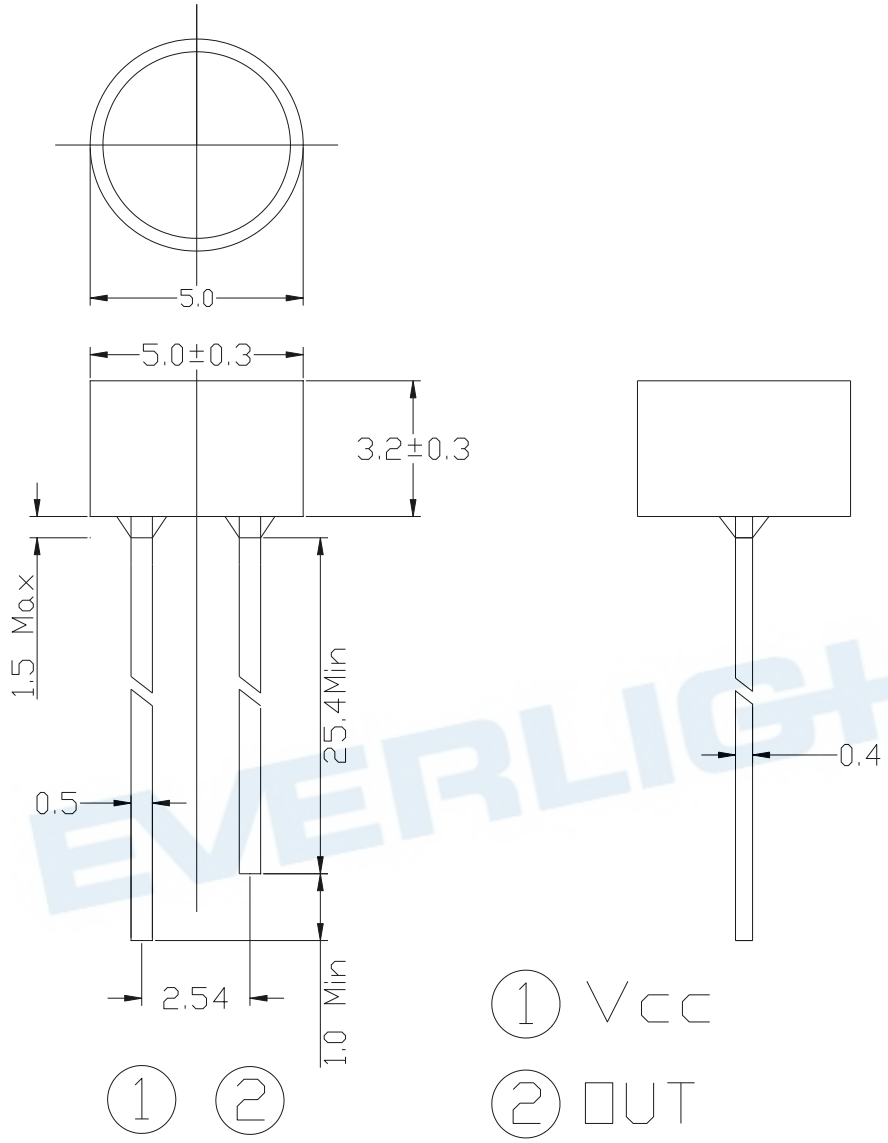
Package Dimensions



Notes:
1.All dimensions are in millimeters
2.Tolerances unless dimensions ±0.1mm

Absolute Maximum Ratings

Parameter	Symbol	Rating	Unit
Supply Voltage	V_{CC}	-0.7 ~ 6.5	V
Operating Temperature Range	T_a	-40 ~ +85	°C
Storage Temperature Range	T_S	-40 ~ +100	°C
Soldering Temperature	T_{SOL}	260	°C

Recommended Operating Conditions

Parameter	Symbol	Min.	Max.	Unit
Operating Temperature	T_a	-40	+85	°C
Supply Voltage	V_{CC}	1.8	5.5	V

Rankings

Bin	Symbol	Min.	Max.	Unit	Test Condition
1	I_{PH2}	10	16	uA	V_{CC}=3V E_V = 100Lux
2		14	23		
3		20	30		
4		26	35		

Electrical and Optical Characteristics (T_a=25℃)

Parameter	Symbol	MIN	TYP	MAX.	Unit	Test Condition
Dark Current	I_D	---	0.05	0.1	uA	V_{CC}=3V, Ev= 0Lux
Light Current	I_{PH1}	1	---	3.5	uA	V_{CC}=3V, Ev= 10Lux [Note1]
	I_{PH2}	10	---	35	uA	V_{CC}=3V, Ev= 100Lux [Note1]
	I_{PH3}	100	---	350	uA	V_{CC}=3V, Ev= 1000Lux [Note1]
	I_{PH4}	100	300	---	uA	V_{CC}=3V, Ev= 1000Lux [Note2]
Photocurrent Ratio	I_{PH4} / I_{PH3}	---	1.2	---	---	V_{CC}=3V, Ev= 1000Lux
Saturation Output Voltage	V_{o_RL}	---	1.9	---	V	V_{CC}=3V; Ev= 1000Lux, R_L=100 KΩ
Peak Sensitivity Wavelength	λ_p	---	560	---	nm	---
Sensitivity Wavelength Range	λ	390	---	700	nm	---
Rise time	tr	---	0.36	---	ms	V_{CC} = 3 V R_L = 27KΩ
Fall time	tf	---	1.13	---	ms	
Angle of half Sensitivity	$2\theta_{1/2}$	---	143	---	Deg.	I_F=20mA

Note:

1. White Fluorescent light (Color Temperature = 6500K) is used as light source. However, White LED is substituted in mass production.
2. Illuminance by CIE standard illuminant-A / 2856K, incandescent lamp.

Typical Electrical and Optical Characteristics Curves

Fig.1 Photocurrent vs. Illuminance

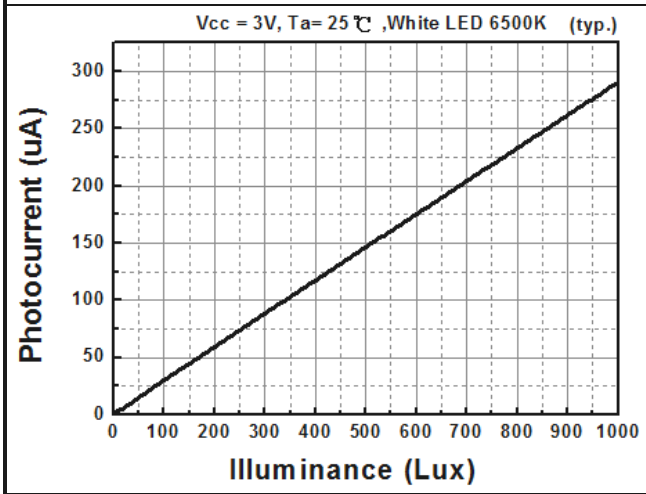


Fig.2 Output Voltage vs. Illuminance

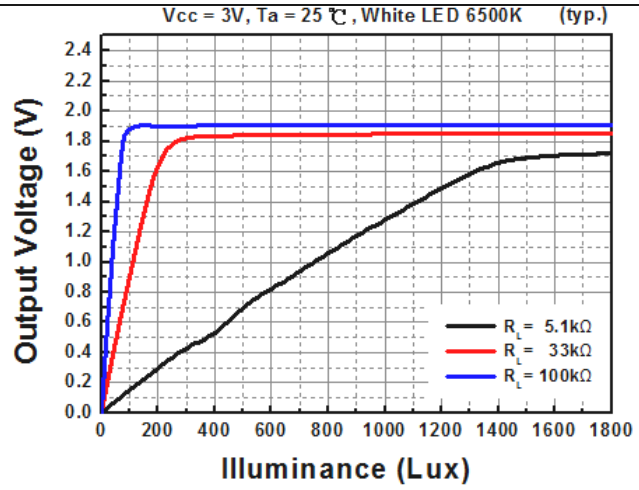


Fig.3 Spectral Response

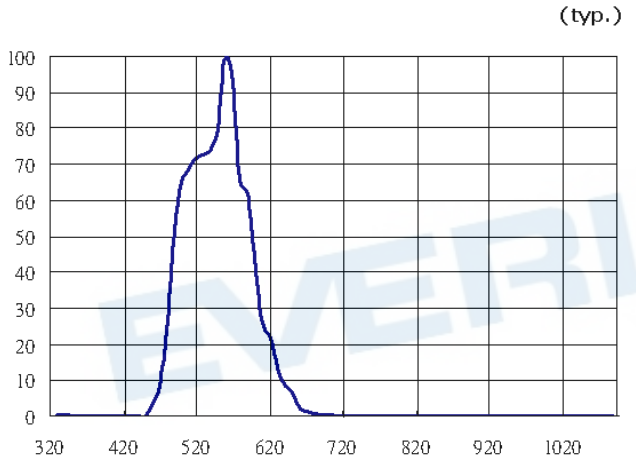


Fig.4 Photocurrent vs. Supply Voltage

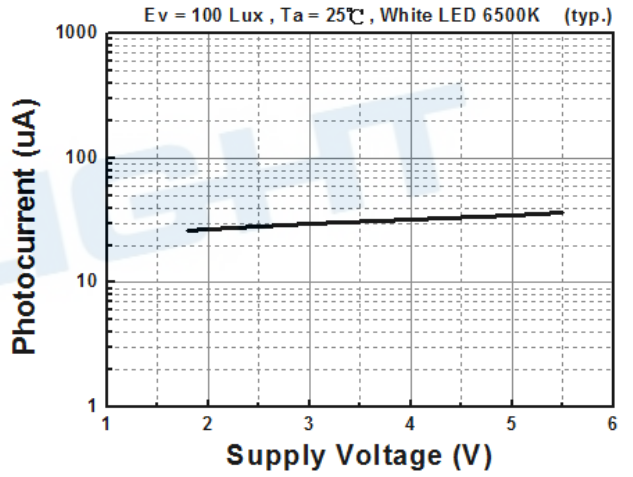


Fig.5 Photocurrent vs. Temperature

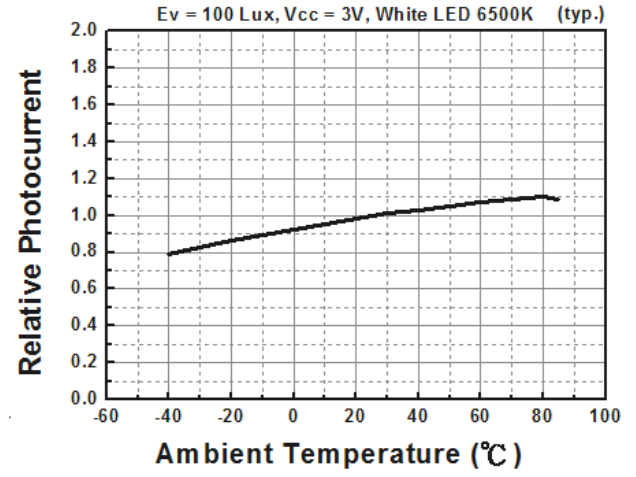
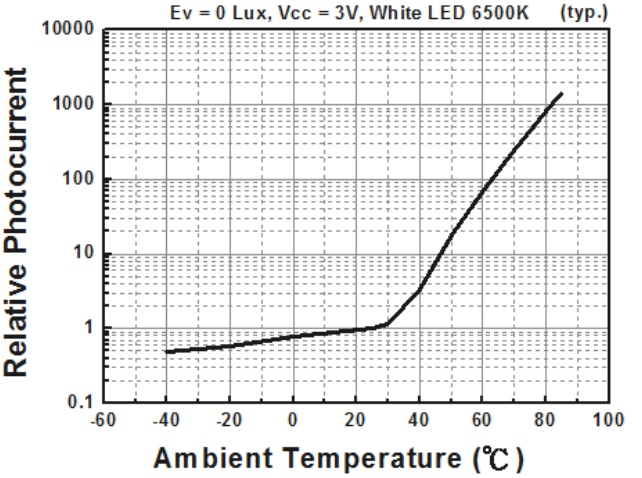
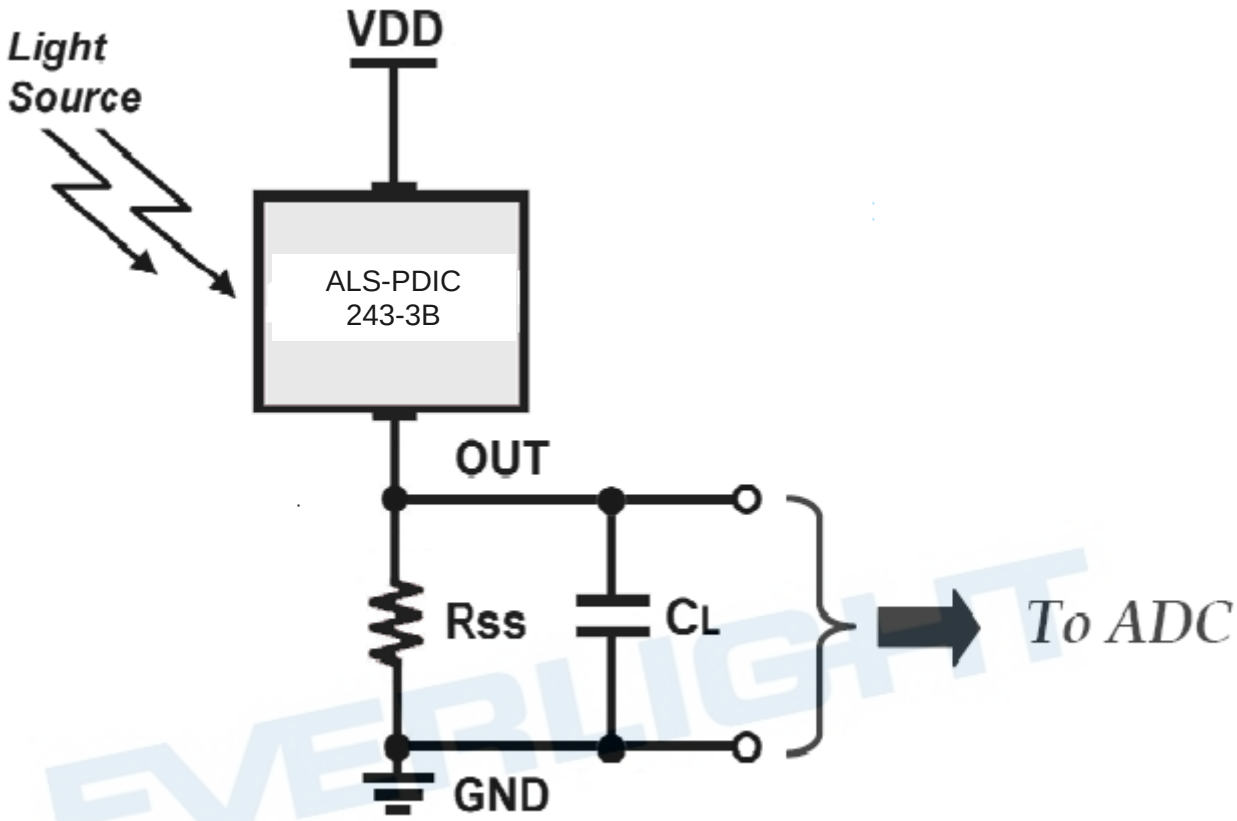


Fig.5 Dark Current vs. Temperature



Converting Photocurrent to Voltage



Note:

1. The output voltage (V_{OUT}) is the product of photocurrent (I_{PH}) and loading resistor (R_L)
2. A right loading resistor shall be chosen to meet the requirement of maximum ambient light, and output saturation voltage:

$$V_{OUT\_amb\_max} = I_{OUT\_amb\_max}{}^{(*)} \times R_L \leqq V_{OUT}\ (\text{saturation})$$

(*) For $I_{OUT\_amb\_max}$, please refer to Fig.1.

Packing Quantity Specification

1.500PCS/1Bag，5Bags/1Box
2.10Boxes/1Carton

Label Format

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

DISCLAIMER

1. EVERLIGHT reserves the right(s) on the adjustment of product material mix for the specification.
2. The product meets EVERLIGHT published specification for a period of twelve (12) months from date of shipment.
3. The graphs shown in this datasheet are representing typical data only and do not show guaranteed values.
4. 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 the use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
5. These specification sheets include materials protected under copyright of EVERLIGHT. Reproduction in any form is prohibited without obtaining EVERLIGHT's prior consent.
6. This product is not intended to be used for military, aircraft, automotive, medical, life sustaining or life saving applications or any other application which can result in human injury or death. Please contact authorized Everlight sales agent for special application request.