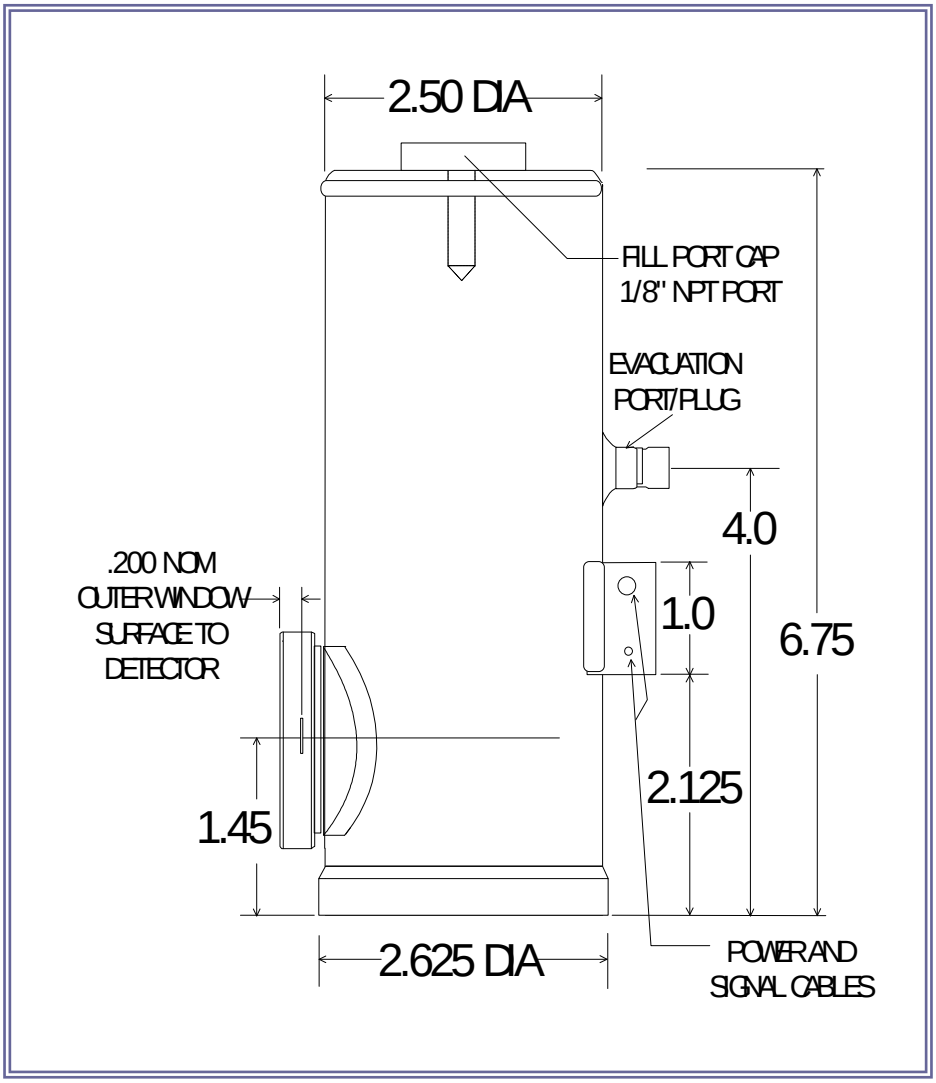
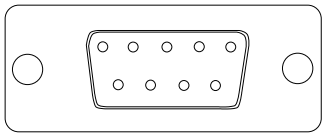
MCT SERIES CRYOGENIC PHOTODETECTOR/AMPLIFIER



Part No: MCT14-010-E-LN6N



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.

SPECIFICATIONS	
Active Area	**1 mm x 1 mm**
Spectral Range	**2 - 15 um ; pk @ ~ 13.5um**
Detectivity (D*pk)	**4.0 x 10^{10} cm-$Hz^{1/2}$/W, min**
Dewar Hold Time	**12 hours minimum with liquid N_2**
Field of View	**60° nominal**
Responsivity (pk), **at amplifier out, typ**	**5 x 10^5 V/W HI ; 10^4 V/W LO**
Voltage Noise, 10kHz, at amplifier out	**1.25 x 10^{-6} / 10^{-7} V/$Hz^{1/2}$**
Detector Resistance	**25 ohms, nom**

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Bias Current (set internally, not user adjustable)	**15 mA**
Bandwidth	**5 Hz - 50kHz typ**
Connections	**BNC signal coaxial cable with 3 lead shielded power cable.** **Red = +V, Black = -V, White/Shield = ground** ***Note:*** **A DB9 connector is provided for direct connection to the optional PS-1 Low Noise Power Supply**
Power requirements	**+,- 9VDC up to +,- 15VDC, 50 mA**

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

DB-9 PIN OUT

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