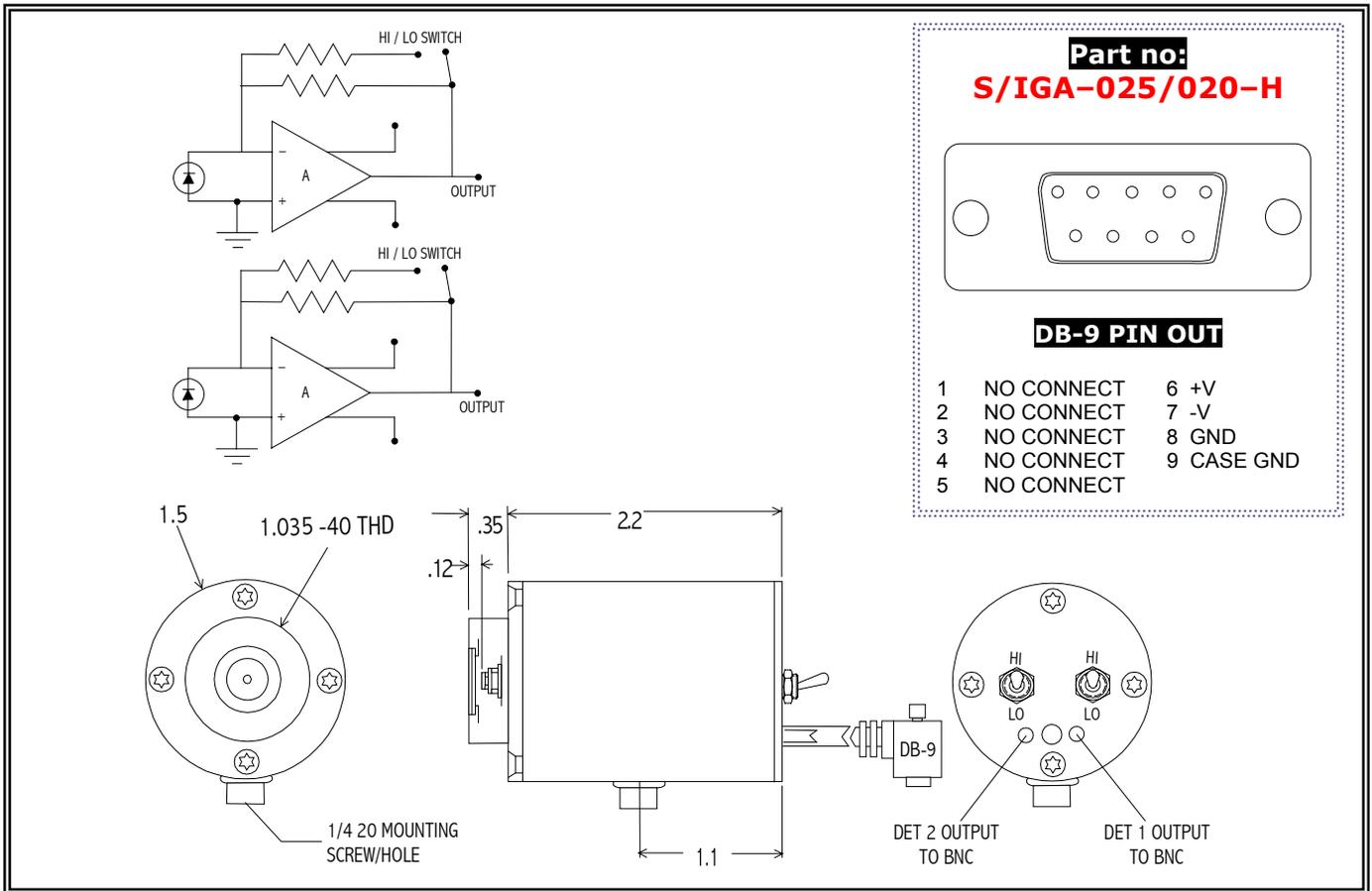


## 2 - COLOR PHOTODIODE / RECEIVER



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

### SPECIFICATIONS

|                                      |  |   |
|--------------------------------------|--|---|
| <b>Detector Type</b>                 | <b>2.5 mm dia Si Photodiode / 2 mm dia InGaAs Photodiode</b>   |   |
| <b>Operating Temperature - °C</b>    | <b>22</b>  |   |
| <b>Operating Wavelength - μm</b>     | <b>0.3 - 1.0</b>   | <b>1.0 - 1.7</b>  |
| <b>Responsivity - V/W @ pk</b>       | <b><math>0.6 \times 10^8 / 0.6 \times 10^7</math></b>  | <b><math>0.6 \times 10^8 / 0.6 \times 10^7</math></b>       |
| <b>Noise - V/Hz<sup>1/2</sup></b>    | <b><math>1.2 \times 10^{-6} / 1.5 \times 10^{-7}</math></b>  | <b><math>1.2 \times 10^{-6} / 1.5 \times 10^{-7}</math></b> |
| <b>NEP - W/Hz<sup>1/2</sup> @ pk</b> | <b><math>&lt; 2 \times 10^{-14}</math></b>   | <b><math>&lt; 2 \times 10^{-14}</math></b>                  |
| <b>Bandwidth (-3dB) - Hz</b>         | <b>DC - 2k</b>   |   |
| <b>Power Requirements</b>            | <b>+/- 9 VDC to +/- 15 VDC</b>   |   |
| <b>Connections</b>                   | <b>Two shielded signal cables terminated with a BNC. Shielded power cable terminated with a DB-9 connector directly couples the unit with the PS-1 Low Noise Power Supply.</b> |   |