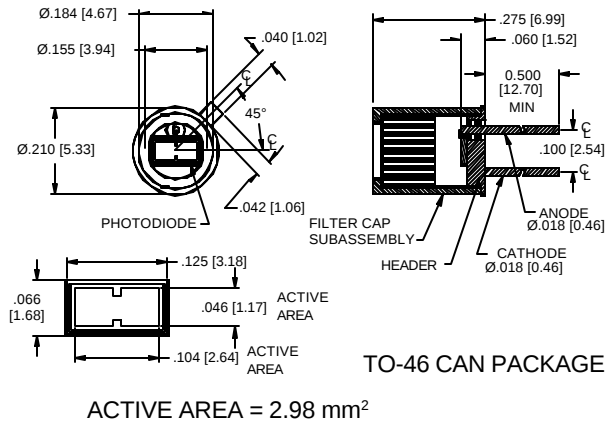


# PHOTONIC DETECTORS INC.

## Silicon Photodiode, Filter Combination Photovoltaic (center wavelength 660 nm) Type PDR-V466-46



### PACKAGE DIMENSIONS INCH [mm]



### FEATURES

- 660 nm CWL
- 10 nm FWHM
- Large active area

### DESCRIPTION

The **PDR-V466-46** is a silicon, PIN planar diffused, photodiode with a narrow band interference 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.

### APPLICATIONS

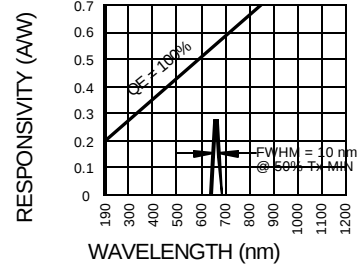
- Spectrophotometry
- Chemistry instrumentation
- Liquid chromatography

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

| SYMBOL           | PARAMETER                   | MIN | MAX  | UNITS |
|------------------|-----------------------------|-----|------|-------|
| V <sub>BR</sub>  | Reverse Voltage             |     | 75   | V     |
| T <sub>STG</sub> | Storage Temperature         | -20 | +85  | °C    |
| T <sub>O</sub>   | Operating Temperature Range | -15 | +70  | °C    |
| T <sub>S</sub>   | Soldering Temperature*      |     | +240 | °C    |
| I <sub>L</sub>   | Light Current               |     | 0.5  | 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 <sub>SC</sub>    | Short Circuit Current***          | H = 100 fc, 2850 K              | 35  | 40                  |     | μA     |
| I <sub>D</sub>     | Dark Current                      | H = 0, V <sub>R</sub> = 10 V    |     | 150                 | 300 | pA     |
| R <sub>SH</sub>    | Shunt Resistance                  | H = 0, V <sub>R</sub> = 10 mV   | 1.0 | 6                   |     | GΩ     |
| TC R <sub>SH</sub> | R <sub>SH</sub> Temp. Coefficient | H = 0, V <sub>R</sub> = 10 mV   |     | -8                  |     | % / °C |
| C <sub>J</sub>     | Junction Capacitance              | H = 0, V <sub>R</sub> = 0 V**   |     | 340                 |     | pF     |
| CWL                | Center Wavelength                 | (CWL, λ <sub>0</sub> ) +/- 2 nm |     | 660                 |     | nm     |
| HBW                | Half Bandwidth                    | (FWHM)                          |     | 10                  |     | nm     |
| V <sub>BR</sub>    | Breakdown Voltage                 | I = 10 μA                       | 30  | 50                  |     | V      |
| N <sub>EP</sub>    | Noise Equivalent Power            | V <sub>R</sub> = 10 mV @ Peak   |     | 5x10 <sup>-14</sup> |     | W/√Hz  |
| tr                 | Response Time                     | RL = 1 KΩ V <sub>R</sub> = 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-PDR-V466-46 REV N/C]