

### FEATURES

- Large active area
- Photoconductive
- Low cost
- High speed

### DESCRIPTION

The **PDB-C142F** is a blue enhanced PIN silicon photodiode in a photoconductive mode with a daylight filter, packaged in a T1 3/4 plastic package.

### APPLICATIONS

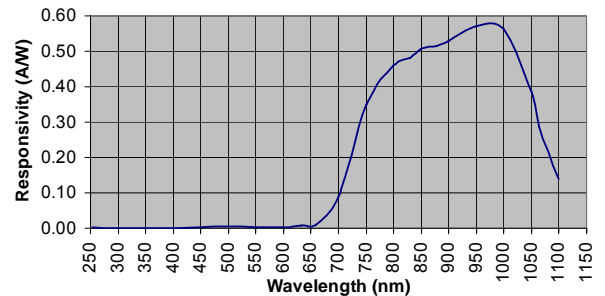
- Smoke detectors
- Light pen detectors
- TV & VCR remotes
- Bar code detectors

### ABSOLUTE MAXIMUM RATING (TA)= 23°C UNLESS OTHERWISE NOTED

| SYMBOL           | PARAMETER              | MIN | MAX  | UNITS |
|------------------|------------------------|-----|------|-------|
| V <sub>BR</sub>  | Reverse Voltage        |     | 50   | V     |
| T <sub>STG</sub> | Storage Temperature    | -40 | +100 | °C    |
| T <sub>O</sub>   | Operating Temperature  | -40 | +80  | °C    |
| T <sub>S</sub>   | Soldering Temperature* |     | +260 | °C    |

\* 1/16 inch from case for 3 seconds max.

### SPECTRAL RESPONSE



### ELECTRO-OPTICAL CHARACTERISTICS RATING (TA)= 23°C UNLESS OTHERWISE NOTED

| SYMBOL          | CHARACTERISTIC             | TEST CONDITIONS                  | MIN | TYP                   | MAX  | UNITS |
|-----------------|----------------------------|----------------------------------|-----|-----------------------|------|-------|
| I <sub>SC</sub> | Short Circuit Current      | H = 100 fc, 2850 K               | 100 | 150                   |      | μA    |
| I <sub>D</sub>  | Dark Current               | V <sub>R</sub> = 10 V            |     | 5                     | 30   | nA    |
| R <sub>SH</sub> | Shunt Resistance           | V <sub>R</sub> = 10 mV           | 100 | 500                   |      | MΩ    |
| C <sub>J</sub>  | Junction Capacitance       | V <sub>R</sub> = 10 V, f = 1 MHz |     | 18                    | 25   | pF    |
| λ range         | Spectral Application Range | Spot Scan                        | 700 |                       | 1100 | nm    |
| V <sub>BR</sub> | Breakdown Voltage          | I = 10 μA                        | 15  | 25                    |      | V     |
| NEP             | Noise Equivalent Power     | V <sub>R</sub> = 10V @ λ = Peak  |     | 2.4x10 <sup>-14</sup> |      | W/√Hz |
| t <sub>r</sub>  | Response Time              | RL = 50 Ω, V <sub>R</sub> = 50 V |     | 50                    |      | nS    |

\*\*Response time of 10% to 90% is specified at 660nm wavelength light.

Information in this technical datasheet is believed to be correct and reliable. However, no responsibility is assumed for possible inaccuracies or omission. Specifications are subject to change without notice.