

FEATURES

- Surface mount package
- Low capacitance
- Fast response
- High shunt impedance
- Tape & reel supplied

PRODUCT DESCRIPTION

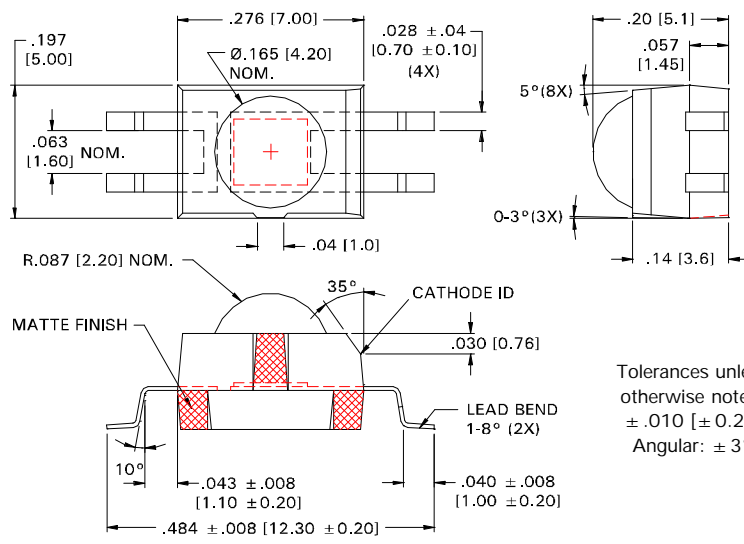
This planar silicon photodiode features a lensed, water clear epoxy package suitable for surface mount assembly in a “back mounted” (lens up) orientation.

These photodiodes exhibit performance characteristics which make them suitable for a wide range of near-IR sensing applications. Devices are shipped taped & reeled on a 24 mm embossed carrier.

ELECTRO-OPTICAL CHARACTERISTICS @ 25° C

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNITS |
|---|------------------|------|------|------|---------|
| SHORT CIRCUIT CURRENT @ 100 fc, 2850 K | I _{sc} | 75 | 90 | | μA |
| DARK CURRENT @ V _R = 10 V | I _D | | | 20 | nA |
| SHUNT RESISTANCE @ H = 0, V = 10 mV | R _{SH} | | 0.25 | | GΩ |
| JUNCTION CAPACITANCE @ V _R = 3 V | C _J | | | 50 | pF |
| OPEN CIRCUIT VOLTAGE @ 100 fc, 2850 K | V _{OC} | 325 | | | mV |
| ANGULAR RESPONSE (50% RESPONSE POINT) | θ _{1/2} | | ±42 | | Degrees |

PACKAGE DIMENSIONS inch (mm)



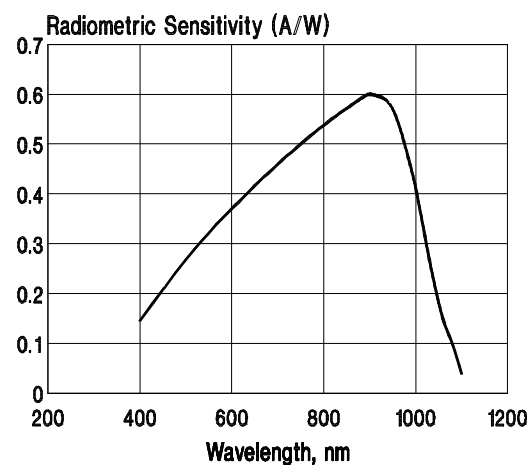
Tolerances unless otherwise noted: ±.010 [±0.25]
Angular: ± 3°

CHIP SIZE: .100 x .116 (2.54 x 2.94)
EXPOSED ACTIVE AREA: .0082 in² (5.269 mm²)

RoHS Compliant



TYPICAL SPECTRAL RESPONSE



GENERAL CHARACTERISTICS

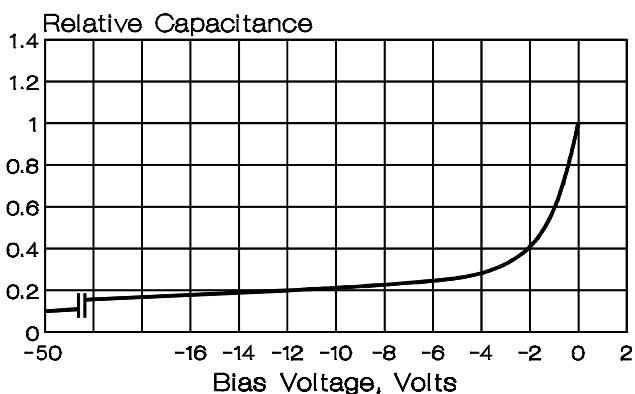
| PARAMETER | SYMBOL | TYPICAL RATING | UNITS |
|---------------------------------------|--------------------|-----------------------|---------------------------|
| PEAK SPECTRAL RESPONSE @ 25°C | λ_P | 925 | nm |
| RADIOMETRIC SENSITIVITY @ PEAK, 25°C | S _{RPK} | 0.6 | A / W |
| NOISE EQUIVALENT POWER | NEP | 2.0×10^{-13} | W/ $\sqrt{\text{Hz}}$ |
| SPECIFIC DETECTIVITY | D* | 1.2×10^{12} | cm $\sqrt{\text{Hz}}$ / W |
| TEMPERATURE COEFFICIENT | | | |
| SHORT CIRCUIT CURRENT @ 2850 K SOURCE | TC I _{SC} | +0.22 | %/°C |
| OPEN CIRCUIT VOLTAGE @ 2850 K SOURCE | TC V _{OC} | -2.0 | mV/ C |
| DARK CURRENT | TC I _D | +15.0 | %/°C |

ABSOLUTE MAXIMUM RATINGS

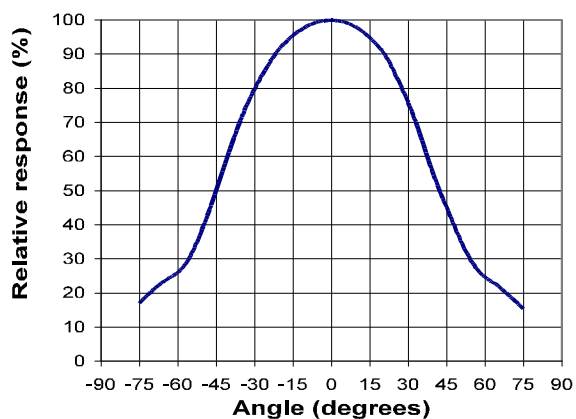
| PARAMETER | SYMBOL | RATING | UNITS |
|---|------------------|------------|-------|
| TEMPERATURE RANGE OPERATING AND STORAGE | T _{AMB} | -40 to +85 | °C |
| LEAD SOLDER TEMPERATURE (1.6 mm FROM CASE, 5 SECONDS MAX.) | T _{LS} | 260° | °C |
| BREAKDOWN VOLTAGE @ 25°C | V _{BR} | 33 | Volts |
| POWER DISSIPATION | P _D | 150 | mW |

TYPICAL CHARACTERISTIC CURVES

RELATIVE JUNCTION CAPACITANCE vs BIAS VOLTAGE
(REFERRED TO ZERO BIAS)



ANGULAR RESPONSE



Specifications subject to change without prior notice. Information supplied by PerkinElmer Optoelectronics is believed to be reliable, however, no responsibility is assumed for possible inaccuracies or omissions. The user should determine the suitability of this product in his own application. No patent rights are granted to any devices or circuits described herein.