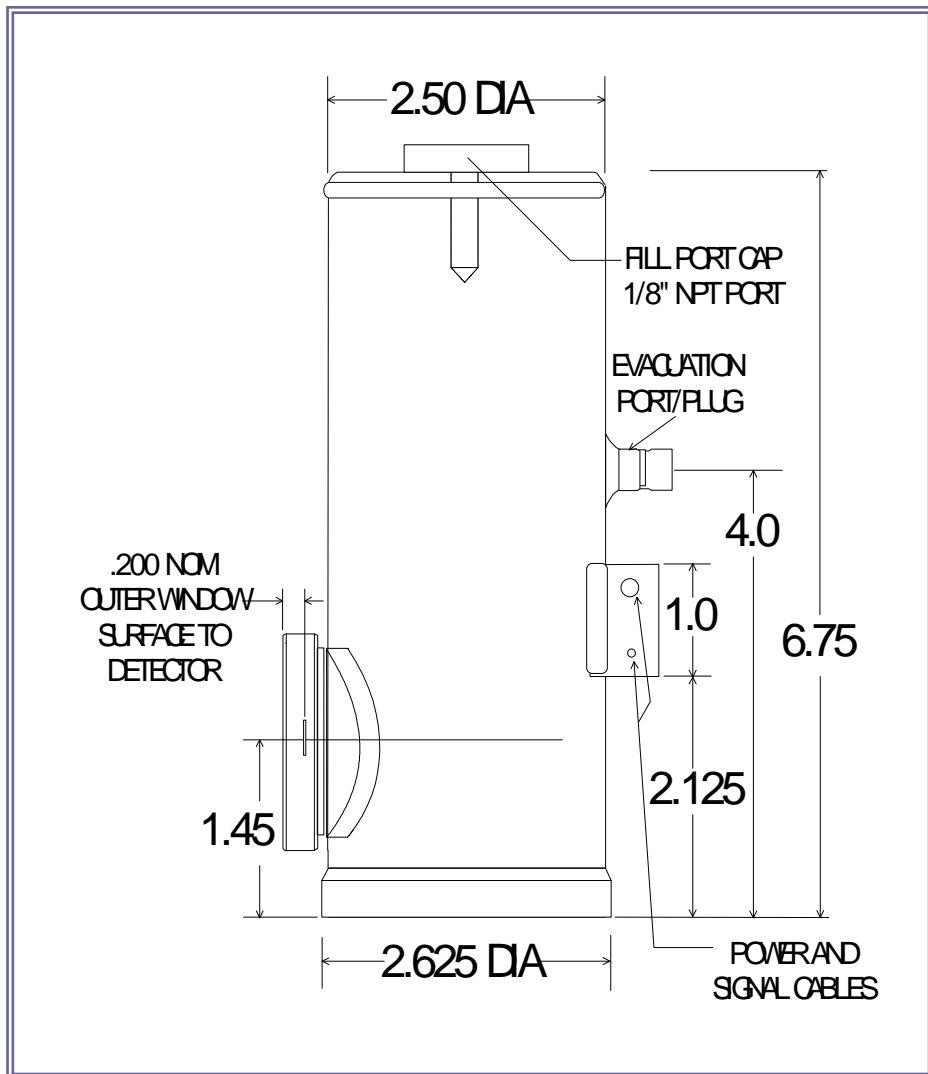
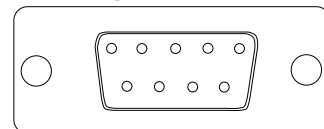


MCT SERIES CRYOGENIC PHOTODETECTOR/AMPLIFIER



Part No: MCT10-010-E-LN6N
s/n 090908-1



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 - 12+ um
Window	BBAR Germanium
Detectivity (D*pk)	5.2 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	5.5 x 10 ⁴ V/W
Noise Voltage, 10kHz	1.1 x 10 ⁻⁷ V/Hz ^{1/2}
Detector Resistance	20 ohms



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Bias Current (set internally, not user adjustable)	30 mA
Bandwidth	5 Hz – 1MHz
Connections	BNC signal coaxial cable with 3 lead shielded power cable. Red = +V, Black = -V, White/Shield = ground Note: A DB9 connector is provided on units purchased with optional PS-1 Low Noise Power Supply
Power requirements	+,- 9VDC up to +,- 15VDC, 50 mA