

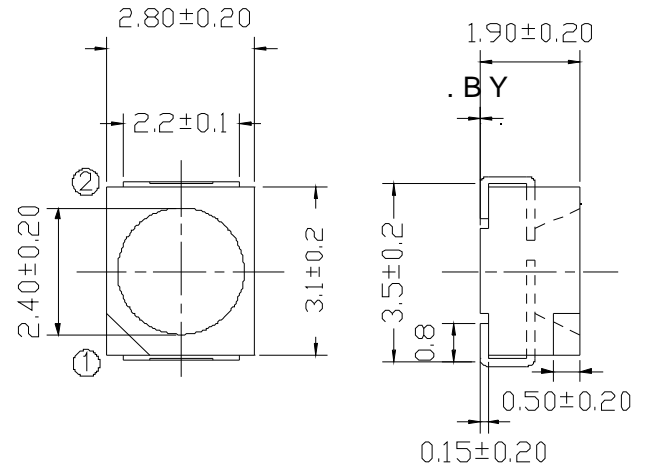
Visible Light Detector

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

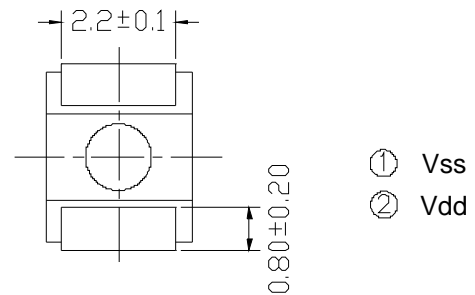


DESCRIPTION

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 160Lux, and can be over 700Lux 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 ± 0.25 mm unless otherwise noted.

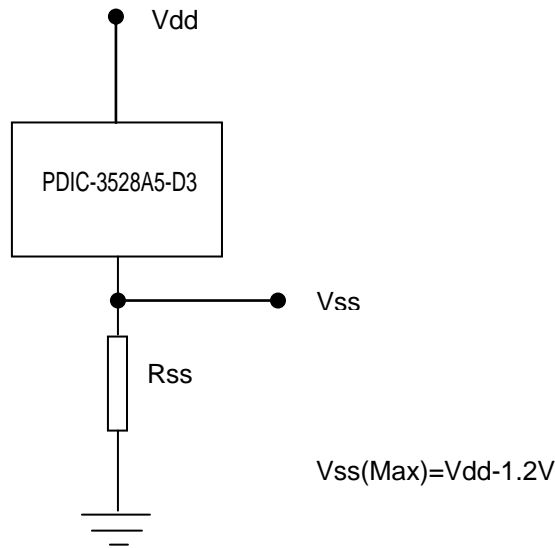
APPLICATIONS

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

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BASIC APPLICATION



ABSOLUTE MAXIMUM RATINGS

| PARAMETER | RATING | UNITS |
|---------------------------------------|--------------------|-------|
| Supply input voltage | -0.3 to 12 | V |
| Supply current | Internally limited | mA |
| Operating Temperature, T _O | -40°C to +85°C | °C |
| Storage Temperature, T _S | -40°C to +100°C | °C |

ELECTRICAL SPECIFICATION

| Parameter | Symbol | Test Conditions | Min | Typ | Max | Units |
|------------------------|------------------|--|-----|---------|----------|----------|
| Operating voltage | V _{DD} | | | 5 | 12 | V |
| Output Current | I _{SS} | light @ yellow led 590nm V _r =5v | 8.0 | 9.5 | 12 | μA |
| Dark Current | I _{DRK} | 0 Lux, T _a = 25°C 0 Lux, T _a = 85°C | | 5 10 | 20 50 | nA nA |
| Peak Spectral Response | Wavelength | | | 550 | | nm |

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Photo-spectral response and IR rejection

Dark current is only 360nA @ 125C

Output current: