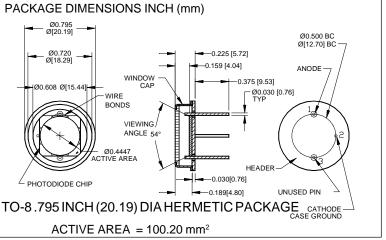
# PHOTONIC DETECTORS INC<u>.</u>

## Silicon Photodiode, Blue Enhanced Photovoltaic Type PDB-V111



### DESCRIPTION

- Low noise
- Blue enhanced
- High shunt resistance
- High response

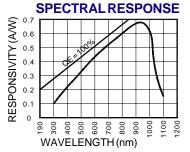
The **PDB-V111** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a low cost TO-8 metal can with a flat window.

### **APPLICATIONS**

- Instrumentation
- Power meters
- Colorimeters
- Laser power meters

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

| SYMBOL           | PARAMETER                   | MIN | MAX  | UNITS |  |
|------------------|-----------------------------|-----|------|-------|--|
| Vbr              | Reverse Voltage             |     | 75   | V     |  |
| T <sub>stg</sub> | Storage Temperature         | -55 | +150 | °C    |  |
| To               | Operating Temperature Range | -40 | +125 | °C    |  |
| Ts               | Soldering Temperature*      |     | +224 | °C    |  |
| Ι                | Light Current               |     | 0.5  | mA    |  |



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

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

| SYMBOL | CHARACTERISTIC             | TESTCONDITIONS                | MIN | TYP                 | MAX    | UNITS   |
|--------|----------------------------|-------------------------------|-----|---------------------|--------|---------|
| lsc    | Short Circuit Current      | H = 100 fc, 2850 K            | 0.9 | 1.2                 |        | mA      |
| ΙD     | Dark Current               | H = 0, V <sub>R</sub> = 10 mV |     | 200                 | 335    | pА      |
| Rsн    | Shunt Resistance           | H = 0, V <sub>R</sub> = 10 mV | 30  | 50                  |        | MΩ      |
| TC RSH | RsH Temp. Coefficient      | H = 0, V <sub>R</sub> = 10 mV |     | -8                  |        | %/°C    |
| CJ     | Junction Capacitance       | $H = 0, V_R = 0 V^{**}$       |     | 10,000              | 12,000 | pF      |
| λrange | Spectral Application Range | Spot Scan                     | 350 |                     | 1100   | nm      |
| λρ     | Spectral Response - Peak   | Spot Scan                     |     | 950                 |        | nm      |
| Vbr    | Breakdown Voltage          | I = 10 μA                     | 20  | 30                  |        | V       |
| NEP    | Noise Equivalent Power     | V <sub>R</sub> = 10 mV @ Peak |     | 2x10 <sup>-14</sup> |        | W/ √ Hz |
| tr     | Response Time              | $RL = 1 K\Omega V_R = 0 V$    |     | 2000                |        | 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-PDB-V111 REV B]