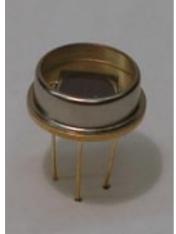
PHOTONIC DETECTORS INC.

Silicon Photodiode, Blue Enhanced Photoconductive Bi-cell Type PDB-C202



PACKAGE DIMENSIONS INCH [mm] 0.215 [5.46] -Ø0.483 [12.27]-0.065 [1.65] -Ø0.449 [11.39]-WIRE BONDS 1.50 [38.1] ANODE #1 Ø0.018 [0.46] Ø0.295 [7.49] 69° VIEWING Ø0.550 [13.97] CATHODE & CASE Ø0.018 [0.46] ANGLE -ANODE #2 Ø0.018 [0.46] HEADER PHOTODIODE WINDOW CAP (WELDED) 0.261 [6.63] SQUARE R0.1235 [R3.137] ACTIVE AREA 2 PLACES **TO-8 HERMETIC PACKAGE** 0.0018 [0.045] GAP ACTIVE AREA = 15.50 mm² PER ELEMENT

FEATURES

- High speed
- Low capacitance
- Blue enhanced
- Low dark current

DESCRIPTION

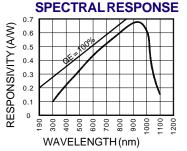
The **PDB-C202** is a silicon, pin planar diffused, blue enhanced bi-cell photodiode. Ideal for high speed photoconductive applications. Packaged in a hermetic TO-8 metal can with a flat window.

APPLICATIONS

- Optical alignment
- · Position sensing
- Edge sensing
- Instrumentation

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

| | · · | | | , | |
|------------------|-----------------------------|-----|------|-------|--|
| SYMBOL | PARAMETER | MIN | MAX | UNITS | |
| Vbr | Reverse Voltage | | 100 | V | |
| T _{stg} | Storage Temperature | -55 | +150 | °C | |
| To | Operating Temperature Range | -40 | +125 | °C | |
| Ts | Soldering Temperature* | | +240 | °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 | 200 | 250 | | μ A | | | | |
| ΙD | Dark Current | H = 0, V _R = 10 V | | 5 | 10 | nA | | | | |
| Rsн | Shunt Resistance | H = 0, V _R = 10 mV | 75 | 100 | | MΩ | | | | |
| TC Rsh | RsH Temp. Coefficient | $H = 0, V_R = 10 \text{ mV}$ | | -8 | | %/°C | | | | |
| CJ | Junction Capacitance | H = 0, V _R = 10 V | | 75 | | pF | | | | |
| λrange | Spectral Application Range | Spot Scan | 350 | | 1100 | nm | | | | |
| λρ | Spectral Response - Peak | Spot Scan | | 950 | | nm | | | | |
| Vbr | Breakdown Voltage | I = 10 μA | 50 | 100 | | V | | | | |
| NEP | Noise Equivalent Power | V _R = 10 V @ Peak | | 1.5x10 ⁻¹⁴ | | W/ √ Hz | | | | |
| tr | Response Time | $RL = 1 K\Omega V_R = 10 V$ | | 10 | 30 | 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. [FORM NO. 100-PDB-C202 REV A]