

High Speed Extended IR response (Series 3T)

3T series photodetectors are specifically designed for high speed, infra-red laser pulse detection. The detector structure designed to be fully depleted at 60 volts reverse bias, uses high resistivity silicon to achieve very low capacitance. The detectors offer high responsivity in the 800-1000 nm range but are equally suited to high speed application at longer wavelengths where maximum absolute responsivity is not as important as speed of response.

Electrical / Optical Specifications

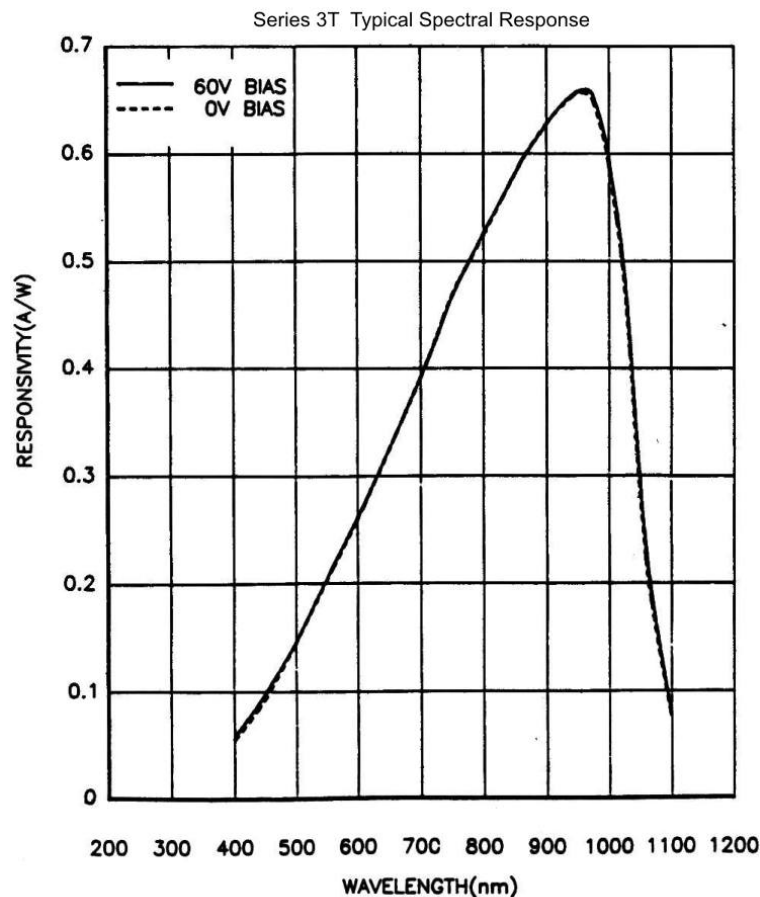
Characteristics measured at 22°C (± 2) ambient, and a reverse bias of 60 volts, unless otherwise stated.

Single Elements

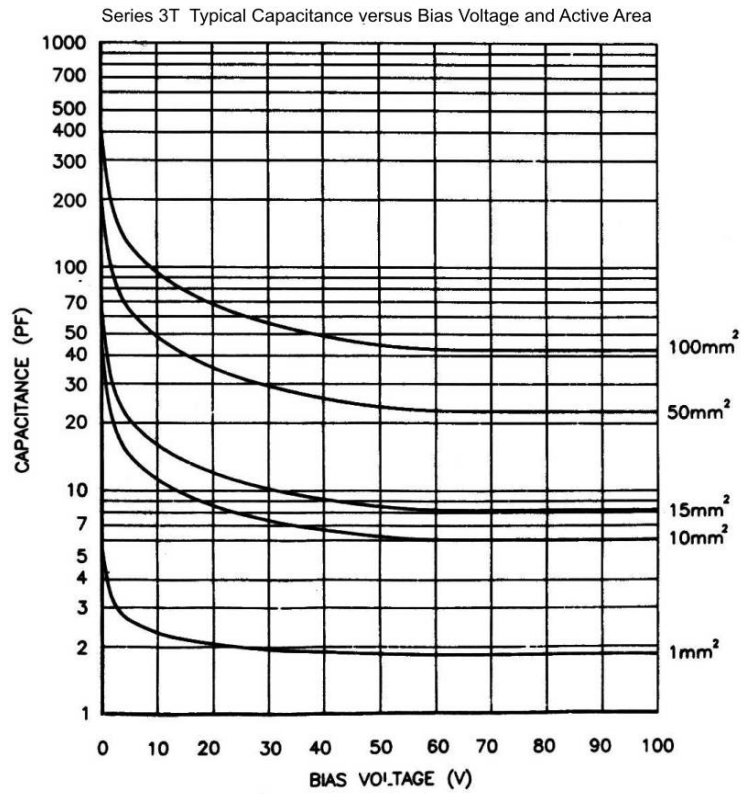
| Type No. | Active Area | | Responsivity A/W | | Dark Current | | NEP $WHz^{-1/2}$ $\lambda = 900$ nm Typ. | Capacitance pF | | Risetime ns $\lambda = 900$ nm RL = 50 Ω (Typ.) | Package |
|-----------|-----------------|-----------|--------------------|------|--------------|------|--|-------------------|-------------------|--|---------|
| | mm ² | mm | $\lambda = 900$ nm | | Max. | Typ. | | $V_r=0$ V Max. | $V_r=60V$ Max. | | |
| | | | Min. | Typ. | | | | | | | |
| OSD1-3T | 1 | 1.13 dia | 0.54 | 0.61 | 10 | 2 | 1.0e-13 | 7 | 2.5 | 10 | TO18 |
| OSD5-3T | 5 | 2.52 dia | 0.54 | 0.61 | 30 | 7 | 1.6e-13 | 30 | 5 | 10 | TO5 |
| OSD15-3T | 35 | 3.8 x 3.8 | 0.54 | 0.61 | 40 | 10 | 1.9e-13 | 90 | 10 | 10 | TO5 |
| OSD35-3T | 35 | 5.9 x 5.9 | 0.54 | 0.61 | 150 | 40 | 4.8e-13 | 205 | 22 | 10 | TO8 |
| OSD50-3T | 50 | 7.98 dia | 0.54 | 0.61 | 200 | 50 | 5.9e-13 | 290 | 27 | 10 | TO8 |
| OSD60-3T | 62 | 7.9 x 7.9 | 0.54 | 0.61 | 300 | 50 | 5.9e-13 | 350 | 32 | 10 | TO8 |
| OSD100-3T | 100 | 11.3 dia | 0.54 | 0.61 | 600 | 200 | 8.3e-13 | 580 | 52 | 10 | 13 |

Highlighted items are Centronic standard products generally available from stock

Series 3T Spectral Response Graph



Capacitance versus Bias Voltage



Due to our policy of continued development, specifications are subject to change without notice.