

Manifold Molecular Iodine Cells

(Product ID: I2M-5U, I2M-10U)

To create a sealed starved cell with a flexible set point, a glass cell with an attached cold-finger and vacuum port is constructed. The vacuum port and cold-finger include stopcocks. The cell is evacuated and cold-finger filled with Iodine is brought to the desired vapor pressure (cold-finger operating temperature). The stem between the cold-finger and cell is then closed by closing the stopcock, isolating the Iodine in the cell body and fixing the number density. The cell is then operated 10-20 °C above the cold-finger set temperature and the Iodine in the cell is a super-heated vapor with a set number density. The result is a molecular cell with a very stable absorption spectra.

Iodine-vapor cells with a manifold are 3-in.-dia, 5-in.-long or 10-in.-long Pyrex cells. Standard cells are manufactured with 1/4 grams of iodine (actual pressure determined by temperature of water cooling jacket at the time of operation). The cells feature an integrated Type T thermocouple and rugged aluminum housing. These cells are manufactured with a prescribed iodine partial pressure (specified by user at time of order). In addition, transitions can be pressure broadened with buffer gas supplied by user through a fill-port.

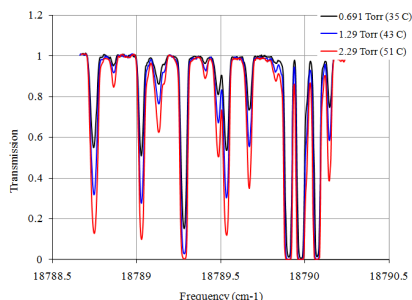
This unit is specifically rated for 240VAC, 50Hz power.



Packaged I2M-10 with thermocouples and heater

SPECIFICATIONS FOR I2M-5 AND I2M-10

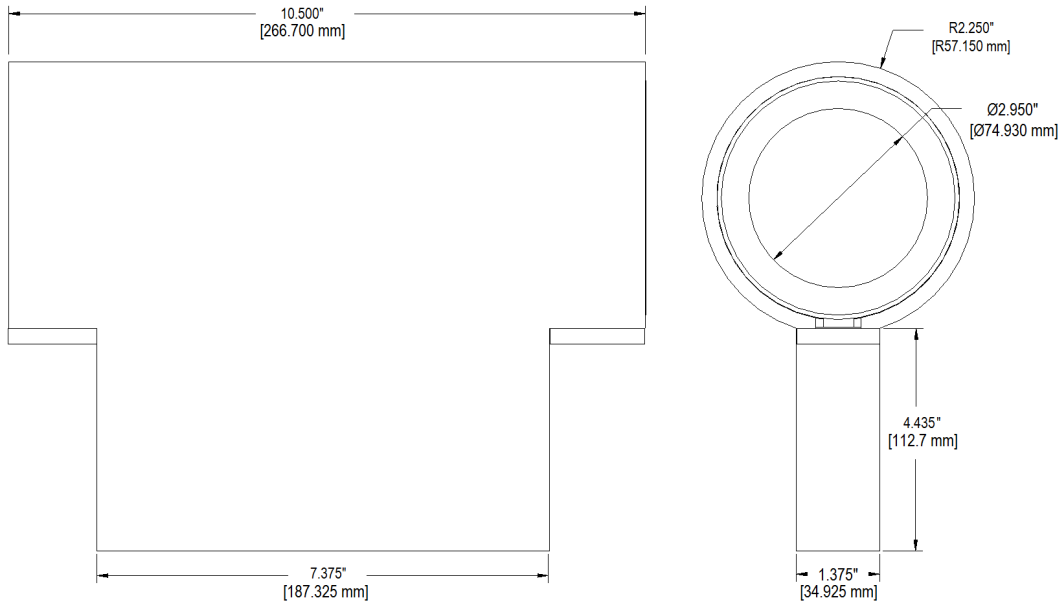
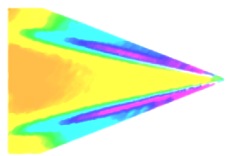
Length	125-mm or 250-mm
Diameter	76-mm
Housing	Anodized Aluminum
Mounting	¼"-20
Maximum Operating Temperature	130 °C
Set Point	30°C - 50°C
Thermocouple	Type T
Temperature Controller	Optional add-on
Input Power	240 VAC, 50 Hz
Warranty	1 year
ECCN	EAR99



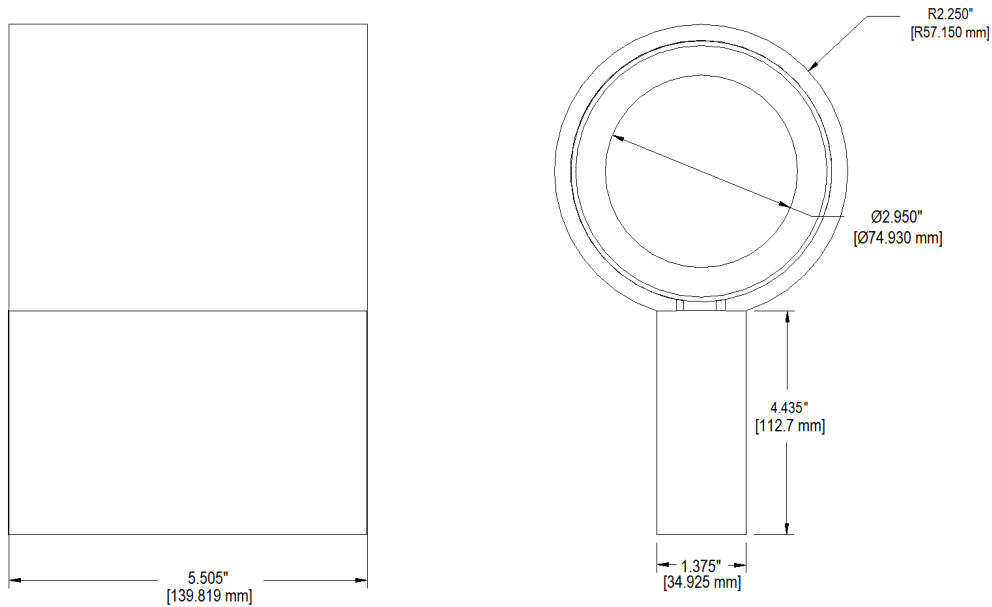
Transmission versus Frequency for 5-inch Iodine Cell at a range of cold-finger (vapor pressure) set points.



Profile of I2M-10 Cell Manifold



I2M-10



I2M-5