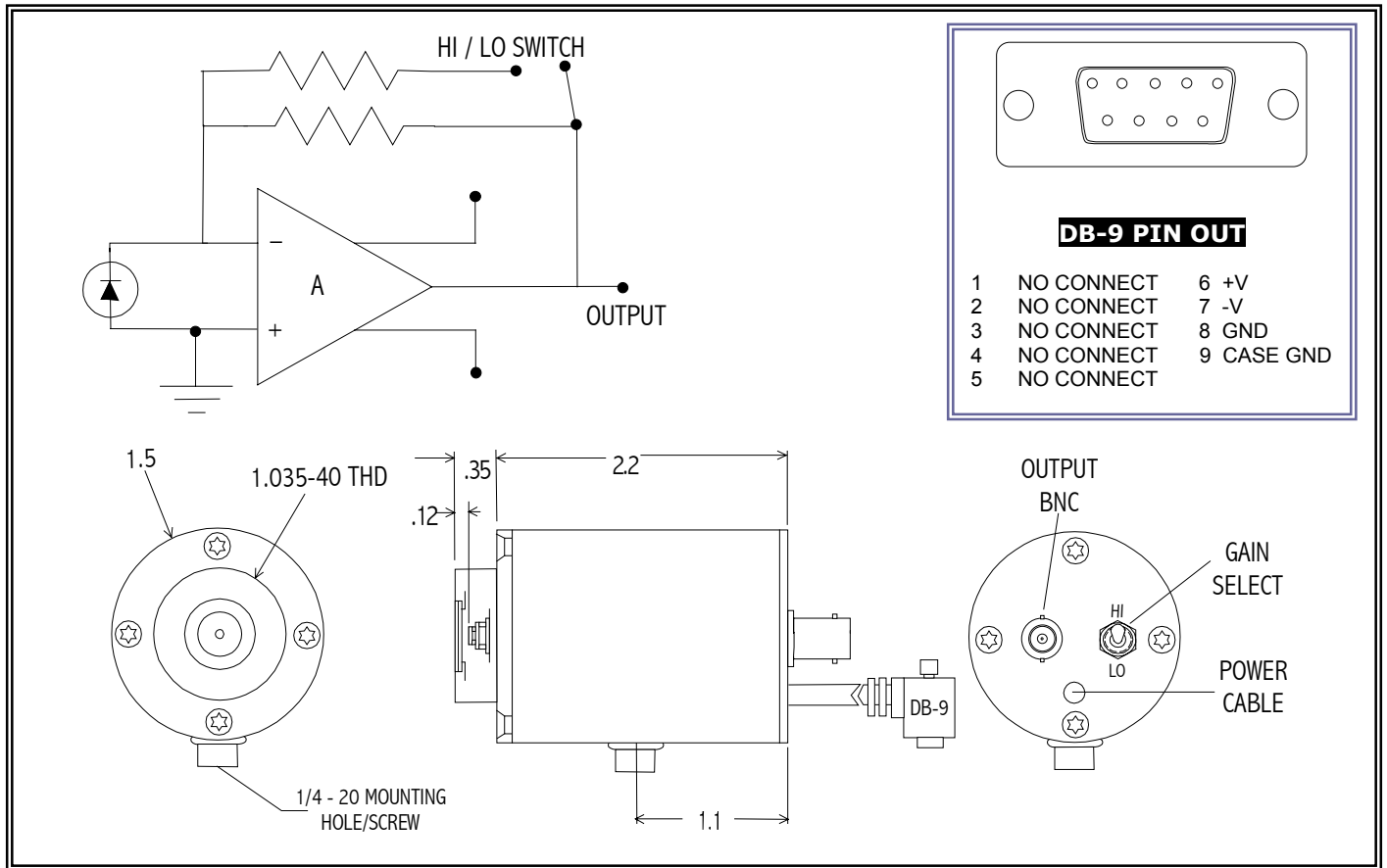


## SILICON PHOTODIODE RECEIVERS



**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 @ 22° C NOM.

Part Number	S - 010 - H	S - 025 - H	S - 050 - H
Active Area	1 mm dia	2.5 mm dia	5 mm dia
Operating Wavelength- $\mu\text{m}$	0.3 - 1.0		
Responsivity- V/W @ pk	$0.5 \times 10^9 / 10^8$	$.5 \times 10^9 / 10^8$	$.5 \times 10^8 / 10^7$
Noise- V/Hz <sup>1/2</sup>	$5.0 \times 10^{-6} / 0.5 \times 10^{-6}$	$5.0 \times 10^{-6} / 10^{-7}$	$1.3 \times 10^{-6} / 10^{-7}$
NEP- W/Hz <sup>1/2</sup> @ pk	$< 1.0 \times 10^{-14}$	$< 1.0 \times 10^{-14}$	$< 2.5 \times 10^{-14}$
Bandwidth (-3dB)- Hz	DC - 500 / 2k	DC - 500 / 2k	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.		