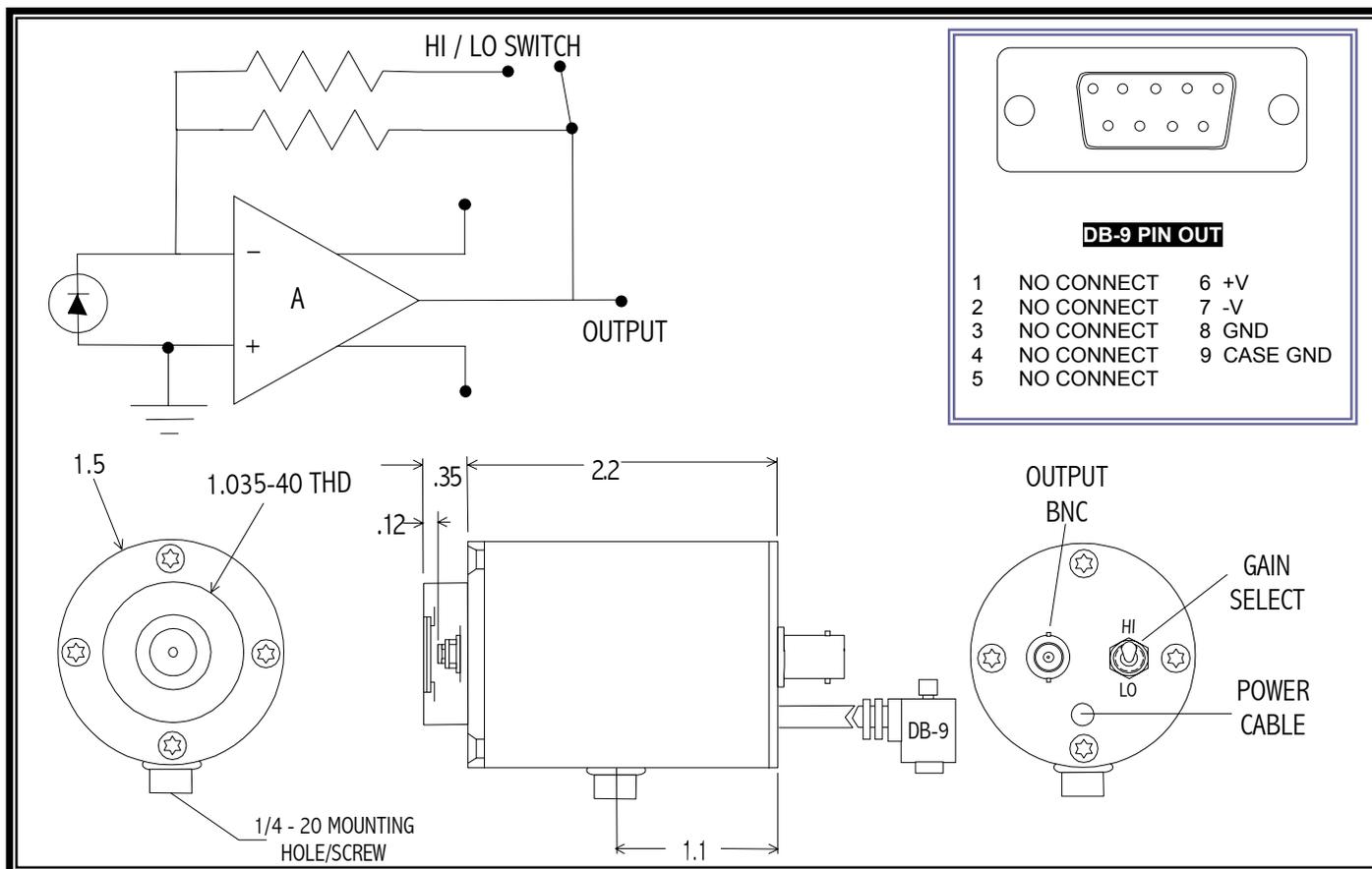


GERMANIUM PHOTODIODE RECEIVERS



Application Note This unit is a high performance photodiode/receiver operated with at ambient temperature with a dual gain FET input transimpedance amplifier. The output voltage is proportional to the input signal current: $V_{out} = I_{signal} \cdot R_f$. The PD/AMP is a DC coupled dual gain system. Care should be taken in shielding the unit from stray light during operation to prevent saturation of the amplifier (and potential failure).

SPECIFICATIONS @ 23° C NOM.

| Part Number | G - 020 - H | G - 030 - H | G - 050 - H |
|-------------------------------------|---|--------------------------------|------------------------------|
| Active Area | 2mm dia | 3mm dia | 5mm dia |
| Operating Wavelength- μm | 0.8 - 1.8 | | |
| Responsivity- V/W @ pk | $0.8 \times 10^7 / 10^6$ | $0.8 \times 10^7 / 10^6$ | $0.8 \times 10^6 / 10^5$ |
| Noise- V/Hz ^{1/2} | $4.0 \times 10^{-6} / \times 10^{-7}$ | $6.0 \times 10^{-6} / 10^{-7}$ | $1 \times 10^{-6} / 10^{-7}$ |
| NEP- W/Hz ^{1/2} @ pk | 5×10^{-13} | 7.5×10^{-13} | 1.2×10^{-12} |
| Bandwidth (-3dB)- Hz | DC - 2k | | |
| Power Requirements | +/- 9 VDC to +/- 15 VDC | | |
| Connections | BNC signal output. Shielded power cable terminated with a DB-9 connector directly couples the unit with the PS -1 Low Noise Power Supply. | | |