

FILTER DETECTORS

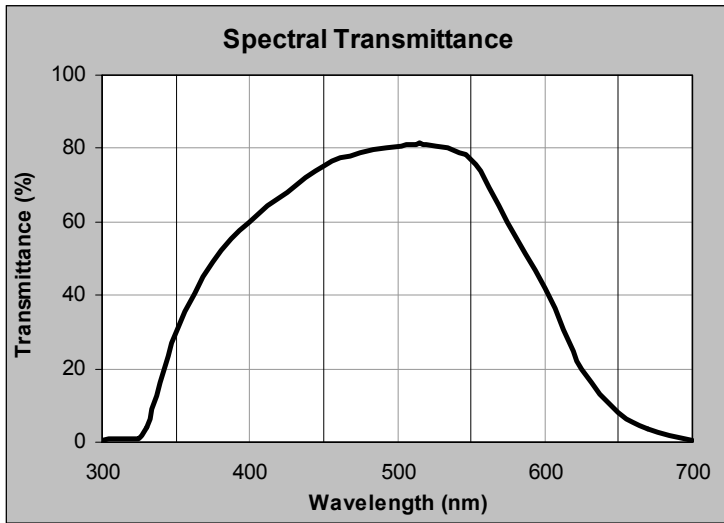
SPECIFICATIONS

| Part Number | Total Area | Active Area | Responsivity | Shunt Resistance | Dark Current ¹ | Breakdown Voltage ¹ | Capacitance ² | NEP | Response Time ⁵ |
|------------------|--------------------|---------------------|----------------------------|-----------------------|---------------------------|--------------------------------|--------------------------|--|----------------------------|
| | (mm ²) | (in) | Min. (A/W) @ (nm) | Min. (M Ω) | Typ. (nA) @ (V) | Typ. (V) | Typ. (pF) @ (V) | Typ. (W/ $\sqrt{\text{Hz}}$) ⁽³⁾ | Typ. (ns) @ (V) |
| SD 100-33-22-223 | 5.1 | 0.100 (dia). | 0.2 @ 550nm | 300 | 6.4 @ 5V | 50 | 87 @ 0V | 4.2x10 ⁻¹² ⁽³⁾ | 15 @ 5V |
| SD 100-34-23-123 | 5.1 | 0.100 (dia). | 0.01 @ 254nm | 650 | 6.0 @ 5V | 5 | 100 @ 0V | 6.0x10 ⁻¹² ⁽³⁾ | 45 @ 0V |
| SD 290-32-31-243 | 42.6 | 0.300 x 0.220 | 0.5 @ 900nm | N/A | 320 @ 24V | 75 | 32 @ 24V | 7.0x10 ⁻¹³ ⁽⁴⁾ | 30 @ 24V |
| SD 170-31-22-223 | 14.8 | 0.152 x 0.152 | 0.2 @ 550nm | 500 | 18 @ 10V | 50 | 250 @ 0V | 3.5x10 ⁻¹³ ⁽³⁾ | 90 @ 0V |

* All values at 23°C

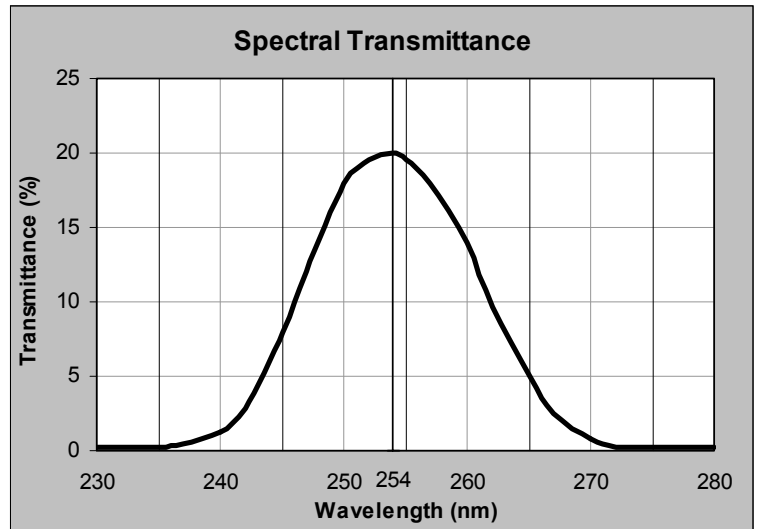
1. Typical values listed. Minimum value shall be 50% of typical.
2. Typical values listed. Maximum value shall be 20% higher than the typical.
3. Test conditions are peak wavelength and $V_B = 10\text{mV}$.
4. Test conditions are $V_B = 24\text{mV}$, and 900 nm.
5. Response Time (transition time between 10% and 90% of the output signal amplitude) measured at 670 nm with a 50 Ω load. Shorter wavelengths will result in faster rise and fall times.
6. Storage and Operating Temperature Range for all detectors is -40°C to 110°C, except for the SD 290-32-31-243, which is -20°C to 75°C.

SD 100-33-22-223



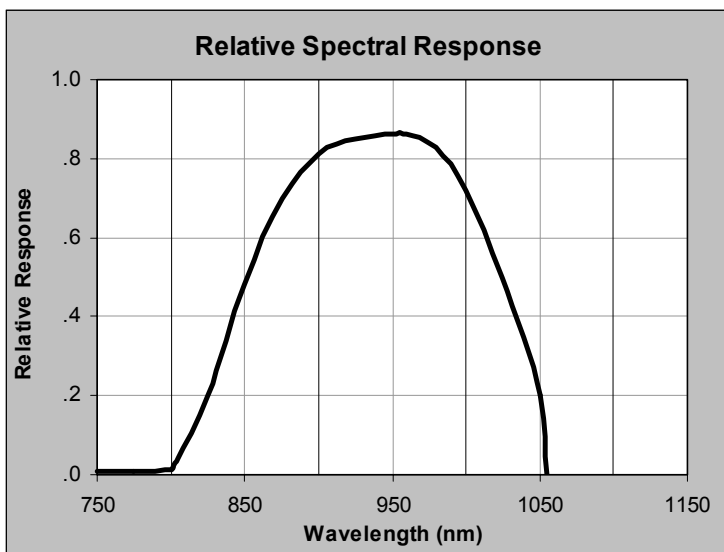
Average blocking 200-300nm, 700-1100nm < 1%

SD 100-34-23-123



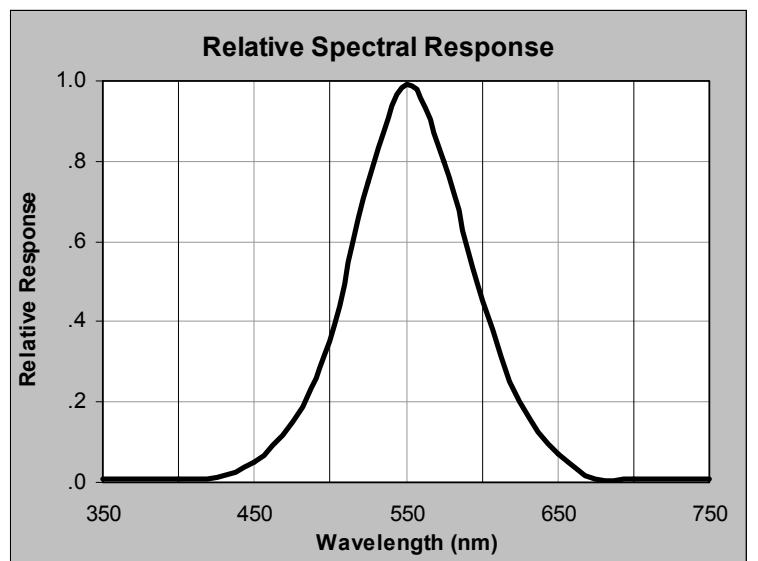
Average blocking 310-1100nm < 3×10^{-5}

SD 290-32-31-243



Average blocking 300-700nm < 2%

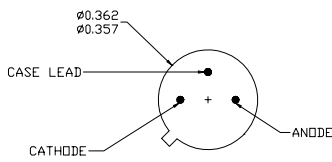
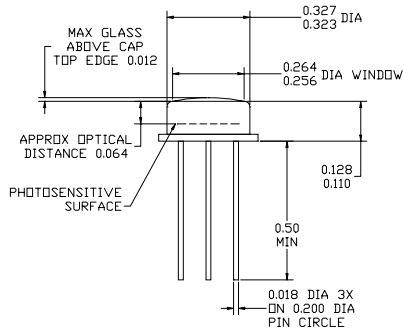
SD 170-32-31-243



Average blocking 200-390nm, 720-1100nm < 1%

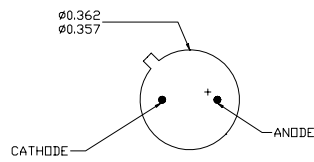
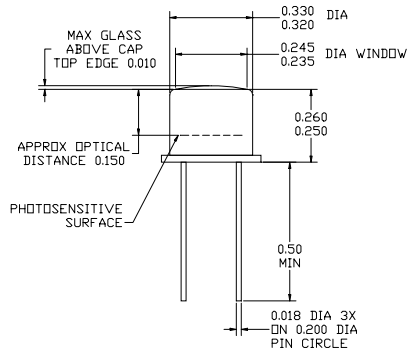
Dimensional Outlines

SD 100-33-22-223



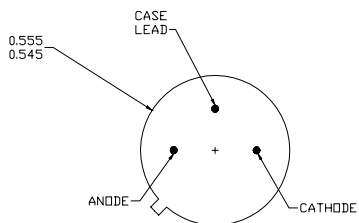
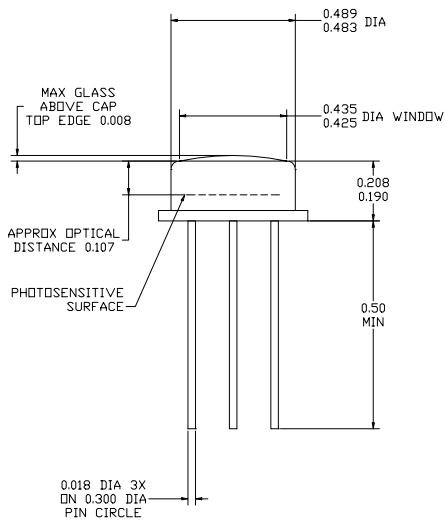
BOTTOM VIEW

SD 100-34-23-123



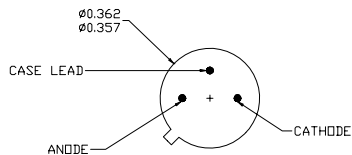
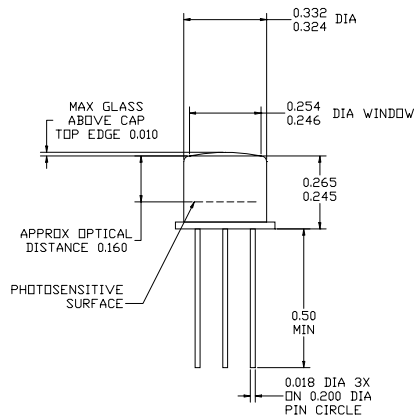
BOTTOM VIEW

SD 290-32-31-243



BOTTOM VIEW

SD 170-31-22-223



BOTTOM VIEW