EVERLIGHT corporation. Please don't reproduce or cause anyone to reproduce them without EVERLIGHT's consent.