



Technical Data Sheet

3mm Silicon PIN Photodiode T-1

PD204-6C

Features

- Fast response time
- High photo sensitivity
- Small junction capacitance
- Pb Free

Descriptions

- PD204-6C is a high speed and high sensitive PIN photodiode in a standard 3 Φ plastic package.
The device is Spectrally matched to visible and infrared emitting diode.



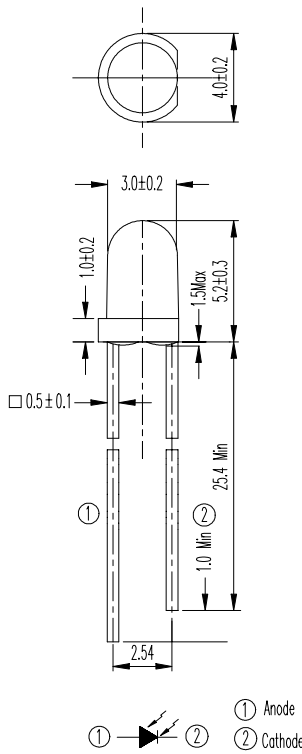
Applications

- Automatic door sensor
- Copier
- Game machine

Device Selection Guide

| LED Part No. | Chip | Lens Color |
|--------------|----------|-------------|
| | Material | |
| PD | Silicon | Water clear |

Package Dimensions



- Notes:** 1.All dimensions are in millimeters
 2.Tolerances unless dimensions ± 0.1 mm

Absolute Maximum Ratings (Ta=25°C)

| Parameter | Symbol | Rating | Units |
|---|------------------|-----------|-------|
| Reverse Voltage | V _R | 32 | V |
| Operating Temperature | T _{opr} | -25 ~ +85 | °C |
| Storage Temperature | T _{stg} | -40 ~ +85 | °C |
| Soldering Temperature | T _{sol} | 260 | °C |
| Power Dissipation at(or below) 25°C Free Air Temperature | P _c | 150 | mW |

Notes: *1:Soldering time ≤ 5 seconds.

Electro-Optical Characteristics (Ta=25°C)

| Parameter | Symbol | Condition | Min | Typ | Max | Unit |
|--------------------------------|-----------------|---|-----|------|------|---------|
| Rang Of Spectral Bandwidth | $\lambda_{0.5}$ | --- | 400 | --- | 1100 | nm |
| Wavelength Of Peak Sensitivity | λ_P | --- | --- | 940 | --- | nm |
| Open-Circuit Voltage | V_{OC} | $E_e=5mW/cm^2$ $\lambda_p=940nm$ | --- | 0.42 | --- | V |
| Short- Circuit Current | I_{SC} | $E_e=1mW/cm^2$ $\lambda_p=940nm$ | --- | 3.5 | --- | μA |
| Reverse Light Current | I_L | $E_e=1mW/cm^2$ $\lambda_p=940nm$ $V_R=5V$ | --- | 3.5 | --- | μA |
| Reverse Dark Current | I_D | $E_e=0mW/cm^2$ $V_R=10V$ | --- | --- | 10 | nA |
| Reverse Breakdown Voltage | B_{VR} | $E_e=0mW/cm^2$ $I_R=100 \mu A$ | 32 | 170 | --- | V |
| Total Capacitance | C_t | $E_e=0mW/cm^2$ $V_R=5V$ $f=1MHz$ | --- | 5 | --- | pF |
| Rise Time | t_r | $V_R=10V$ $R_L=1000 \Omega$ | --- | 6 | --- | nS |
| Fall Time | t_f | | --- | 6 | --- | |

Typical Electro-Optical Characteristics Curves

Fig.1 Power Dissipation vs. Ambient Temperature

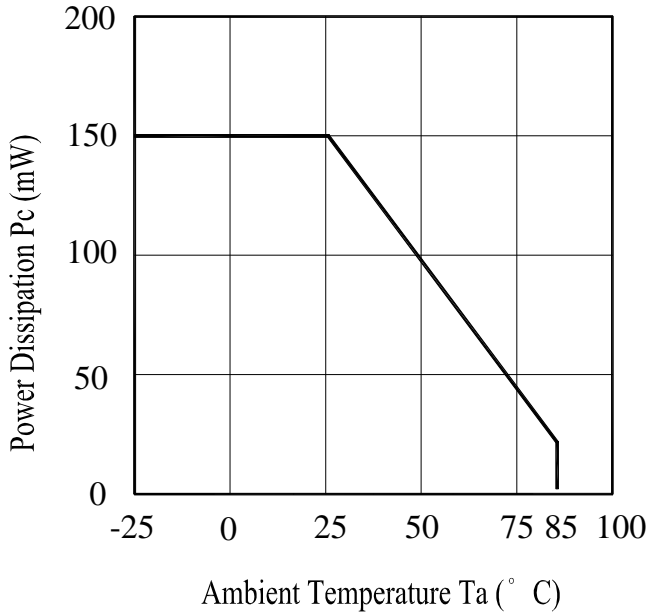


Fig.2 Spectral Sensitivity

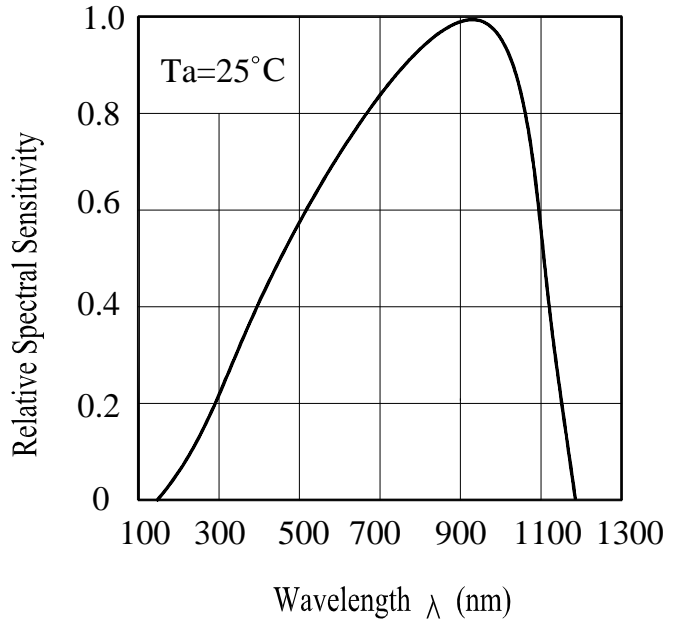


Fig.3 Dark Current vs. Ambient Temperature

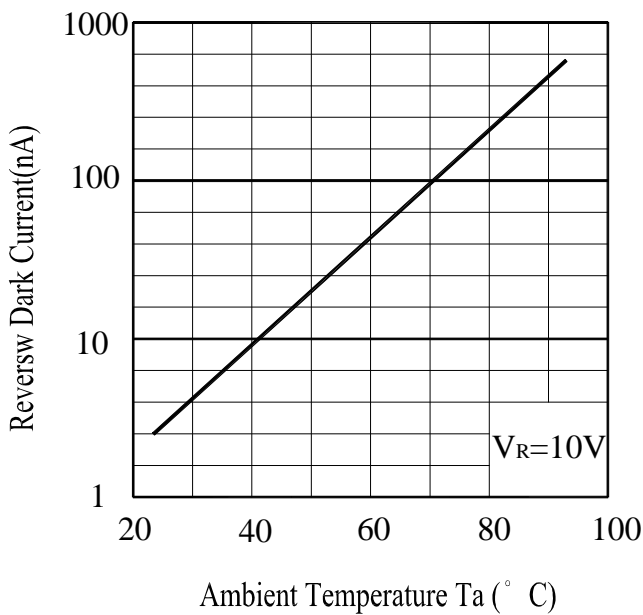
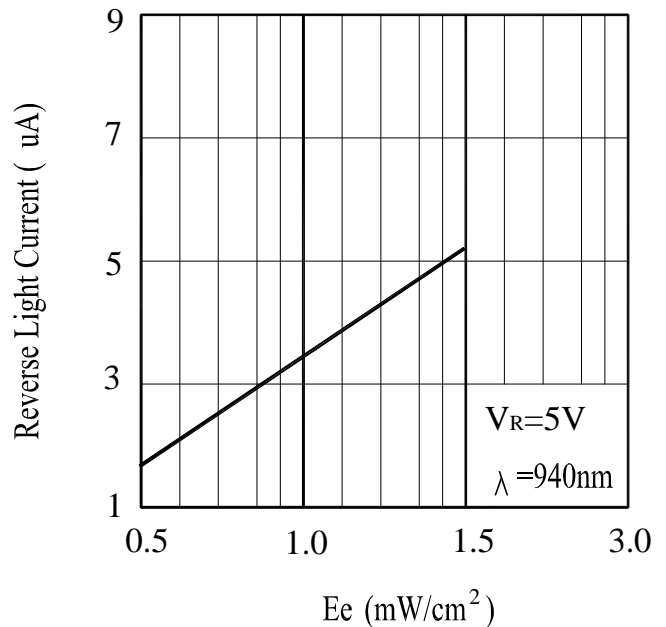


Fig. 4 Reverse Light Current vs. E_e



Typical Electro-Optical Characteristics Curves

Fig.5 Terminal Capacitance vs. Reverse Voltage

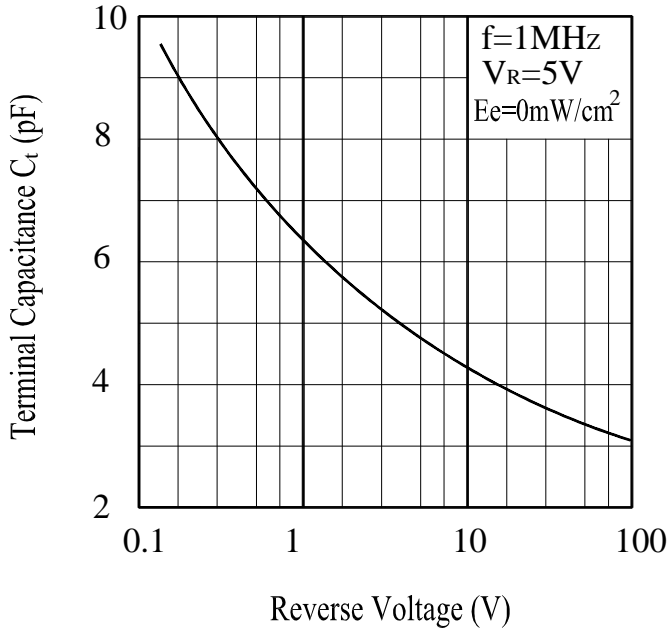
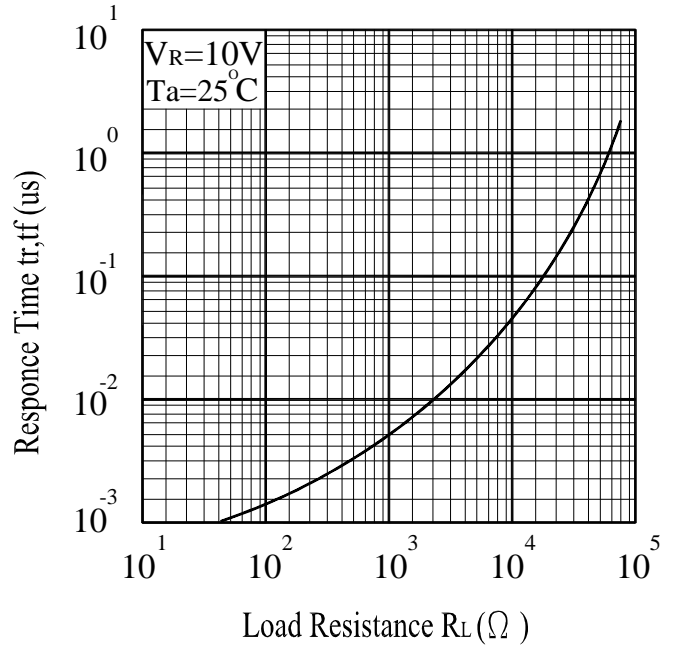


Fig.6 Response Time vs. Load Resistance



Reliability Test Item And Condition

The reliability of products shall be satisfied with items listed below.

Confidence level : 90%

LTPD : 10%

| NO. | Item | Test Conditions | Test Hours/ Cycles | Sample Sizes | Failure Judgement Criteria | Ac/Re |
|-----|------------------------------------|---|-----------------------|-----------------|--|-------|
| 1 | Solder Heat | TEMP. : 260°C ± 5°C | 10secs | 22pcs | $I_L \leq L \times 0.8$ L : Lower Specification Limit | 0/1 |
| 2 | Temperature Cycle | H : +100°C 15mins \updownarrow 5mins L : -40°C 15mins | 50Cycles | 22pcs | | 0/1 |
| 3 | Thermal Shock | H : +100°C 5mins \updownarrow 10secs L : -10°C 5mins | 50Cycles | 22pcs | | 0/1 |
| 4 | High Temperature Storage | TEMP. : +100°C | 1000hrs | 22pcs | | 0/1 |
| 5 | Low Temperature Storage | TEMP. : -40°C | 1000hrs | 22pcs | | 0/1 |
| 6 | DC Operating Life | $V_R=5V$ | 1000hrs | 22pcs | | 0/1 |
| 7 | High Temperature/ High Humidity | 85°C / 85% R.H | 1000hrs | 22pcs | | 0/1 |

Packing Quantity Specification

.1000PCS/1Bag , 4Bags/1Box
2.10Boxes/1Carton

Label Form Specification



CPN: Customer's Production Number
P/N : Production Number
QTY: Packing Quantity
CAT: Ranks
HUE: Peak Wavelength
REF: Reference
LOT No: Lot Number

Notes

1. Above specification may be changed without notice. EVERLIGHT will reserve authority on material change for above specification.
2. When using this product, please observe the absolute maximum ratings and the instructions for using outlined in these specification sheets. EVERLIGHT assumes no responsibility for any damage resulting from use of the product which does not comply with the absolute maximum ratings and the instructions included in these specification sheets.
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<http://moschip.ru/get-element>

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Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

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