

### FEATURES

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

### DESCRIPTION

The **PDB-V103** is a silicon, PIN planar diffused, blue enhanced photodiode. Ideal for low noise photovoltaic applications. Packaged in a hermetic TO-46 metal can with a flat window.

### APPLICATIONS

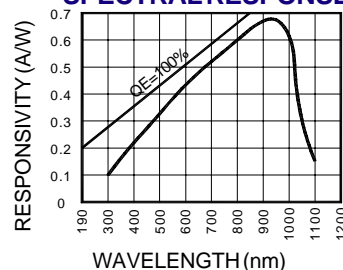
- Instrumentation
- Character recognition
- Laser detection
- Industrial controls

### 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         | -55 | +150 | °C    |
| T <sub>O</sub>   | Operating Temperature Range | -40 | +125 | °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             | 20  | 24                    |      | μA     |
| I <sub>D</sub>    | Dark Current               | H = 0, V <sub>R</sub> = 10 V   |     | 50                    | 150  | pA     |
| R <sub>SH</sub>   | Shunt Resistance           | H = 0, V <sub>R</sub> = 10 mV  | 1   | 10                    |      | GΩ     |
| TCR <sub>SH</sub> | RSH 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**  |     | 180                   |      | pF     |
| λrange            | Spectral Application Range | Spot Scan                      | 350 |                       | 1100 | nm     |
| λp                | Spectral Response - Peak   | Spot Scan                      |     | 950                   |      | nm     |
| V <sub>BR</sub>   | Breakdown Voltage          | I = 10 μA                      | 30  | 50                    |      | V      |
| NEP               | Noise Equivalent Power     | V <sub>R</sub> = 10 mV @ Peak  |     | 5.9x10 <sup>-15</sup> |      | W/√Hz  |
| tr                | Response Time              | RL = 1 KΩ V <sub>R</sub> = 0 V |     | 400                   |      | 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