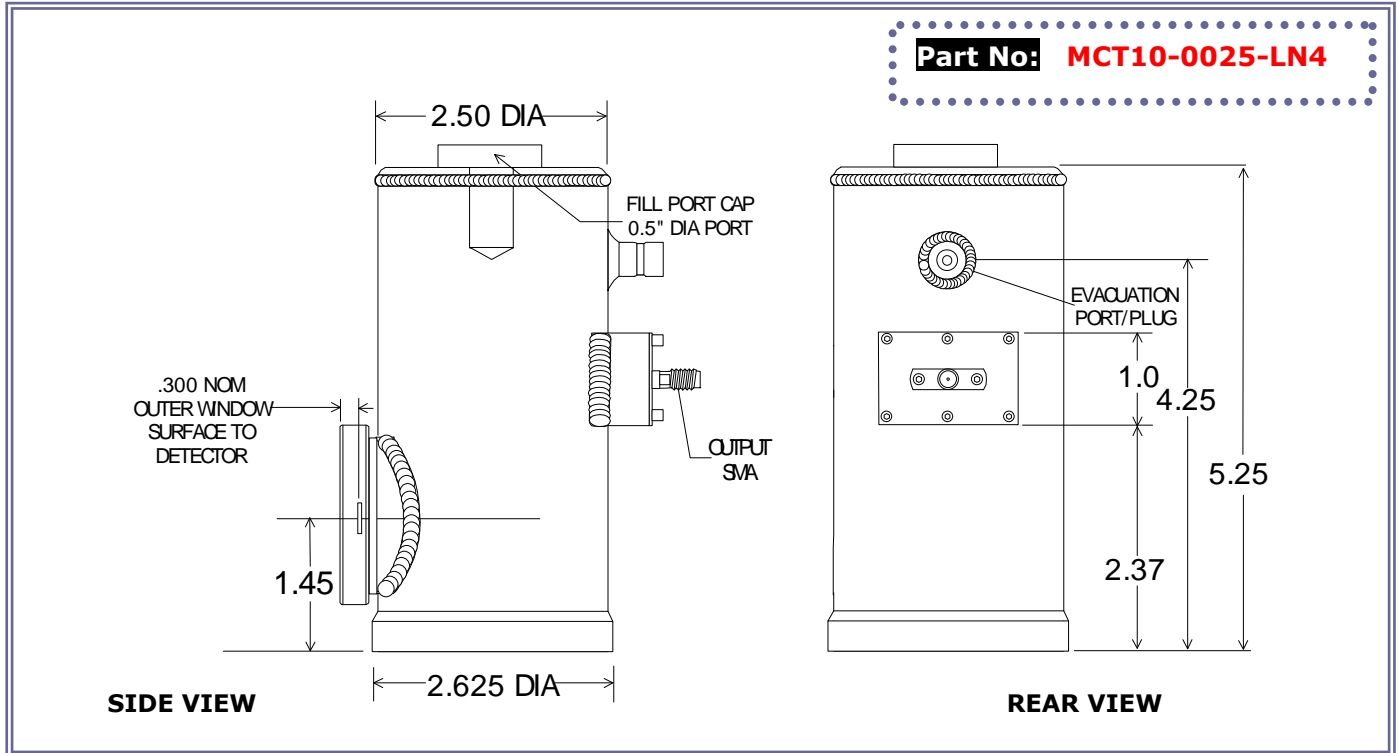


MCT SERIES CRYOGENIC DETECTOR



Application Note This unit is a high performance liquid nitrogen cooled HgCdTe photoconductive infrared detector in a re-pumpable metal dewar. A funnel is provided to assist with filling the dewar. This is best accomplished over a 2-4 minute period of continually pour filling until topped off. The detector is connected thru an SMA-type coaxial connector mounted on the backplate of the dewar. This plate is wired to the feedthru pins inside the shielded box, and is not a part of the vacuum space of the dewar. Standard connection is non-isolated from dewar body. A cryolab plug-type vacuum connector is used as the pumping port of the dewar. Re-pumping should not be necessary for several months after the original pumpout.

SPECIFICATIONS

Active Area	0.25 mm x 0.25 mm
Spectral Range	2 - 12 μm
Resistance	20 - 120 ohms
Bias Current	2 - 20 mA typ.
Responsivity @ pk	1.5×10^4 V/W typ.
Field of View	60° nominal
Detectivity (pk, 10kHz, 1Hz)	$> 5.0 \times 10^{10}$ cm-Hz^{1/2}/W
Dewar Hold Time	8 hours minimum with liquid N₂
Window	ARGE