

## Mercury Calibration Source

Mercury calibration lamps are small, rugged, and easy to use. Because the lamps operate at low pressure, well-spaced, intrinsically narrow and bright Mercury emission lines dominate the output spectrum. Background between the lines is very low. The output wavelengths are known exactly and are ideal for spectral calibration. Single lines are easily isolated with optical filters for alignment or other applications. Closely spaced lines are very useful for testing the resolution of dispersive instruments.

Mercury spectral calibration lamps make excellent high intensity short wave UV sources too. About 90% of the total output is in the 253.65nm emission line. Appropriate UV eye safety measures are required. The visible lines are intense and useful for calibration of McPherson spectrometers.



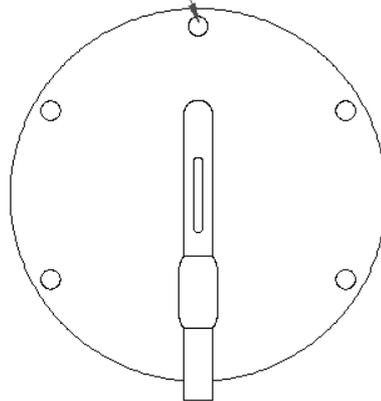
**Narrow, Discrete Spectral Lines | Excellent Stability | Long Life | Fits to McPherson 5" Slits**

Source	Low pressure Hg pencil-type lamp
Source Emission	Discrete, Narrow, Intense Line Emission
Typical Intensity at 253.65nm	4400 uW/cm <sup>2</sup> at 0.75inch distance
Image Size	approx 3mm x 20mm high
Power Supply	AC, 110V and 220V versions available
Rated Lamp Life	5000 hours
Size	5" dia x 1" long
Weight	1 lbs

The Model 625 Mercury calibration light source is available with vacuum tight mounting flanges for use with McPherson 5" vacuum slits as well as 6" Dia Conflat™ flanges. Please inquire.

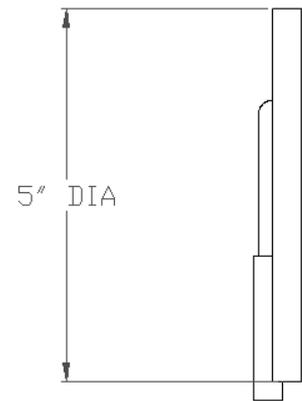


0.28" DIA THRU FOR 1/4-20 THD  
5 PLACES, ON 4.5" BOLT CIRCLE



MODEL 625 MERCURY PEN-RAY  
WAVELENGTH CALIBRATION SOURCE  
PART 8105-0625-0

LINE CORD



### Ordering Information

Part Number 8105-0625-0 = Model 625 Mercury Calibration Lamp w AC Supply, 110V (-1 for 220V)

Part Number 8105-0626-0 = Mercury Calibration Lamp w AC Supply on 5" vacuum flange, 110V (-1 for 220V)

Part Number 105-102157-0 = Mercury Calibration Lamp w AC Supply on 6" Conflat™, 110V (-1 for 220V)

### Useful References:

#### Irradiances or spectral lines in mercury pencil lamps

Joseph Reader, Craig Sansonetti, and J. Mervin Bridges

The irradiances of 37 spectral lines emitted by mercury pencil-type lamps were measured by comparison with calibrated continuum sources. The lines span the region 230 - 590 nanometers. For the 14 most prominent lines, the absolute irradiances should be useful for radiometric calibration at an uncertainty level of 15% (95% confidence). The ratios of the irradiance for this same group of lines are significantly more reproducible; they should be useful at an uncertainty level of 10%.

#### Wavelengths of spectral lines in mercury pencil lamps

Craig J. Sansonetti, Marc L. Salit, and Joseph Reader

The wavelengths of 19 spectral lines in the region 253 - 579 nanometers emitted by Hg pencil-type lamps were measured by Fourier-transform spectroscopy. Precise calibration of the spectra was obtained with wavelengths of Hg as external standards. Our recommended values should be useful as wavelength calibration standards for moderate-resolution spectrometers at an uncertainty level of 0.0001 nm.