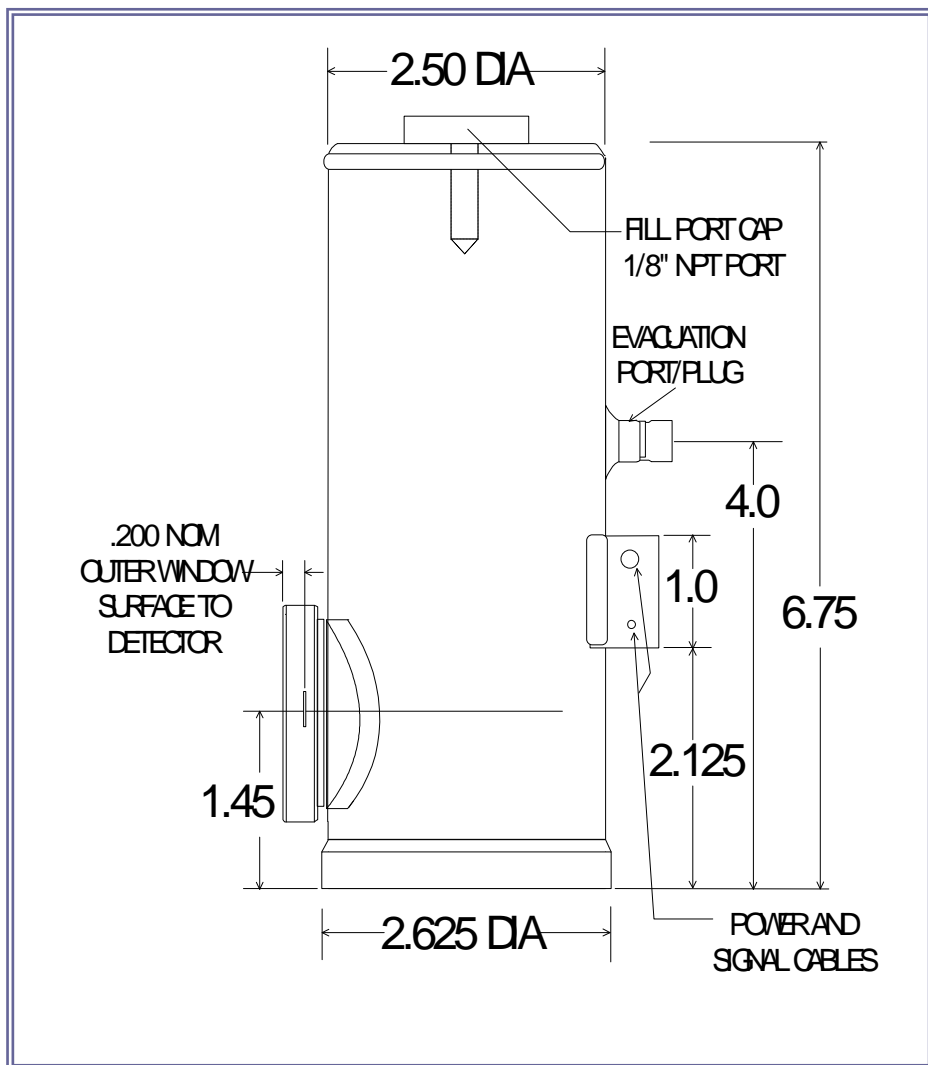
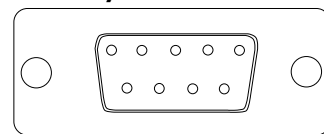


MCT SERIES CRYOGENIC PHOTODETECTOR/AMPLIFIER



Part No: MCT10-020-E-LN6N
s/n 011331



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)	5.1 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, typ	1.4 x 10 ⁶ V/W HI ; 10 ⁵ V/W LO
Noise voltage (10kHz)	5.5 x 10 ⁻⁶ / 10 ⁻⁷ V/Hz ^{1/2}



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Bandwidth	5 Hz - 50kHz + typ
Detector Resistance; Bias (Set internally)	30 ohms; 20mA
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)