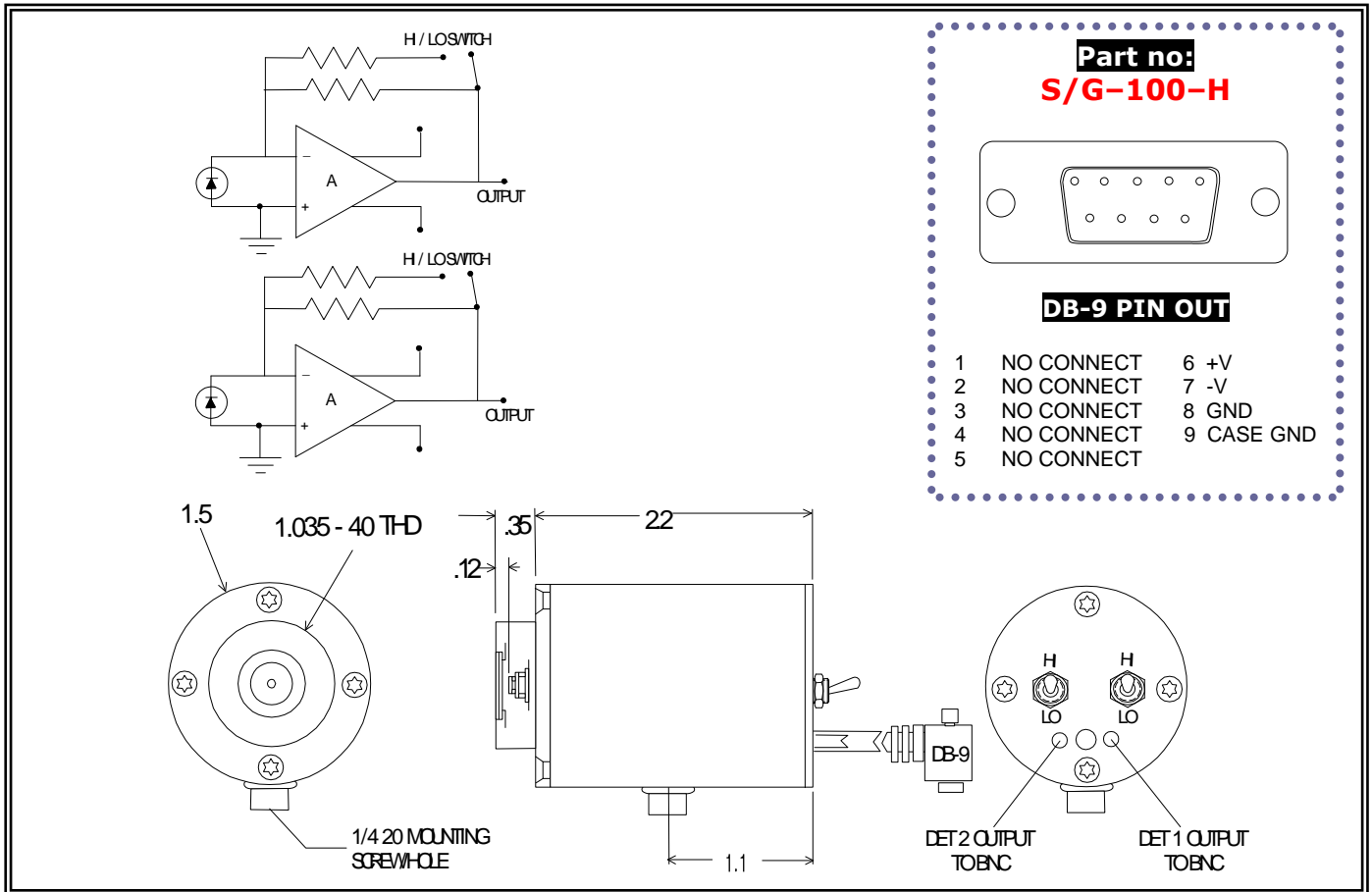


## 2 - COLOR PHOTODIODE / RECEIVER



**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>10mm x 10mm Si Photodiode / 10mm x 10mm Ge Photodiode</b>	
<b>Operating Temperature - °C</b>	<b>22</b>	
<b>Operating Wavelength - μm</b>	<b>0.3 - 1.0</b>	<b>1.0 - 1.8</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 10^5 / 0.6 \times 10^4</math></b>
<b>Noise - V/Hz<sup>1/2</sup></b>	<b><math>1.2 \times 10^{-6} / 1.2 \times 10^{-7}</math></b>	<b><math>2.5 \times 10^{-7} / 10^{-8}</math></b>
<b>NEP - W/Hz<sup>1/2</sup> @ pk</b>	<b><math>2 \times 10^{-14}</math></b>	<b><math>4 \times 10^{-12}</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>	