



MCT SERIES CRYOGENIC DETECTOR

Part No: MCT20-010-LN/CUS
s/n 041213

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 back 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	1 mm x 1 mm
Spectral Range	1 – 20 μm
Resistance	20 ohms
Bias Current	15 mA nom.
Responsivity @ pk	320. V/W
Noise Voltage @ 10kHz	2.0 nV/Hz ^{1/2}
Field of View	60° nominal
Detectivity (pk, 10kHz, 1Hz)	1.6 x 10 ¹⁰ cm-Hz ^{1/2} /W
Dewar Hold Time	12 hours minimum with liquid N ₂
Dewar Type	Custom Down View
Window	KRS5