

Egismos DATASHEET

PD-SI-C-30-TH TO-18 Photodiode Key Features

Wavelength $\lambda = 450\text{nm} \sim 1050\text{nm}$
High output power
High speed response
Wide angular response $\pm 30^\circ$
Package type=5.6mm Φ (TO-18)



PD-SI-C-30-TH

Applications

Optical switch for auto machine
Transmitting distance with glass cable
Laser Module & High Precision Engineering Instruments

Description

The **PD-SI-C-30-TH** is high-output, high-speed silicon photo-diode chip mounted in durable hermetically sealed TO-18 metal can package, permits wide angular response.

Electrical and Optical Characteristics at $T_c=25^\circ\text{C}$

| Parameter | Symbols | Min. | Typ. | Max. | Unit | Condition |
|----------------------------|----------------|------|----------|------|---------------|---------------------------|
| Open Circuit Voltage | Voc | 0.3 | 0.4 | - | V | $E_v=1,000 \text{ lux}^*$ |
| Short Circuit Current | Isc | 6 | 18 | | μA | $E_v=1,000 \text{ lux}^*$ |
| Reverse Break Down Voltage | BVR | 50 | 100 | - | V | $I_R=10\mu\text{A}$ |
| Dark Current | I_D | - | 2.2 | 2.7 | nA | $V_R=10\text{V}$ |
| Capacitance | Ct | - | 50 | - | pF | $f=1\text{MHz}$ |
| Spectrum Sensitivity | λ | 450 | - | 1050 | nm | |
| Peak Sensing Wavelength | λ_p | - | 880 | - | nm | |
| Half Angle | $\Delta\theta$ | - | ± 30 | - | deg | |

*Parallel light of 1,000lux illumination is applied.

Absolute Maximum Rating at $T_c=25^\circ\text{C}$

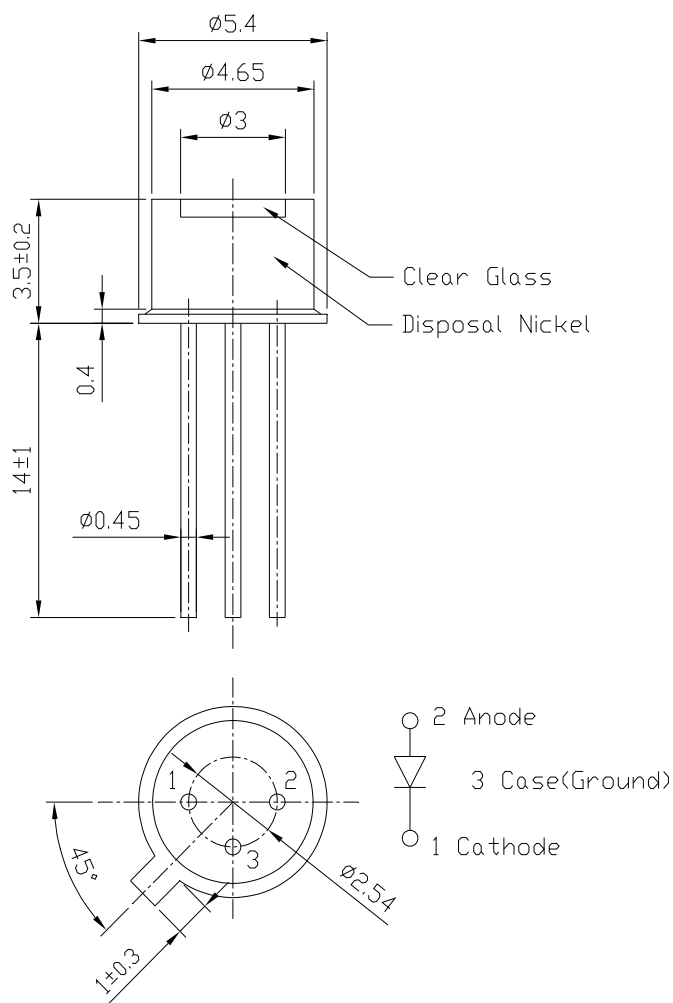
| Parameter | Symbols | Value | Unit |
|---------------------------|-----------|-----------|------------------|
| Reverse Breakdown Voltage | BVR | 35 | V |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Operating Temperature | T_{OPR} | -30 ~ 100 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -40 ~ 110 | $^\circ\text{C}$ |

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Laser Diode Package Drawing



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Example of Representative Characteristics I

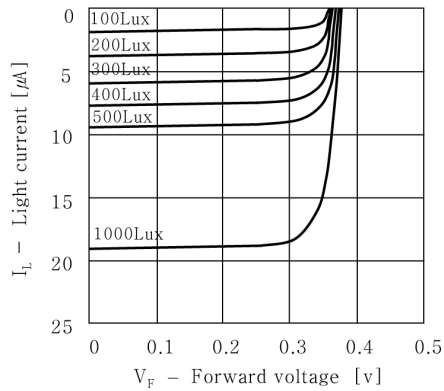


Fig 1. Light current v.s Forward voltage

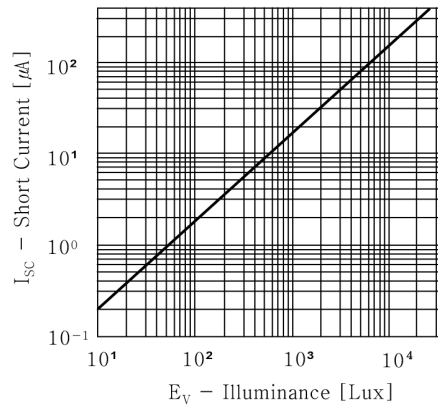


Fig 2. Short Current v.s Illuminance

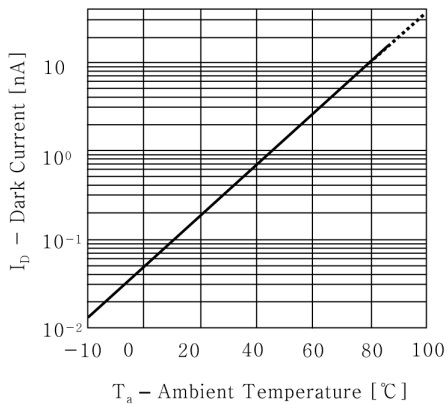


Fig 3. Dark Current v.s Ambient Temperature

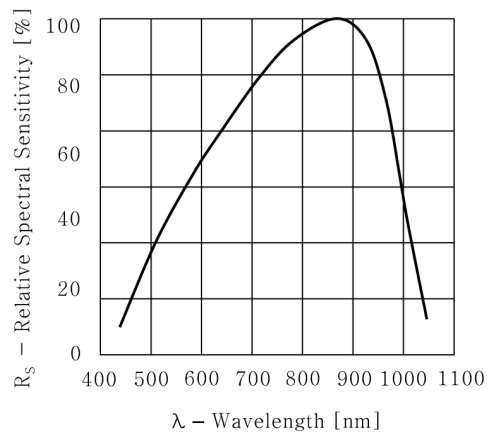


Fig 4. Relative spectral sensitivity v.s Wavelength

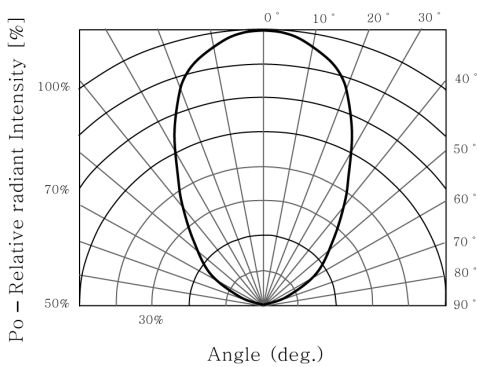


Fig 5. Radiant Pattern

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