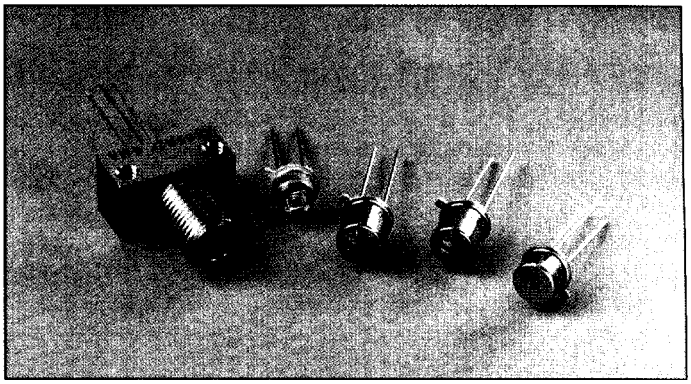
# Silicon Photodetector BPX65 Series

## HIGH SPEED

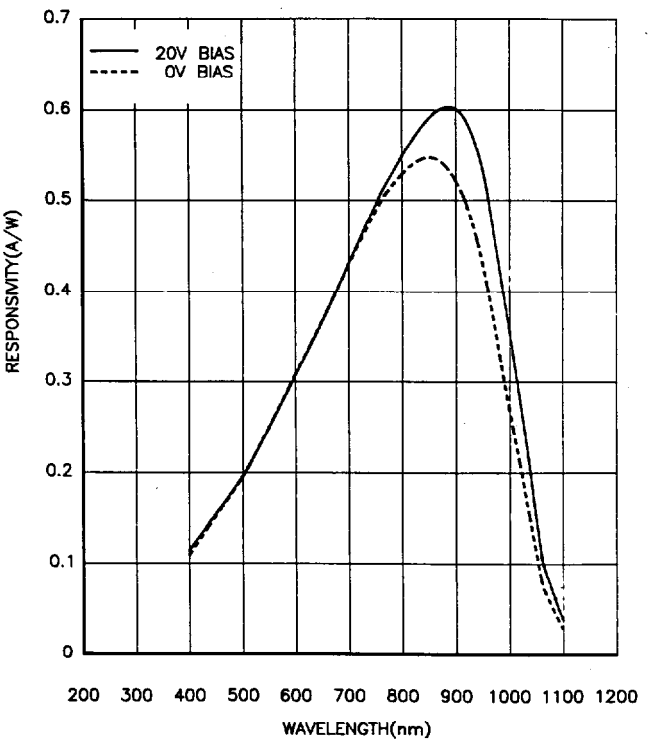
The BPX65 family of detectors feature Centronic's 1mm² high speed, high sensitivity chip already successful in a wide variety of applications. The chip can be packaged in various forms suitable for fibre-optic communication, such as the AX65-RF (precisely centred, isolated, low chip to window spacing) a standard 2 or 3 lead TO18 or even epoxy encapsulated. It has also been used for encoder designs and with MIL SPEC release at the heart of advanced laser warning systems.



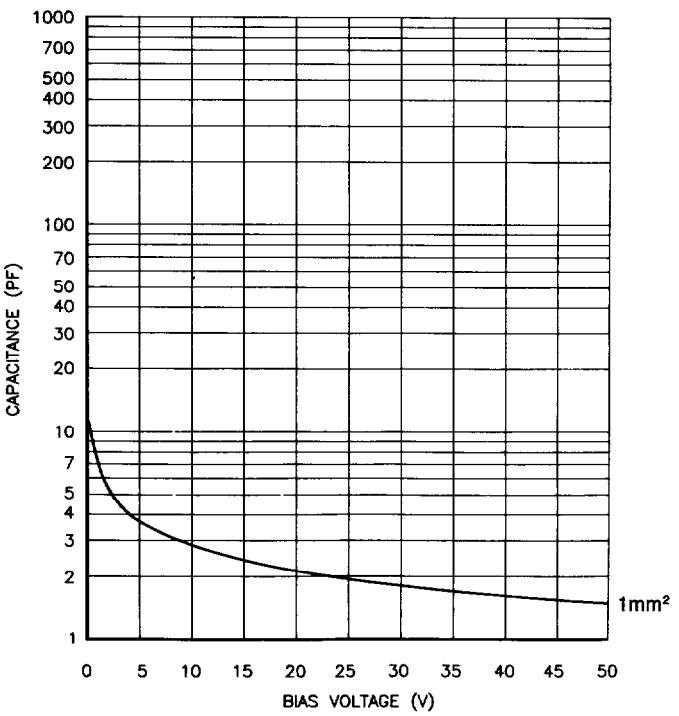
## ABSOLUTE MAXIMUM RATINGS

| | Max. Rating |
|---|---|
| DC Reverse Voltage | 50V |
| Peak Pulse Current (1 µs, 1% duty cycle) | 200mA |
| Peak DC Current | 10mA |
| Illumination level for saturation | 5W/cm² |
| Storage Temperature Range | -55°C + 125°C |
| Operating Temperature Range | -55°C + 120°C |
| Soldering Temperature Range | 200°C |

Series BPX65 - Typical Spectral Response




Series BPX65 - Typical Capacitance versus Bias Voltage



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## Electrical / Optical Specifications

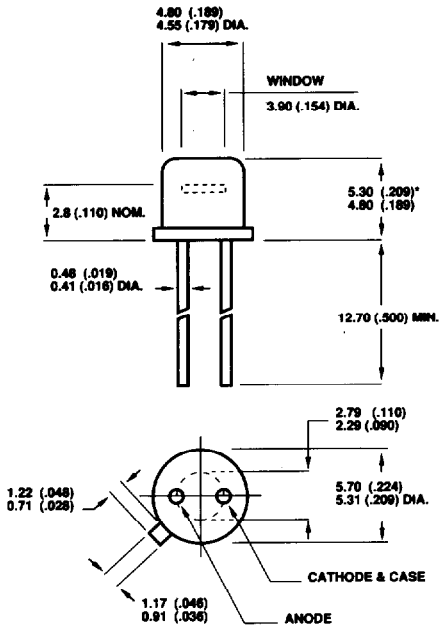
Characteristics measured at 22°C (±2) ambient, and a reverse bias of 20 volts, unless otherwise stated.

## Single Elements

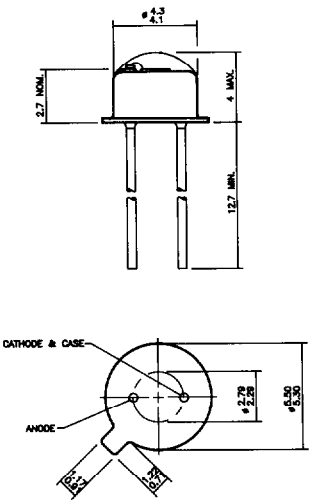
| Type No. | Active Area | | Responsivity A/W λ = 900 nm | | Dark Current nA | | NEP WHz$^{-}$ λ = 900nm | Capacitance pF | | Risetime ns λ = 820 nm $R_L$ = 50 Ω | Package |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | mm² | mm | Min. | Typ. | Max. | Typ. | Typ. | Vr = 0V Max | Vr = 20V Max. | Typ. | |
| BPX65 | 1 | 1 x 1 mm | 0.52 | 0.55 | 5 | 1 | $3.3 \times 10^{-14}$ | 15 | 3.5 | 3.5 | 1 |
| AX65R2F | 1 | 1 x 1 mm | 0.52 | 0.55 | 5 | 1 | $3.3 \times 10^{-14}$ | 15 | 3.5 | 3.5 | 2A |
| X65EB | 1 | 1 x 1 mm | 0.52 | 0.55 | 5 | 1 | $3.3 \times 10^{-14}$ | 15 | 3.5 | 3.5 | 1B |

**Highlighted items are Centronic standard products generally available from stock**

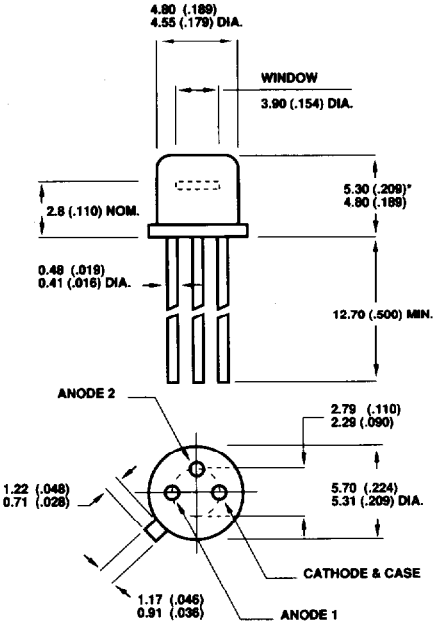
# Package Dimensions - mm (inches)



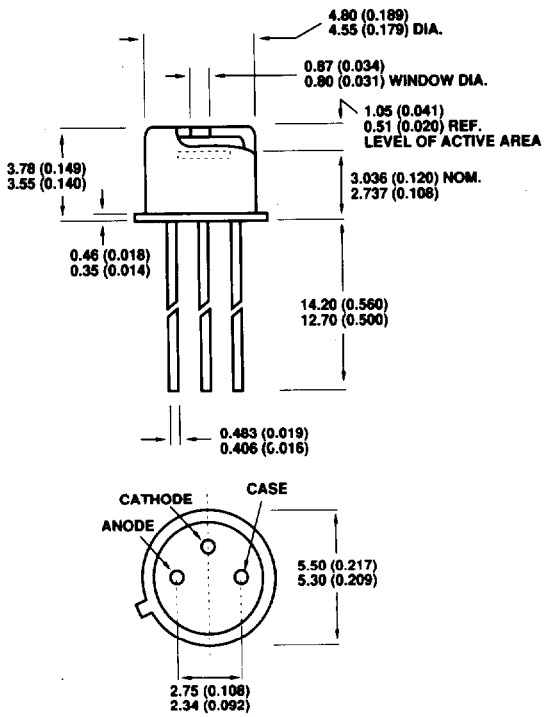

1 (TO18)



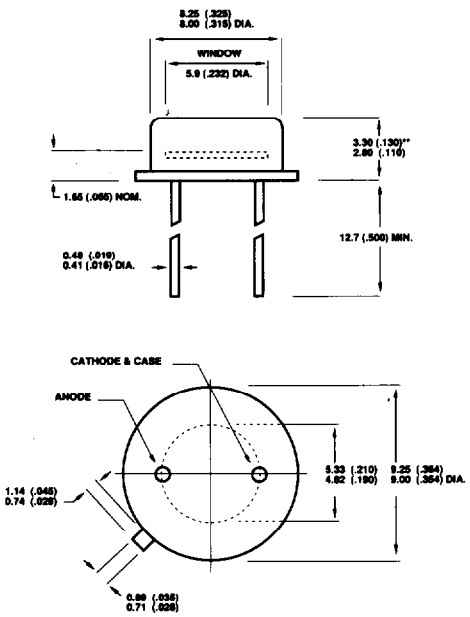

1b



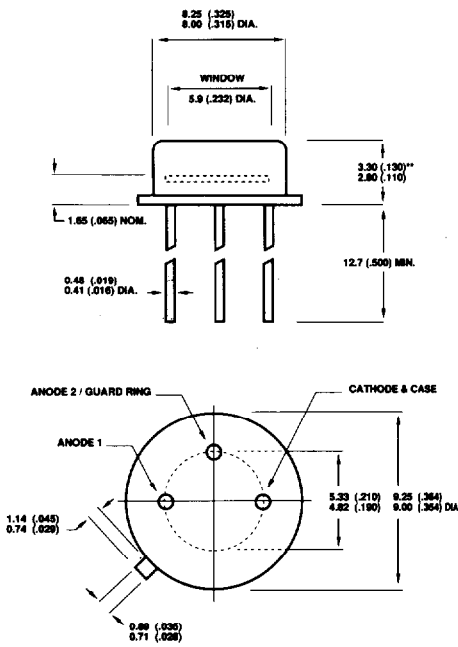

2 (TO18)




2a (T046)




3 (TO5)




4 (TO5)

* (TO18) Window glass climb 0.15 (.006) MAX. ** (TO5) Window glass climb 0.3 (.012) MAX.