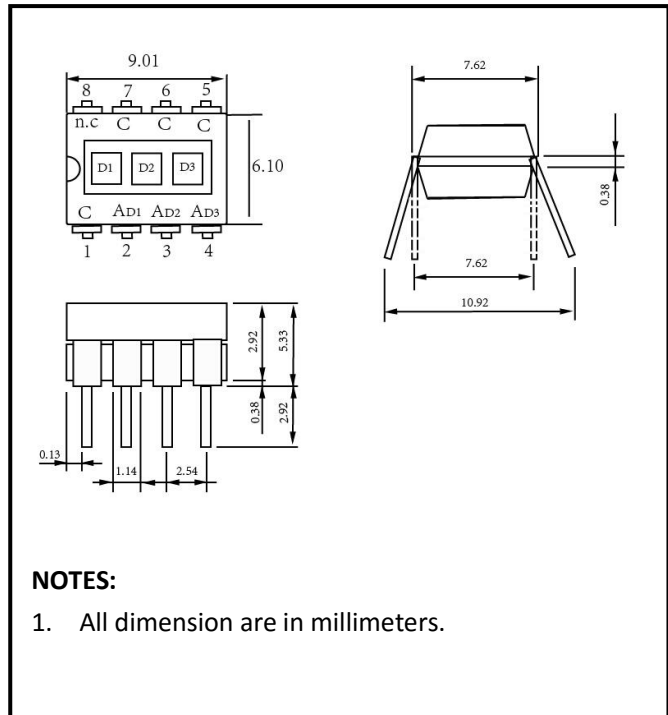
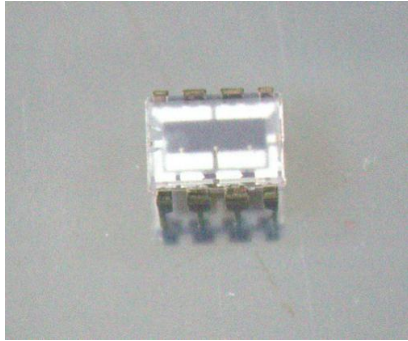


Silicon PIN Photodiode Array

OSD268P



Description

The OSD268P is a high sensitive silicon planar photo-Diode array in a inline configuration.

Four single photodiode chips with a common cathode Are mounted in ceramic package with resin coating.

Each chip measure 2.28mm by 2.28mm .

Features

- * High-speed response
- * High photo sensitivity
- * High reliability in demanding environments
- * Operating temperature is from -40 to +80°C
- * Storage temperature is from -40 to +100°C
- * soldering temperature is 260°C @Max.5 seconds at the position of 2mm from the PIN legs.

General Ratings

- * Type Silicon Photodiode
- * Low dark current
- * Chip active area: 2.28*2.28*3mm²
- * gps of each element: 25.4um

Applications

- * optical switcher
- * Automatic sensor
- * pulse laser detector
- * Industry machine

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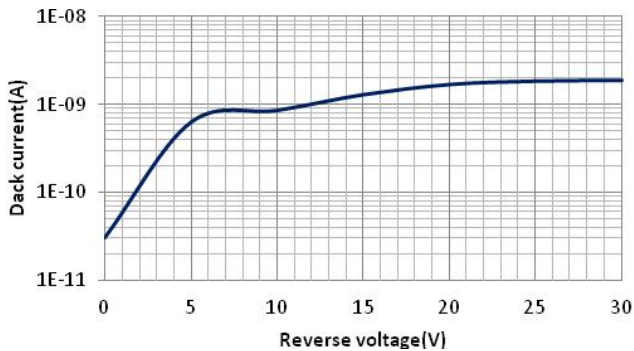
Absolute Maximum Ratings (Ta=25 °C)

| Parameter | Symbol | Condition | Min. | Typ. | Max. | Unit |
|------------------------------------|-----------------------------|--|------|------------------------|------|------------------------------|
| Short circuit Current | I _{sc} | Ev=100lx , fc=2856k* | | 30 | | μA |
| Isc Temperature Coefficient | TC I _{sc} | 2856k | | 1.1 | | %/°C |
| Open Circuit Voltage | Voc | Ev=100lx , fc=2856k* | | 300 | | mV |
| Voc Temperature Coefficient | TC Voc | 2856k | | -2.2 | | mV/°C |
| Dark current | I _d | V _R =10mV | | 40 | | pA |
| | | V _R =10V | | 800 | | |
| Tempcoeffi-cient of I _d | T _{CI_d} | | | 0.18 | | times/°C |
| Reverse breakdown voltage | V _{(BR)R} | I _R =100μA , Ev=0lx | 33 | | | V |
| Junction Capacitance | C _j | V _R =0V , f=1MHz | | 33 | | pF |
| | | V _R =10V , f=1MHz | | 8.2 | | |
| Turn-on/Turn-off Time | ton/toff | V _R =5V, λ=850nm, R _L =50Ω | | 40/40 | | ns |
| | | VR=10V, λ=940nm, RL=1KΩ | | 1000/1000 | | |
| | | VR=10V, λ=880nm, RL=1KΩ | | 200/200 | | |
| | | VR=10V, λ=650nm, RL=1KΩ | | 80/80 | | |
| Photo sensitivity | S _R | 650nm | | 0.38 | | A/W |
| | | 880nm | | 0.60 | | |
| | | 940nm | | 0.64 | | |
| CrossTalk Channel-to-Channel | | 400-850nm , Adjacent Channels | | 0.1 | 0.5 | % |
| | | Non-adjacent Channels | | 0.01 | 0.05 | |
| | | 850-1100nm , Adjacent Channels | | 1 | 5 | |
| | | Non-adjacent Channels | | 0.1 | 2.5 | |
| Uniformity of each Element | % | | 1 | | 2 | % |
| Spectral Application Range | λ _{range} | | 400 | | 1100 | nm |
| Spectral Response-Peak | λ _p | | | 940 | | nm |
| Shunt resistance | R _{sh} | V _R =10mV | | 0.2 | | GΩ |
| Rsh Temperature Coefficient | TC R _{sh} | | | 0.18 | | %/°C |
| Angular Resp 50% Resp Pt | θ _{1/2} | | | ±60 | | Degrees |
| Noise Epuivalent Power | NEP | VR =10V , λ=940nm | | 2.59×10 ⁻¹⁴ | | W/Hz ^{1/2} |
| Specific Detectivity | D* | VR =10V , λ=940nm | | 2.07×10 ¹³ | | cm(Hz/W) ^{1/2} 2 |

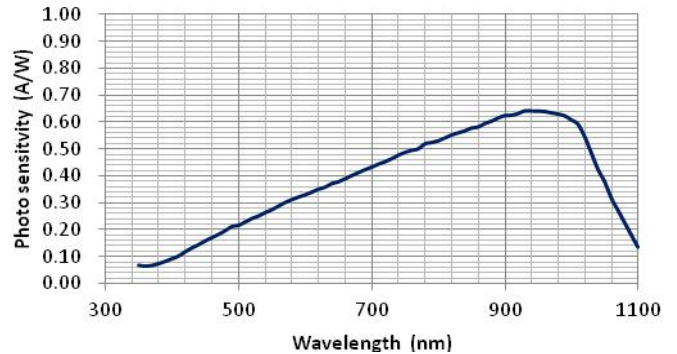
* Ev: Illuminance by CIE standard light source A (tungsten lamp)

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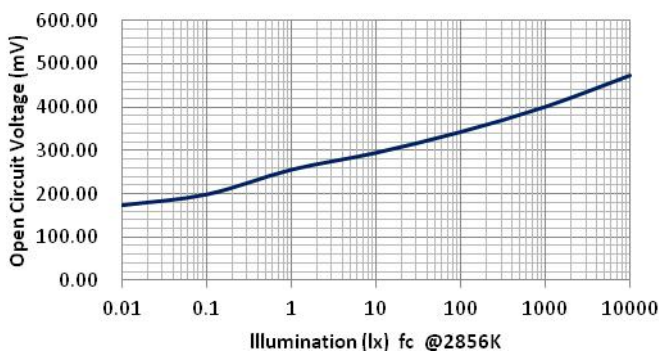
■ Dark current vs. reverse voltage



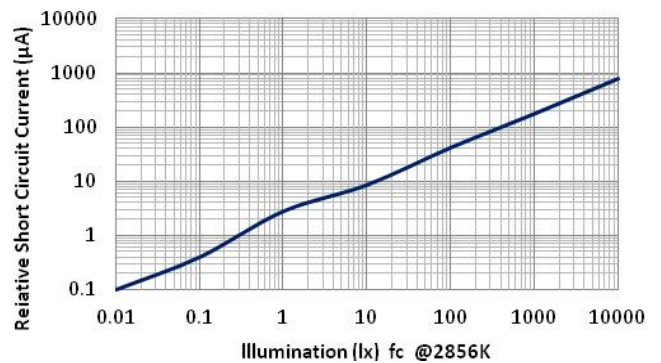
■ Spectral response



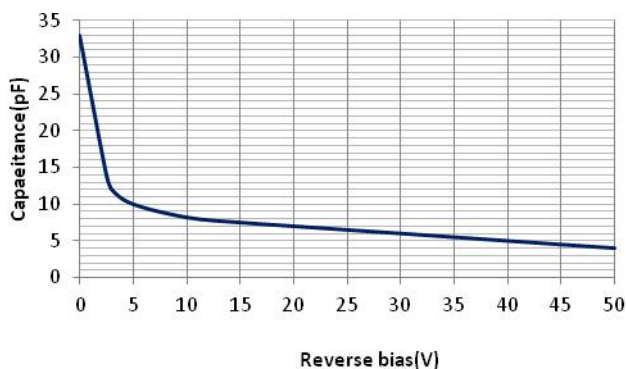
■ Open circuit Voltage vs Illumination



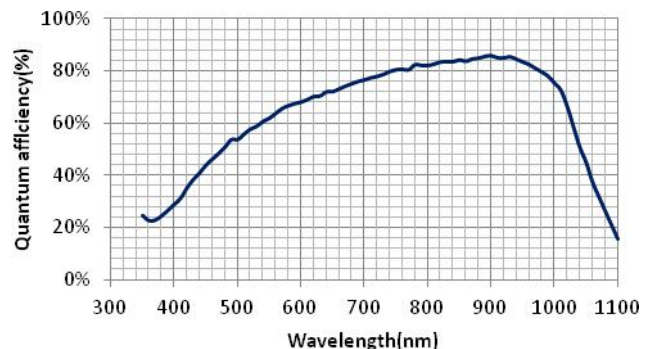
■ Relative Short Circuit Current vs. Illumination



■ Relative Junction Capacitance VS. Voltage



■ Quantum efficiency



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