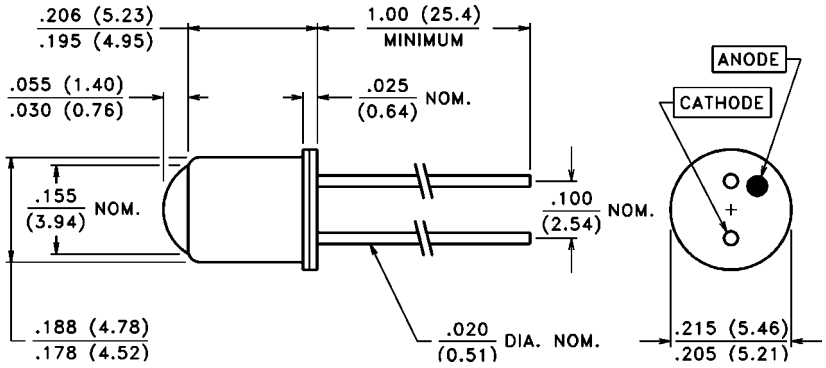
# VTP Process Photodiodes

# VTP1112H



## PACKAGE DIMENSIONS inch (mm)




**CASE 19 TO-46 LENSED HERMETIC**
**CHIP ACTIVE AREA: .0025 in$^2$ (1.6 mm$^2$)**

## PRODUCT DESCRIPTION

Small area planar silicon photodiode in a lensed. dual lead TO-46 package. Cathode is common to the case. These diodes exhibit low dark current under reverse bias and fast speed of response.

## ABSOLUTE MAXIMUM RATINGS

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

## ELECTRO-OPTICAL CHARACTERISTICS @ 25°C (See also VTP curves, pages 45-46)

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | VTP1112H | | | UNITS |
|---|---|---|---|---|---|---|
| | | | Min. | Typ. | Max. | |
| $I_{SC}$ | Short Circuit Current | H = 100 fc, 2850 K | 30 | 90 | | µA |
| TC $I_{SC}$ | $I_{SC}$ Temperature Coefficient | 2850 K | | .20 | | %/°C |
| $V_{OC}$ | Open Circuit Voltage | H = 100 fc, 2850 K | | 350 | | mV |
| TC $V_{OC}$ | $V_{OC}$ Temperature Coefficient | 2850 K | | -2.0 | | mV/°C |
| $I_D$ | Dark Current | H = 0, VR = 50 V | | | 7 | nA |
| $R_{SH}$ | Shunt Resistance | H = 0, V = 10 mV | | .5 | | GΩ |
| $C_J$ | Junction Capacitance | H = 0, V = 15 V | | | 6 | pF |
| Re | Responsivity | 940 nm | | .033 | | A/(W/cm$^2$) |
| $S_R$ | Sensitivity | @ Peak | | .55 | | A/W |
| $\lambda_{range}$ | Spectral Application Range | | 400 | | 1150 | nm |
| $\lambda_p$ | Spectral Response - Peak | | | 925 | | nm |
| $V_{BR}$ | Breakdown Voltage | | 50 | 140 | | V |
| $\theta_{1/2}$ | Angular Resp. - 50% Resp. Pt. | | | ±15 | | Degrees |
| NEP | Noise Equivalent Power | | | 8.7 x 10$^{-14}$ (Typ.) | | $W/\sqrt{Hz}$ |
| D* | Specific Detectivity | | | 1.5 x 10$^{12}$ (Typ.) | | $cm\sqrt{Hz}/W$ |

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