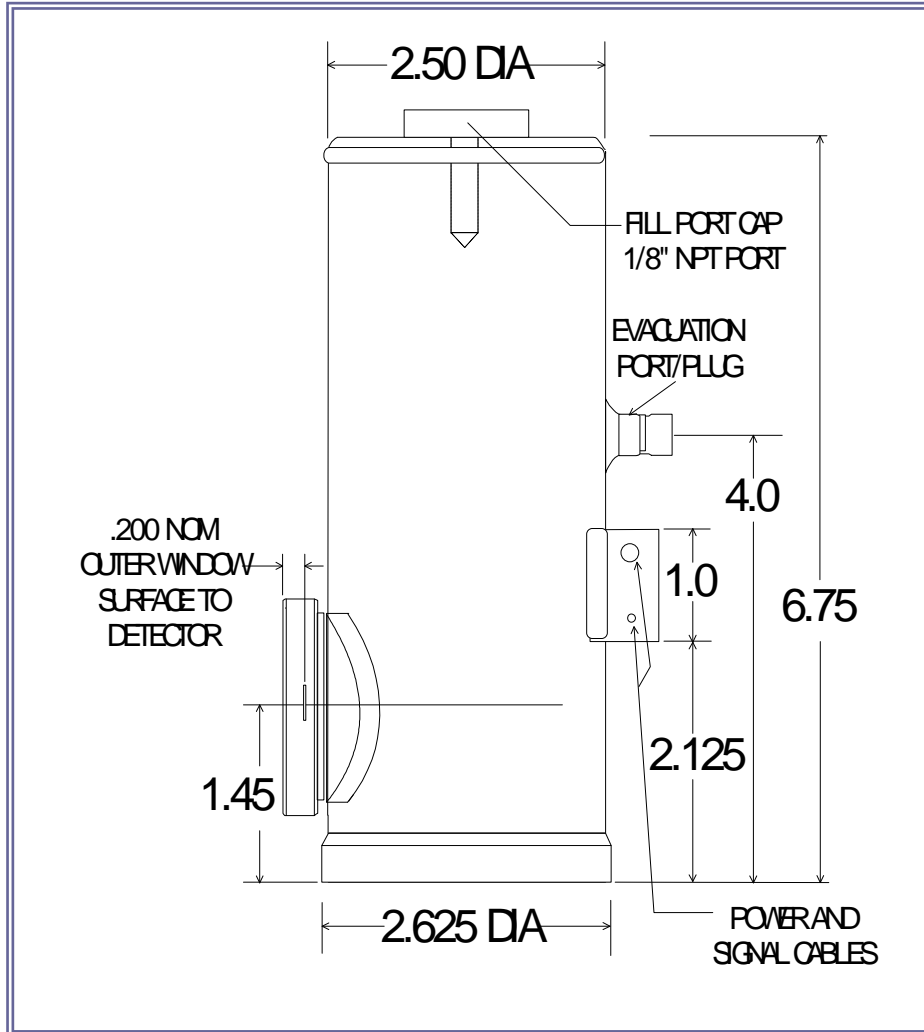


MCT SERIES CRYOGENIC PHOTODETECTOR/AMPLIFIER



Part No:
MCT10-040-E-LN

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	4 mm x 4 mm
Spectral Range	2 - 14+ um
Detectivity (D*pk)	2.5×10^{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	1.0×10^5 V/W HI ; 10^4 V/W LO, typ
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 on units purchased with optional PS-1 Low Noise Power Supply