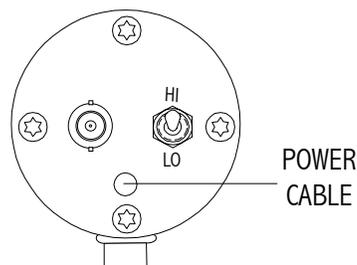
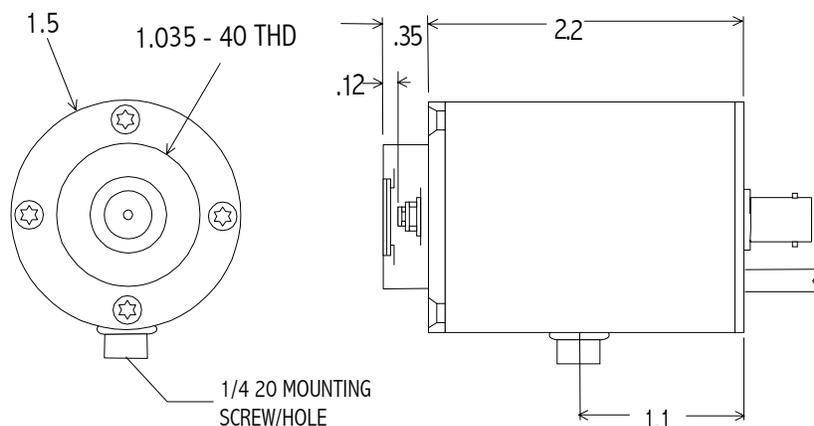
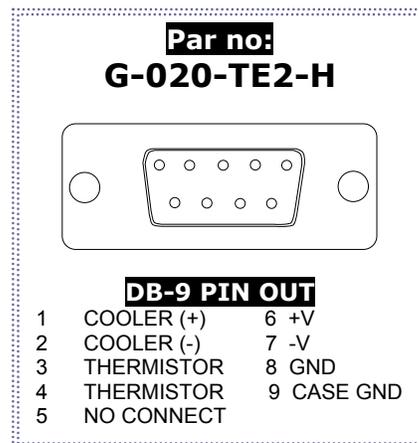
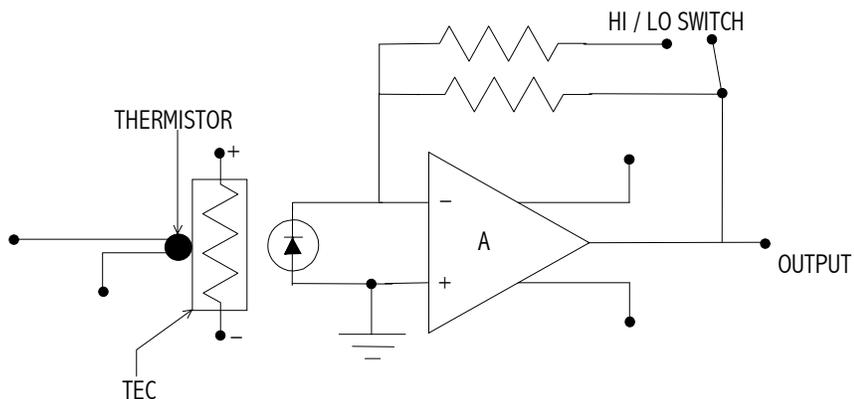


## TE - SERIES PHOTODIODE / RECEIVER



**Application Note** This unit is a high performance photodiode/receiver operated with a thermoelectric cooler for stabilization/cooling 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

Detector Type	2.0 mm Ge Photodiode	
Operating Temperature- °C	22 @ $I_{tec} = 0.0 \text{ A}$	-30 @ $I_{tec} = 0.5 \text{ A}$
Operating Wavelength- $\mu\text{m}$	0.8 – 1.8	0.8 – 1.8
Responsivity- V/W @ pk	$0.8 \times 10^7 / 0.8 \times 10^6$	$0.8 \times 10^7 / 0.8 \times 10^6$
Noise- V/Hz <sup>1/2</sup>	$5.6 \times 10^{-6} / 5.6 \times 10^{-7}$	$4 \times 10^{-7} / 4 \times 10^{-8}$
NEP- W/Hz <sup>1/2</sup> pk	$7 \times 10^{-13}$	$5 \times 10^{-14}$
Bandwidth (-3dB)- Hz	DC – 2kHz	DC – 2kHz
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/TC -1 Low Noise Power Supply.	