

Micro Miniature Refrigerators For Raman and Fluorescence Measurement

This system is designed for Raman and fluorescence measurements to be made over a wide range of temperatures. The Dewar has three windows, two for the entrance and exit of the exciting beam and one at right angles to this for observing the Raman or fluorescence radiation. The chamber and refrigerator are shown in the illustration.

In addition to the refrigerator and vacuum chamber, a temperature controller is needed, either manual or programmable; a source of dry nitrogen (99.998% purity); a filter dryer; and vacuum pump capable of maintaining a vacuum < 5 mTorr in the chamber. Other accessories that add to the convenience of operating the system are available from MMR.

Features

- ◆ Operating Temperature: 70 K to 730 K
- ◆ Temperature Stability: ± 0.1 K with K2000 Digital Controller
- ◆ Temperature Response: 1 K/sec
- ◆ Cooling Capacity: 250 mW at 85 K with nitrogen; 500 mW with Ar at 95 K
- ◆ Cold pad size: 14 mm x 10 mm
- ◆ Standard Window material: Fused silica
- ◆ Optional Window Materials: Sapphire, or Quartz.
- ◆ Standard Vacuum Chamber: Three-window Raman Spectroscopy chamber
- ◆ Optional Vacuum Chamber: Single-window chamber
- ◆ Weight of Vacuum chamber: 170 g (6 oz)



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