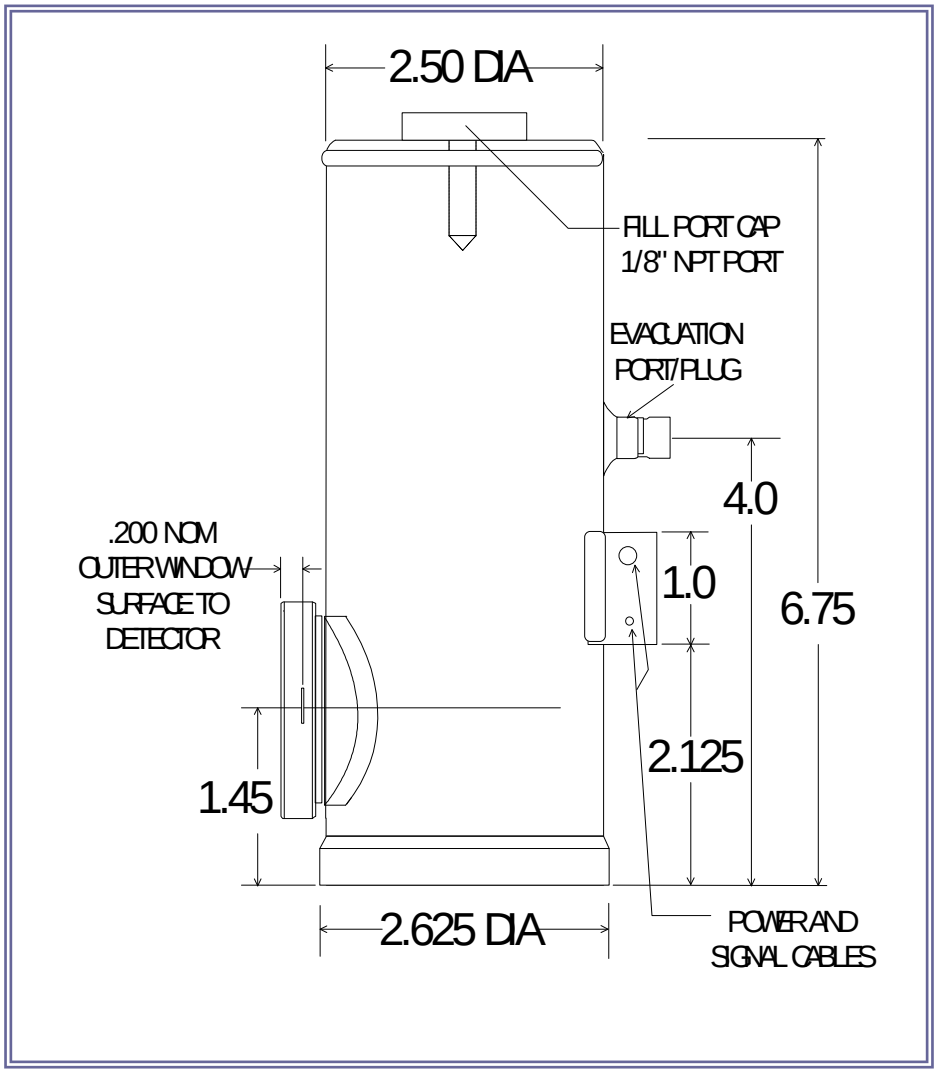
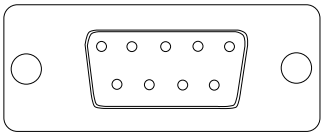
MCT SERIES CRYOGENIC PHOTODETECTOR/AMPLIFIER



Part No: MCT10-020-E-LN6N
s/n 091102-3



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.

TEST DATA: s/n 050918 05/13/2009	
Active Area	**2 mm x 2 mm**
Spectral Range	**2 – 12+ um**
Window Material	**BBAR Germanium**
Detectivity (D*pk,10kHz,1Hz)	**4.0 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, V/W**	**1.5 x 10^{5} HI / x 10^{4} LO**
Noise voltage (10kHz), V/$Hz^{1/2}$	**0.5 x 10^{-6} HI / x 10^{-7} LO**

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Bandwidth	**5 Hz - 50kHz + typ**
Detector Resistance; Bias (Set internally)	**20 ohms; 30mA typ**
Connections **NOTE: Power requirement is +,- 9VDC to +,- 15VDC**	**SIGNAL: BNC Cable** **POWER: 9-pin Dsub** **+V Pin 6 (Red)** **-V = Pin 7 (Black)** **GND/CASE = Pins 8&9 (Wht/Shield)**

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

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