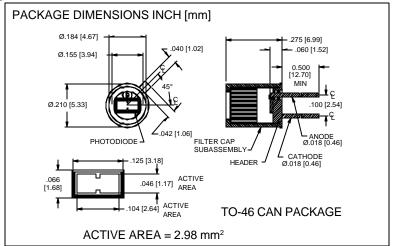
**PHOTONIC** Silicon Photodiode, Filter Combination Photovoltaic **DETECTORS INC.** (center wavelength 800 nm) Type PDI-V480-46





RESPONSIVITY (AVV)

#### **FEATURES**

- 800 nm CWL
- 10 nm FWHM
- · Large active area

#### **DESCRIPTION**

The **PDI-V480-46** is a silicon, PIN planar diffused, photodiode with a narrow band interferance filter. The detector filter combination has a narrow 10 nm half bandwidth designed for low noise photovoltaic applications. Packaged in a TO-46 metal can

# tions. Packaged in a TO-46 metal can. ABSOLUTE MAXIMUM RATING (TA=25°C unless otherwise noted)

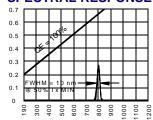
| SYMBOL           | PARAMETER                   | MIN | MAX  | UNITS |
|------------------|-----------------------------|-----|------|-------|
| $V_{BR}$         | Reverse Voltage             |     | 75   | V     |
| T <sub>stg</sub> | Storage Temperature         | -20 | +85  | °C    |
| To               | Operating Temperature Range | -15 | +70  | °C    |
| Ts               | Soldering Temperature*      |     | +240 | °C    |
| I <sub>L</sub>   | Light Current               |     | 0.5  | mA    |

<sup>\*1/16</sup> inch from case for 3 secs max

### **APPLICATIONS**

- Spectrophotometry
- Chemistry instrumentation
- Liquid chromatography

## **SPECTRAL RESPONSE**



WAVELENGTH (nm)

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

| SYMBOL          | CHARACTERISTIC           | TEST CONDITIONS               | MIN | TYP                 | MAX | UNITS  |
|-----------------|--------------------------|-------------------------------|-----|---------------------|-----|--------|
| lsc             | Short Circuit Current*** | H = 100 fc, 2850 K            | 35  | 40                  |     | μΑ     |
| ΙD              | Dark Current             | H = 0, V <sub>R</sub> = 10 V  |     | 150                 | 300 | pA     |
| RsH             | Shunt Resistance         | $H = 0, V_R = 10 \text{ mV}$  | 1.0 | 6                   |     | GΩ     |
| TC Rsh          | Rsн Temp. Coefficient    | $H = 0, V_R = 10 \text{ mV}$  |     | -8                  |     | %/℃    |
| Cı              | Junction Capacitance     | H = 0, V <sub>R</sub> = 0 V** |     | 340                 |     | pF     |
| CWL             | Center Wavelength        | (CWL, $\lambda$ o) +/- 2 nm   |     | 800                 |     | nm     |
| HBW             | Half Bandwidth           | (FWHM)                        |     | 10                  |     | nm     |
| V <sub>BR</sub> | Breakdown Voltage        | I = 10 µuA                    | 30  | 50                  |     | V      |
| N EP            | Noise Equivalent Power   | V <sub>R</sub> = 10 mV @ Peak |     | 5x10 <sup>-14</sup> |     | W/ √Hz |
| tr              | Response Time            | $RL = 1 K\Omega V_R = 0 V$    |     | 450                 |     | 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, \*\*\*without filter [FORM NO. 100-PDI-V480-46 REV N/C]