

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.

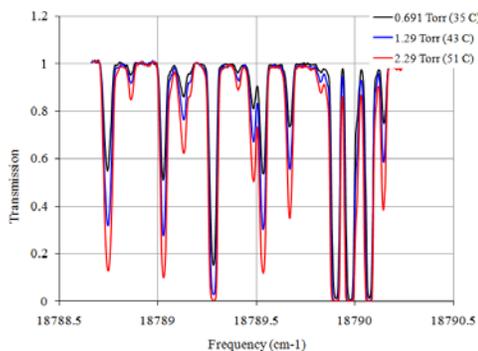
Permanently sealed iodine-vapor cells are 3-in.-dia, 5-in.-long or 10-in.-long Pyrex cells. These cells are manufactured with a prescribed iodine partial pressure (specified by user at time of order). In addition, the transitions can be pressure broadened with nitrogen partial pressure (specified at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



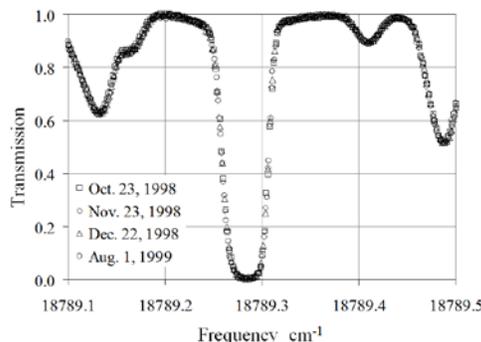
Packaged I2S-5 with integrated thermocouple and heating element in aluminum housing.

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

Innovative Scientific Solutions, Inc.
7610 McEwen Road, Dayton, OH 45459
Phone (937) 630-3012 Fax (937) 630-3015

email: issi-sales@innssi.com
web: www.psp-tsp.com

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