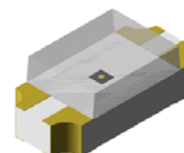


1206 Package Ambient Light Sensor

OE 5A28

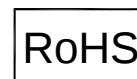
Features

- 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



Absolute Maximum Rating (Ta =25°C)

Parameter	Symbol	Value	Unit
Supply Voltage	V _{CC}	-0.5 ~ 6	V
Operating Temperature Range	T _{opr}	-25 ~ +85	°C
Storage Temperature	T _{stg}	-40 to +100	°C
Soldering Temperature	T _{sol}	260+/-10	°C

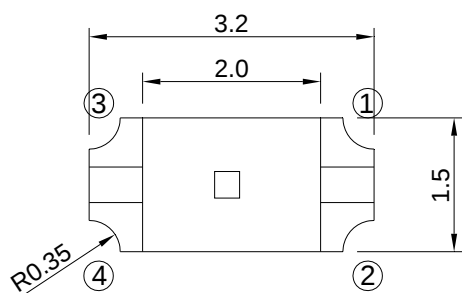
Note: Please take note the Absolute Maximum Rating values. Any operation beyond the specified ratings in this table will result degradation of LED life-span and may cause LED to fail.

Recommended Operating Conditions (Ta =25°C)

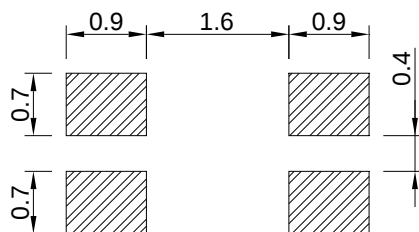
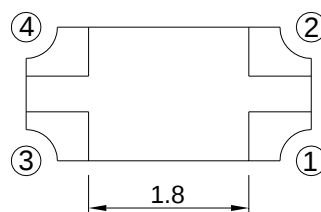
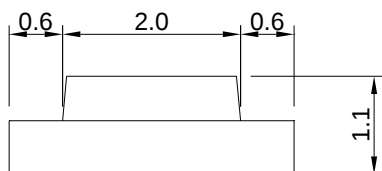
Parameter	Symbol	Value	Unit
Operating Voltage	V _{CC}	2.5 ~ 5.5	V
Output voltage	V _O	0 ~ V _{CC} -0.8	V
Output Photo Current	I _{PH}	0 ~ 5	mA

Package Dimension:

unit : mm



- ① Out
- ② Vcc
- ③ GND
- ④ GND



Recommended Soldering Pad

Notes:

1. All dimensions are millimeters.
2. Tolerance is $\pm 0.2\text{mm}$ unless otherwise specified.
3. Specifications are subject to change without notice.

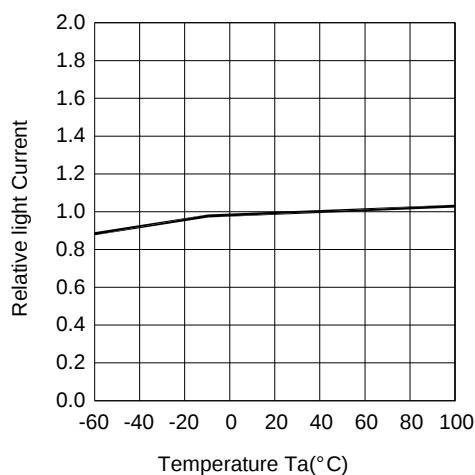
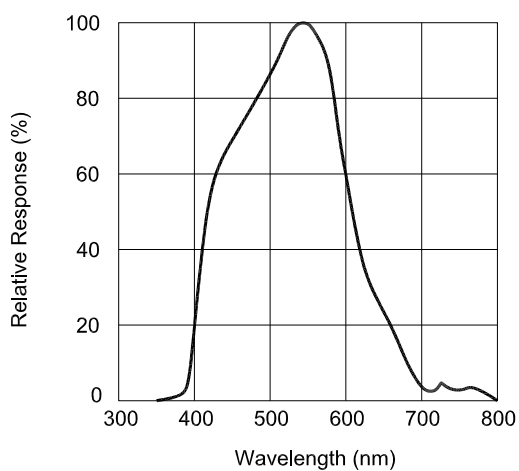
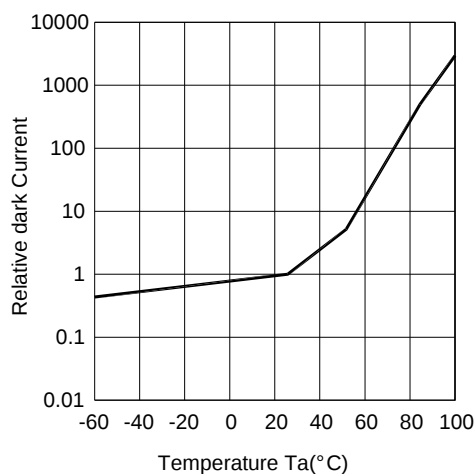
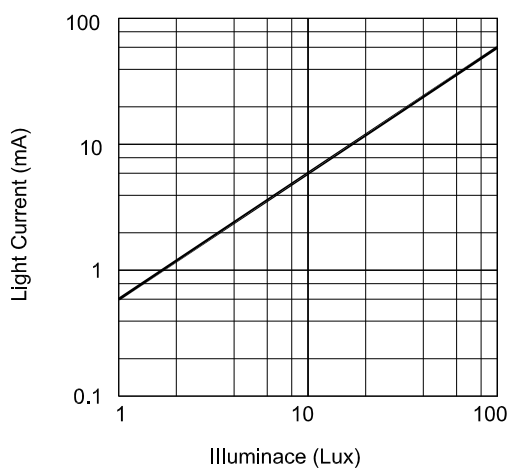
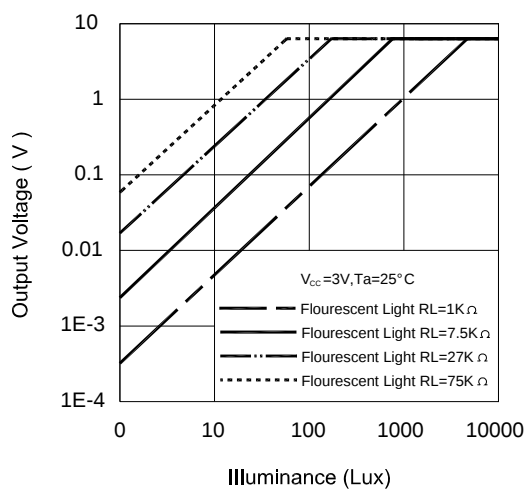
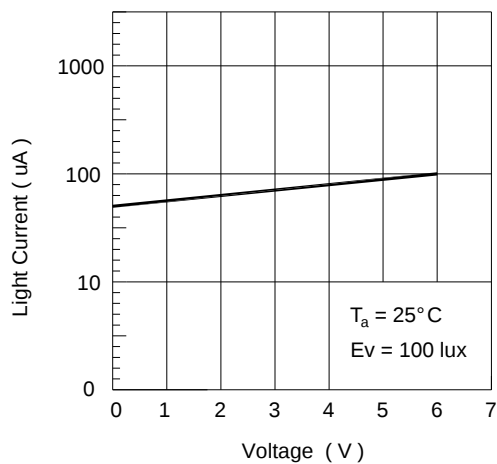
Optical Characteristics (Ta=25°C and Vcc = 3.0V)

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Dark Current	V _{CC} = 3V E _v = 0Lx	I _D	--	--	0.1	uA
Photocurrent Ratio	---	I _{PH3} /I _{PH2}	---	1.2	1.4	--
Peak Sensitivity Wavelength	---	λ _p	---	590	--	nm
Light Current	V _{CC} = 3V E _v = 10Lx (note1)	I _{PH1}	4.5	6	7.5	uA
	V _{CE} = 3V E _v = 100Lx(note1)	I _{PH2}	40	55	70	uA
	V _{CE} = 3V E _v = 100Lx(note1)	I _{PH3}	50	70	90	uA
	V _{CC} = 3V E _v = 1000Lx (note1)	I _{PH4}	350	500	650	uA
Light Test Current	V _{CC} = 3V E _v = 1000Lx (note3)	I _{TPH}	--	500	--	uA
Response Wavelength	> 10% Response	λ	430	--	640	nm
Rise Time	V _{CC} =3V, R _L =5KΩ	T _r	--	0.075	--	ms
Fall Time		T _f	--	0.2	--	ms
Delay Time		T _d	--	0.15	--	ms
Angle of Half Sensitivity	I _F =20mA	2 θ 1/2	--	140	--	Deg

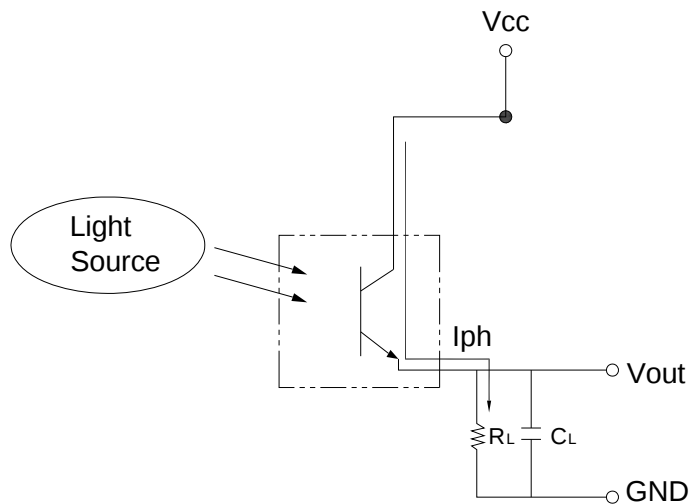
Notes:

- (1) White Fluorescent light is used as light source (Color Temperature @ 6500k)
- (2) Illuminati by CIE stand illuminant-A / 2856k.
- (3) White light LED is substituted in mass production.

Typical Electro-optical Characteristics Curves



Converting Photocurrent to Voltage



Note:

1. The out put voltage is the product of photo current(I_{PH}) and loading resistor(R_L)
2. A right loading resistor shall be chosen to meet the requirement of maximum ambient light.

