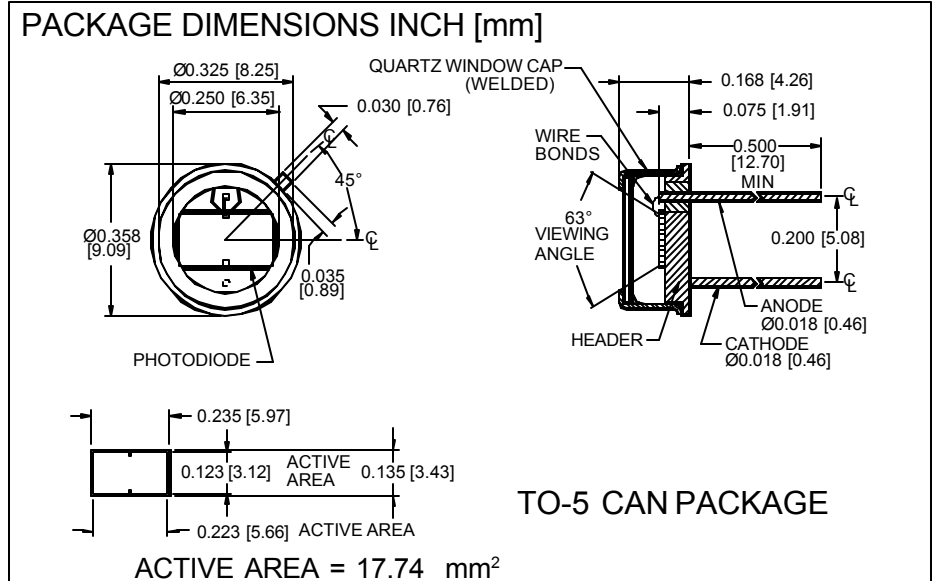


PHOTONIC DETECTORS INC.

Silicon Photodiode, U.V. Enhanced Photovoltaic Type PDU-V114-Q



FEATURES

- Low noise
- U.V. enhanced
- High shunt resistance
- Quartz window

DESCRIPTION

The **PDU-V114-Q** is a silicon, PIN planar diffused, U.V. enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a TO-5 metal can with a flat quartz window.

APPLICATIONS

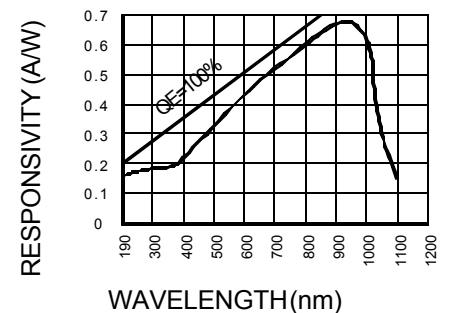
- Spectrometers
- Fluorescent analysers
- U.V. meters
- Colorimeters

ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

| SYMBOL | PARAMETER | MIN | MAX | UNITS |
|------------------|-----------------------------|-----|------|-------|
| V _{BR} | Reverse Voltage | | 75 | V |
| T _{STG} | Storage Temperature | -55 | +150 | °C |
| T _O | Operating Temperature Range | -40 | +125 | °C |
| T _S | Soldering Temperature* | | +240 | °C |
| I _L | Light Current | | 500 | mA |

*1/16 inch from case for 3 secs max

SPECTRAL RESPONSE



ELECTRO-OPTICAL CHARACTERISTICS (TA=25°C unless otherwise noted)

| SYMBOL | CHARACTERISTIC | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--------------------|----------------------------|----------------------------------|-----|---------------------|------|--------|
| I _{SC} | Short Circuit Current | H = 100 fc, 2850 K | 200 | 230 | | μA |
| I _D | Dark Current | H = 0, V _R = 10 mV | | 10 | 50 | pA |
| R _{SH} | Shunt Resistance | H = 0, V _R = 10 mV | .2 | 1 | | GΩ |
| TC R _{SH} | RSH Temp. Coefficient | H = 0, V _R = 10 mV | | -8 | | % / °C |
| C _J | Junction Capacitance | H = 0, V _R = 0 V** | | 2000 | | pF |
| λ _{range} | Spectral Application Range | Spot Scan | 190 | | 1100 | nm |
| R | Responsivity | V _R = 0 V, λ = 254 nm | .12 | .18 | | A/W |
| V _{BR} | Breakdown Voltage | I = 10 μA | 5 | 10 | | V |
| NEP | Noise Equivalent Power | V _R = 10 mV @ Peak | | 2x10 ⁻¹⁴ | | W/√Hz |
| tr | Response Time | RL = 1 KΩ V _R = 0 V | | 900 | | nS |

Information in this technical data sheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice. **f = 1 MHz

[FORM NO. 100-PDU-V114-Q REV N/C]