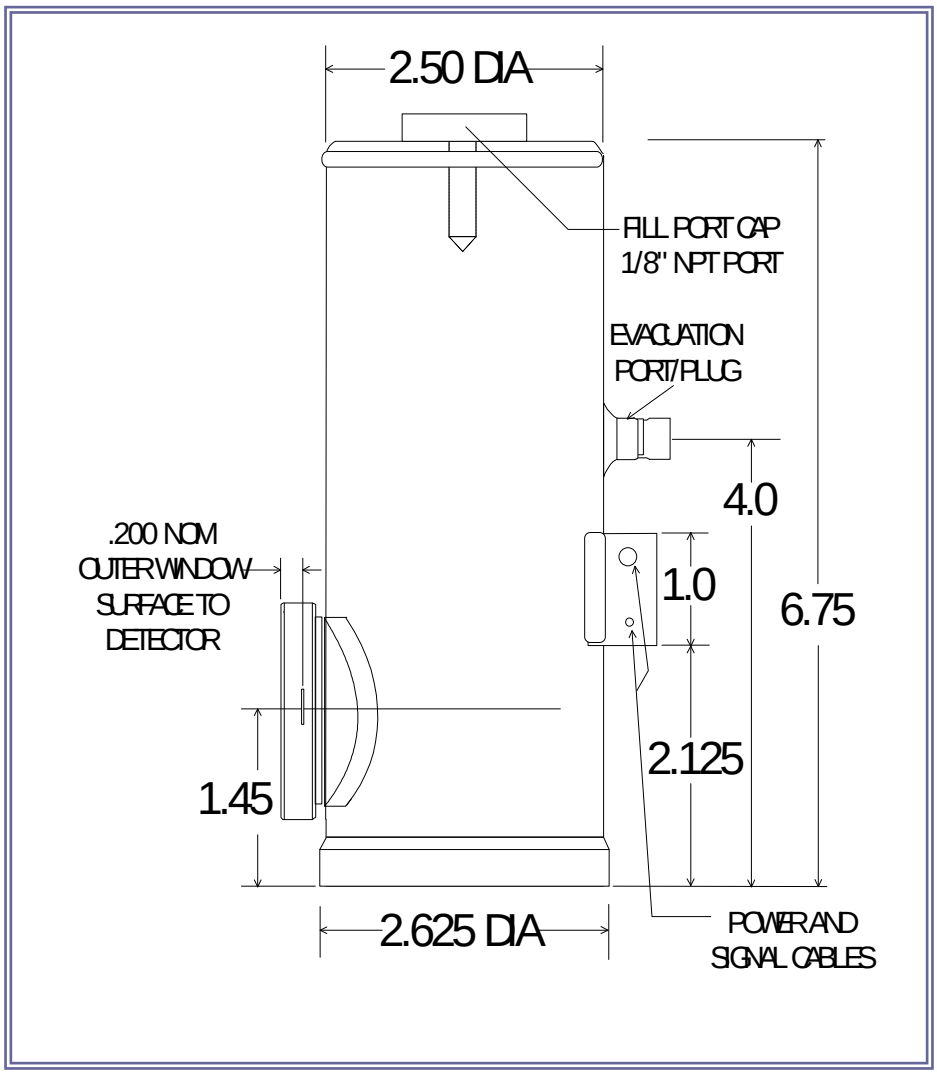
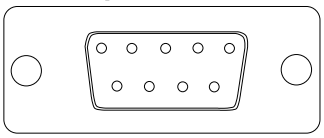
MCT SERIES CRYOGENIC PHOTODETECTOR/AMPLIFIER



Part No: MCT10-010-E-LN6N
s/n 071118



DB-9 PIN OUT

1	NO CONNECT	6	+V
2	NO CONNECT	7	-V
3	NO CONNECT	8	GND
4	NO CONNECT	9	CASE
5	NO CONNECT		

Application Note

This unit is a high performance cryogenically operated HgCdTe photodetector/amplifier. The unit should be at LN2 temperature before turning on power to the amplifier. A funnel is provided to assist in the filling of the dewar, which is best accomplished by gradually filling and topping off over a several minute period.

The amplifier has a dual gain function controlled by a switch on the backplate. The HI (up) position is x10 above the LO (down) position. Output is thru a BNC-type cable, and power is connected thru a shielded multi-wire cable terminated in a 9-pin Dsub connector or solder leads.

Active Area	**1 mm x 1 mm**
Spectral Range	**2 – 13+ um**
Detectivity (D*pk,10kHz,1Hz)	**4.9 x 10^{10} cm-$Hz^{1/2}$/W**
Dewar Hold Time	**12 hours minimum with liquid N_2**
Field of View	**60° nominal**
Responsivity (pk), **at amplifier out**	**0.9 x 10^{6} V/W HI ; 10^{5} V/W LO**
Noise voltage (100Hz) **(1kHz)** **(10kHz)**	**9.5 x 10^{-6} / 10^{-7} $V/Hz^{1/2}$** **3.0 x 10^{-6} / 10^{-7}** **1.8 x 10^{-6} / 10^{-7}**
Bandwidth	**5 Hz - 50kHz + typ**

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Detector Resistance; Bias (Set internally)	**33 ohms; 20mA**
Power Requirement	**+,- 5VDC to +,- 15VDC ; 50mA**
Connections	**BNC Signal Cable** **Shielded Power Cable** **Red = +V** **Black = -V** **White/Shield = GND** **Note: Units delivered with the PS-1 power supply are terminated with a 9-pin DB-9 connector.**

Part No: **MCTxx-E-LN Series**

DB-9 PIN OUT

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