

Permanently Sealed Molecular Iodine Cells

(Product ID: I2S-5, I2S-10)

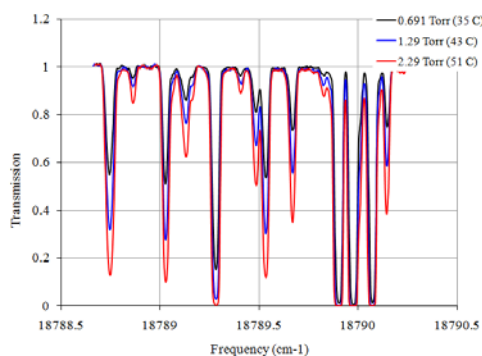
To create the permanently sealed starved cell, the cell is evacuated and cold-finger filled with iodine is brought to the desired vapor pressure (cold-finger operating temperature). The stem between the cold-finger and cell is then permanently sealed with a torch, isolating the iodine in the cell body 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.



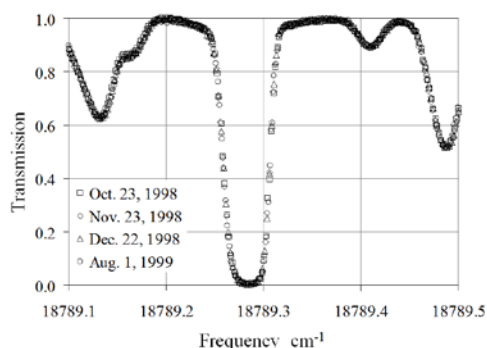
Permanently sealed iodine-vapor cells are 3-in.-dia, 5-in.-long or 10-in.-long Pyrex cells. The cells feature an integrated Type T thermocouple and rugged aluminum housing. These cells are manufactured with a prescribed iodine partial pressure (specified by user at time of order). In addition, the transitions can be pressure broadened with nitrogen partial pressure (specified at time of order). Both models are classified as EAR99.

SPECIFICATIONS FOR I2S-5 AND I2S-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 | 110 VAC, 60 Hz |
| Warranty | 1 year |
| ECCN | EAR99 |



Transmission versus frequency for 5-inch iodine cell at a range of vapor pressure set points.

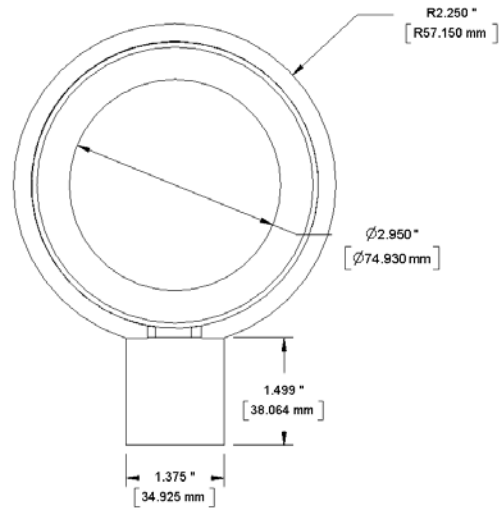
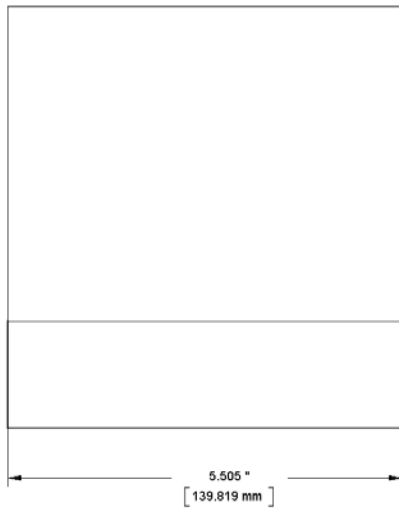


Long term stability of sealed iodine Cell

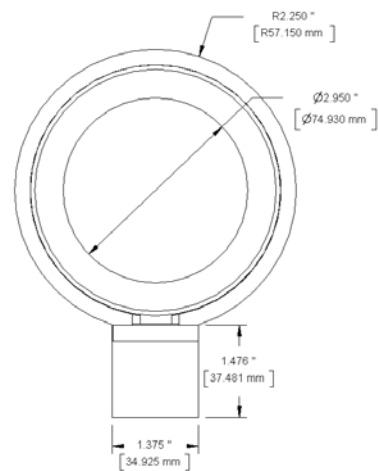
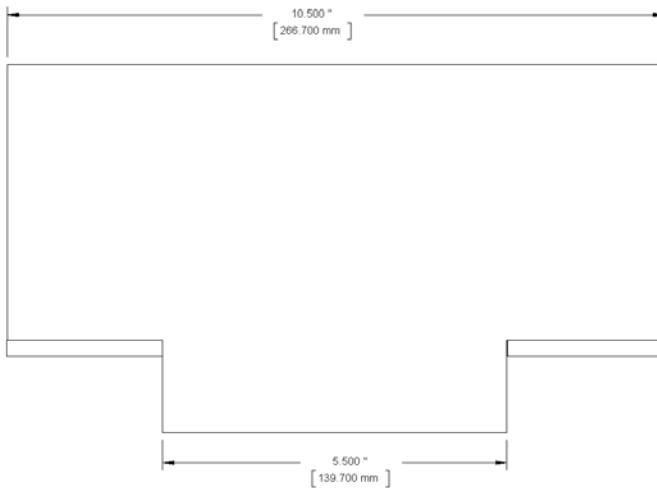
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I2S-5



I2S-10