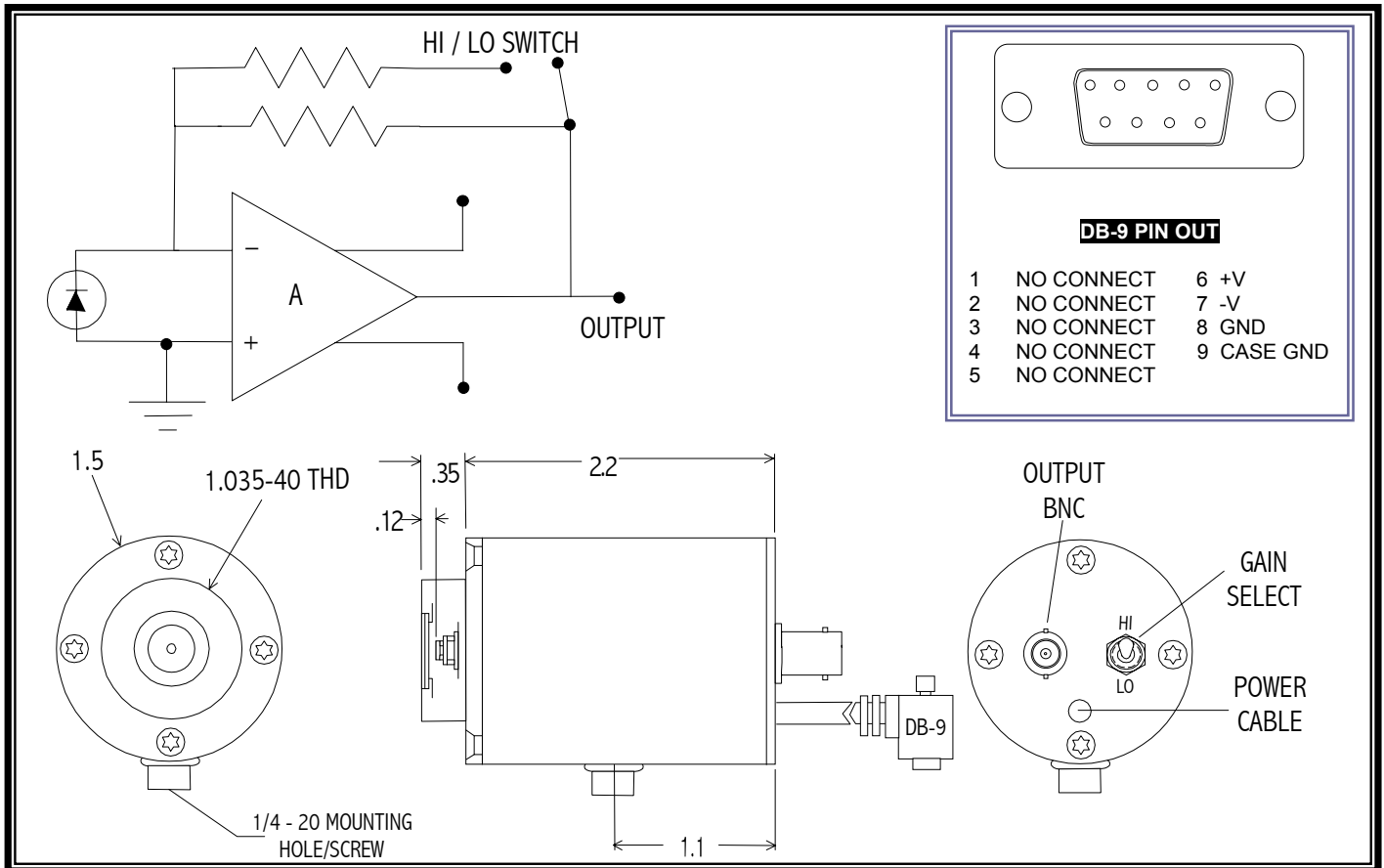


## InGaAs PHOTODIODE RECEIVERS



**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                         | IGA - 020 - H   | IGA - 030 - H                  | IGA - 050 - H                  |
|-------------------------------------|---|--------------------------------|--------------------------------|
| Active Area                         | 2mm dia   | 3mm dia                        | 5mm dia                        |
| Operating Wavelength- $\mu\text{m}$ | 1.0 - 1.7   |                                |                                |
| Responsivity- V/W @ pk              | $0.9 \times 10^8 / 10^7$  | $0.9 \times 10^8 / 10^7$       | $0.9 \times 10^7 / 10^6$       |
| Noise- V/Hz <sup>1/2</sup>          | $5.5 \times 10^{-6} / \times 10^{-7}$   | $5.5 \times 10^{-6} / 10^{-7}$ | $1.8 \times 10^{-6} / 10^{-7}$ |
| NEP- W/Hz <sup>1/2</sup> @ pk       | $6 \times 10^{-14}$   | $6 \times 10^{-14}$            | $2. \times 10^{-13}$           |
| 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. |                                |                                |