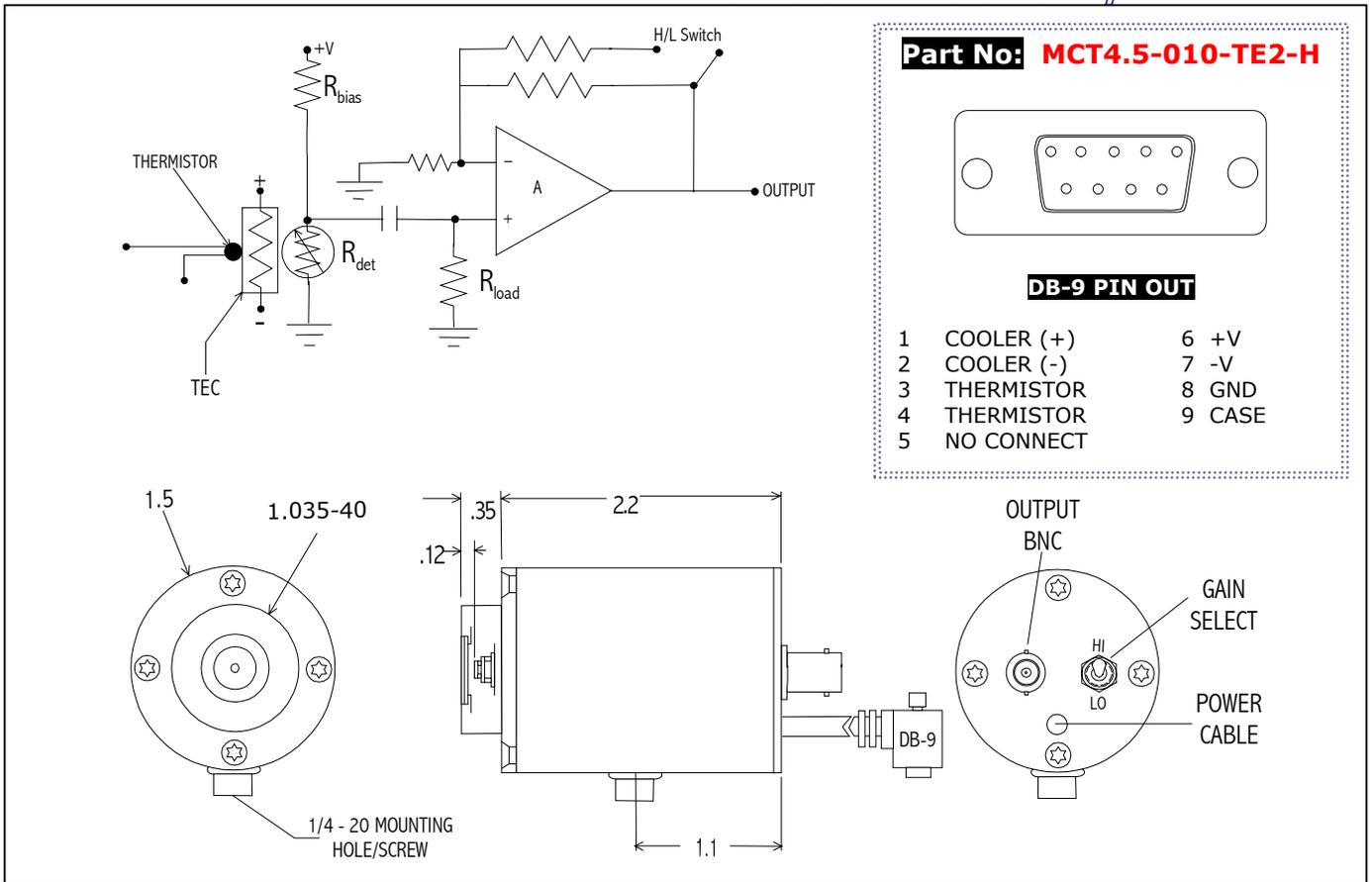


MCT - SERIES PHOTONDUCTOR / RECEIVER



Application Note

This unit is a high performance photoconductor/receiver operated with a thermoelectric cooler for stabilization/cooling with a dual gain voltage amplifier. The detector's bias voltage is linked to the amplifier power supply and no additional biasing is necessary. The PC/AMP is an AC coupled, dual gain detector system requiring a modulated input signal for operation.

SPECIFICATIONS

Detector Type	1 x 1 mm HgCdTe Photoconductor	
Operating Temperature - °C	22 @ I _{tec} = 0.0 A	-30 @ I _{tec} = 0.6 A
Operating Wavelength - μm	1.0 - 4.3	1.0 - 4.5
Responsivity - V/W @ pk, typ	10 ⁵ / 10 ⁴	10 ⁶ / 10 ⁵
Noise - V/Hz ^{1/2} @ 1000 Hz	5.0 x 10 ⁻⁶ / 10 ⁻⁷	5.0 / .5 x 10 ⁻⁶
D* - cm - Hz ^{1/2} / W @ pk	> 1 x 10 ¹⁰	> 4 x 10 ¹⁰
Bandwidth (-3dB) - Hz	5 - 50 k+	5 - 50 k+
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 Power Supply.	