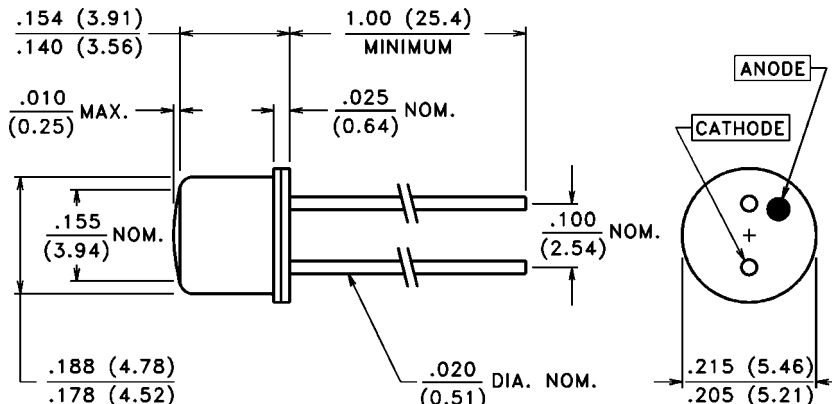




PACKAGE DIMENSIONS inch (mm)



CASE 17 TO-46 HERMETIC
CHIP ACTIVE AREA: .0025 in² (1.60 mm²)

PRODUCT DESCRIPTION

Small area planar silicon photodiode in a "flat" window, dual lead TO-46 package. Cathode is common to the case. These diodes have very high shunt resistance and have good blue response.

ABSOLUTE MAXIMUM RATINGS

Storage Temperature: -40°C to 110°C
Operating Temperature: -40°C to 110°C

RoHS Compliant



ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTB curves, pages 21-22)

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | VTB1012H | | | VTB1013H | | | UNITS |
|--------------------|---|--------------------|--------------------------------|------|------|--------------------------------|------|------|-----------|
| | | | Min. | Typ. | Max. | Min. | Typ. | Max. | |
| I _{SC} | Short Circuit Current | H = 100 fc, 2850 K | 8 | 13 | | 8 | 13 | | μA |
| TC I _{SC} | I _{SC} Temperature Coefficient | 2850 K | | .12 | .23 | | .12 | .23 | %/°C |
| V _{OC} | Open Circuit Voltage | H = 100 fc, 2850 K | | 490 | | | 490 | | mV |
| TC V _{OC} | V _{OC} Temperature Coefficient | 2850 K | | -2.0 | | | -2.0 | | mV/°C |
| I _D | Dark Current | H = 0, VR = 2.0 V | | | 100 | | | 20 | pA |
| R _{SH} | Shunt Resistance | H = 0, V = 10 mV | | .25 | | | 7.0 | | GΩ |
| TC R _{SH} | R _{SH} Temperature Coefficient | H = 0, V = 10 mV | | -8.0 | | | -8.0 | | %/°C |
| C _J | Junction Capacitance | H = 0, V = 0 | | .31 | | | .31 | | nF |
| S _R | Sensitivity | 365 nm | | .09 | | | .09 | | A/W |
| λ _{range} | Spectral Application Range | | 320 | | 1100 | 320 | | 1100 | nm |
| λ _p | Spectral Response - Peak | | | 920 | | | 920 | | nm |
| V _{BR} | Breakdown Voltage | | 2 | 40 | | 2 | 40 | | V |
| θ _{1/2} | Angular Resp. - 50% Resp. Pt. | | | ±35 | | | ±35 | | Degrees |
| NEP | Noise Equivalent Power | | 3.0 x 10 ⁻¹⁴ (Typ.) | | | 5.9 x 10 ⁻¹⁵ (Typ.) | | | W/√Hz |
| D* | Specific Detectivity | | 4.2 x 10 ¹² (Typ.) | | | 2.1 x 10 ¹³ (Typ.) | | | cm√Hz / W |