



Photodiode

EPD-365-0-2.5

Preliminary

11.04.2007

rev. 03/07

| Wavelength | Type | Technology | Case |
|------------|------------------|------------|----------------------|
| UV | Schottky Contact | GaP | TO-39 + UG-11 filter |

| | |
|--|---|
| | <p>Description</p> <p>Wide bandwidth and high spectral sensitivity in the UV range (245 nm - 400 nm), mounted in hermetically sealed TO-39 package with UG11 UV filter-glass window</p> <p>Applications</p> <p>Medical engineering (dermatology), output check of UV - lamps and gas burner flame, measurement and control of ecological parameters, radiation control for a solarium, UV water purification facilities</p> |
|--|---|

Miscellaneous Parameters

T_{amb} = 25°C, unless otherwise specified

| Parameter | Test conditions | Symbol | Value | Unit |
|---|-----------------|----------------------------------|-------------|-----------------|
| Active area | | A | 4.8 | mm ² |
| Temperature coefficient of I _D | | T _C (I _D) | 7.0 | %/K |
| Operating temperature range | | T _{amb} | -40 to +125 | °C |
| Storage temperature range | | T _{stg} | -40 to +125 | °C |
| Acceptance angle at 50% S _λ | | φ | 60 | deg. |

Optical and Electrical Characteristics

T_{amb} = 25°C, unless otherwise specified

| Parameter | Test conditions | Symbol | Min | Typ | Max | Unit |
|---|---|-------------------------------------|-----|-----------------------|-----|----------------------------|
| Breakdown voltage ¹⁾ | I _R = 10 μA | V _R | 5 | | | V |
| Dark current | V _R = 5 V | I _D | | 15 | 40 | pA |
| Peak sensitivity wavelength | V _R = 0 V | λ _p | | 365 | | nm |
| Responsivity at λ _p | V _R = 0 V | S _λ | | 0.07 | | A/W |
| Sensitivity range at 1% | V _R = 0 V | λ _{min} , λ _{max} | 245 | | 400 | nm |
| Spectral bandwidth at 50% | V _R = 0 V | Δλ _{0.5} | | 85 | | nm |
| Shunt resistance | V _R = 10 mV | R _{SH} | 80 | 100 | | GΩ |
| Noise equivalent power | λ = 365 nm | NEP | | 3.2x10 ⁻¹⁴ | | W/√Hz |
| Specific detectivity | λ = 365 nm | D* | | 6.9x10 ¹² | | cm · √Hz · W ⁻¹ |
| Junction capacitance | V _R = 0 V | C _J | | 1000 | | pF |
| Switching time (R _L = 50 Ω) | V _R = 5 V | t _r , t _f | | 1/60 | | ns |
| Photo current at λ = 365 nm ^{1,2)} | V _R = 0 V E _e = 1 mW/cm ² | I _{Ph} | | 1.3 | | μA |

¹⁾for information only

²⁾measured with common halogen lamp source and appropriate filter



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Typical responsivity

