



深圳成光兴光电技术股份有限公司

SHENZHEN CGX OPTOELECTRONIC TECHNOLOGY, INC..

# 样品规格承认书

## SAMPLE APPROVAL SHEET

客户名称

Company Name : \_\_\_\_\_

产品型号

Part Number: PDIC-3528A5-D3

送样日期

Sample Date: \_\_\_\_\_

| APPROVED SIGNATURES (供应商确认) |    |    |
|-----------------------------|----|----|
| 核准                          | 品保 | 工程 |
|                             |    |    |

客户确认：☐样品承认 ☐不予承认需重新送样 ☐不予承认不需送样

客户建议: \_\_\_\_\_

| APPROVED SIGNATURES (客户确认) |    |    |
|----------------------------|----|----|
| 核准                         | 工程 | 品保 |
|                            |    |    |

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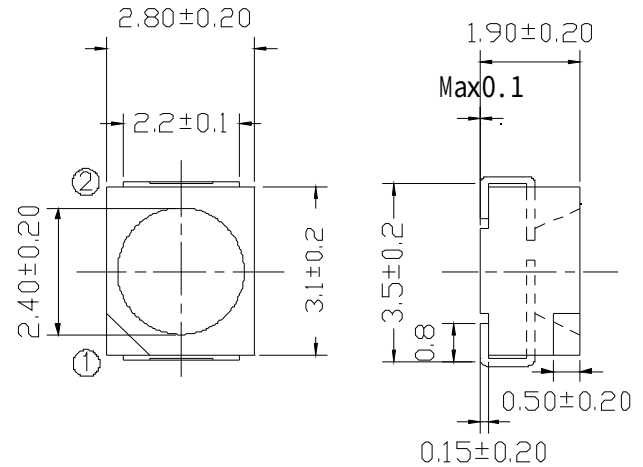
## Visible Light Detector

**PATR NO. : PDIC-3528A5-D3**

### FEATURES

- Near human eye photopic response
- High IR rejection without external optical filter
- Photo-Current amplifier integrated
- Excellent dark current performance over wide temperature range, especially over high temp
- High output current linearity to ambient light level
- Buffered analog output intergrates seamlessly with external MCU
- Higher humidity immunity

### Package Dimensions Unit : mm

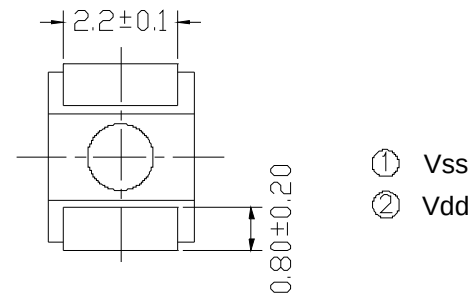


### DESCRIPTION

PDIC-3528A5-\*\* is a cost effective visible light sensor series without external optical filter to provide close to human eye response and high IR rejection.

It converts light into voltage by connecting it with a series resistor. The dynamic range is determined by the power supply and the external resistor (5V supply with 10K ohm resistor gives a range of up to 160 Lux, and can be over 700 Lux with a 1K ohm resistor). The internal dark current cancellation circuits enable a stable and accurate performance even up to 125°C.

The digital output version provides a good BOM cost reduction and enables board miniaturization for system maker.



### Notes :

1. All dimensions are in millimeters
2. Protruded resin under flange is 0.5 mm max.
3. Tolerance is  $\pm 0.25$  mm unless otherwise noted.

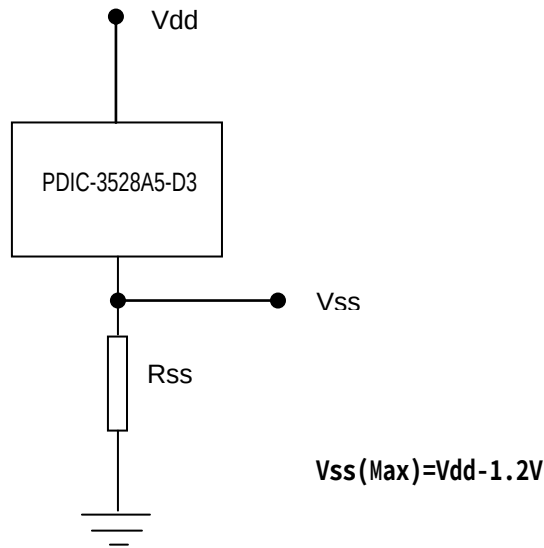
### APPLICATIONS

- Dawn/dusk sensing
- Security lighting
- Light sensing
- Automotive car headlight
- Automatic Night Light

## Visible Light Detector

**PATR NO. : PDIC-3528A5-D3**

### BASIC APPLICATION



### ABSOLUTE MAXIMUM RATINGS

| PARAMETER                             | RATING             | UNITS |
|---------------------------------------|--------------------|-------|
| Supply input voltage                  | -0.3 to 12         | V     |
| Supply current                        | Internally limited | mA    |
| Operating Temperature, T <sub>O</sub> | -40°C to +85°C     | °C    |
| Storage Temperature, T <sub>S</sub>   | -40°C to +100°C    | °C    |

### ELECTRICAL SPECIFICATION

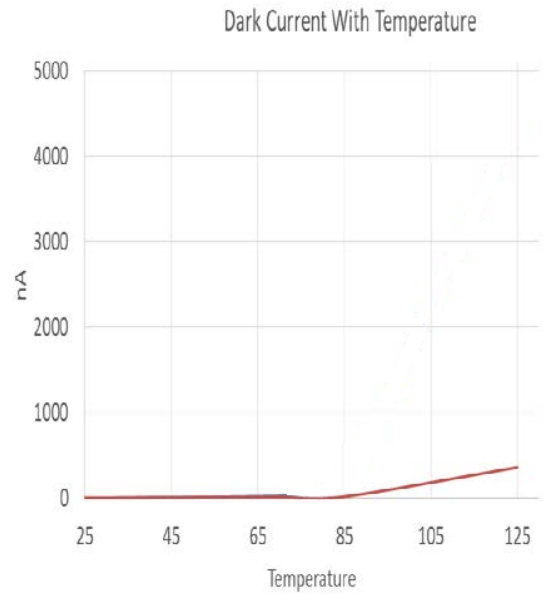
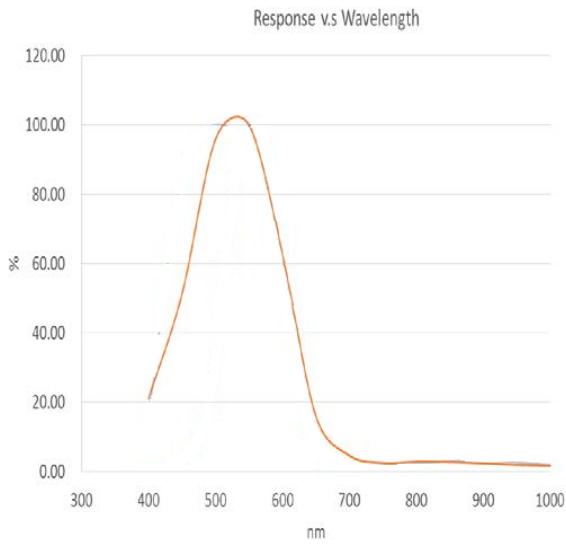
| Parameter              | Symbol           | Test Conditions                      | Min | Typ     | Max      | Units    |
|------------------------|------------------|--------------------------------------|-----|---------|----------|----------|
| Operating voltage      | V <sub>DD</sub>  |                                      |     | 5       | 12       | V        |
| Output Current         | I <sub>SS</sub>  | light @ yellow led<br>590nm<br>Vr=5v | 8.0 | 9.5     | 12       | μA       |
| Dark Current           | I <sub>DRK</sub> | 0 Lux, Ta = 25°C<br>0 Lux, Ta = 85°C |     | 5<br>10 | 20<br>50 | nA<br>nA |
| Peak Spectral Response | Wavelength       |                                      |     | 550     |          | nm       |

## Visible Light Detector

**PATR NO. : PDIC-3528A5-D3**

### Photo-spectral response and IR rejection

**Dark current is only 360nA @ 125C**



### Output current:

