

FEATURES

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

DESCRIPTION

The **SD 290-12-22-241** is a blue enhanced silicon PIN photodiode, packaged in a hermetic TO-8 metal package.

APPLICATIONS

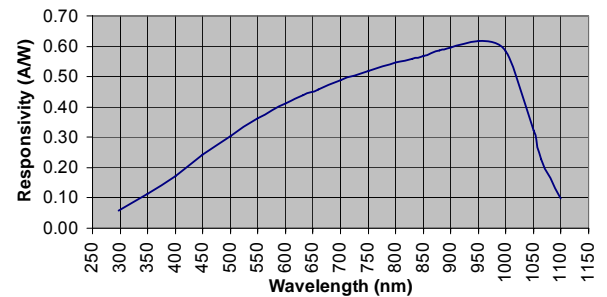
- Instrumentation
- Industrial
- Medical

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

| SYMBOL | PARAMETER | MIN | MAX | UNITS |
|-----------|------------------------|-----|------|-------|
| V_{BR} | Reverse Voltage | | 75 | V |
| T_{STG} | Storage Temperature | -55 | +150 | °C |
| T_O | Operating Temperature | -40 | +125 | °C |
| T_S | Soldering Temperature* | | +240 | °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_D | Dark Current | $V_R = 5V$ | | 13.0 | 52.0 | nA |
| R_{SH} | Shunt Resistance | $V_R = 10 mV$ | 35 | | | $M\Omega$ |
| C_J | Junction Capacitance | $V_R = 0 V, f = 1 MHz$ | | 725 | | pF |
| | | $V_R = 5 V, f = 1 MHz$ | | 213 | | |
| λ_{range} | Spectral Application Range | Spot Scan | 350 | | 1100 | nm |
| R | Responsivity | $\lambda = 450 nm, V_R = 0 V$ | 0.20 | 0.28 | | A/W |
| V_{BR} | Breakdown Voltage | $I = 10 \mu A$ | | 50 | | V |
| NEP | Noise Equivalent Power | $V_R = 0V @ \lambda = Peak$ | | 1.2×10^{-13} | | W/\sqrt{Hz} |
| t_r | Response Time** | $RL = 50 \Omega, V_R = 0 V$ | | 190 | | nS |
| | | $RL = 50 \Omega, V_R = 10 V$ | | 13 | | |

**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.