# Features and Operation of Hollow Cathode Lamps and Deuterium Lamps


## Abstract

[illegible]

## The Hollow Cathode Lamp

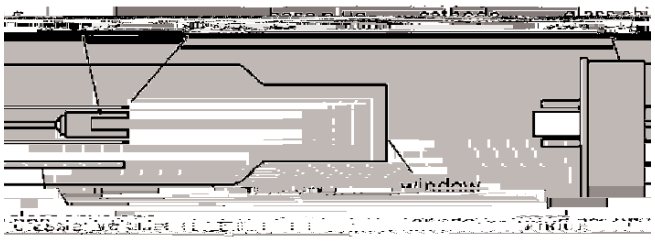


*Figure 1. Hollow cathode lamp construction.*

## Design Characteristics of the Hollow Cathode Lamp

### Cathode

### Gas Fill

### Anode

### Envelope

### Processing

## Hollow Cathode Lamp Operation

### Lamp Current

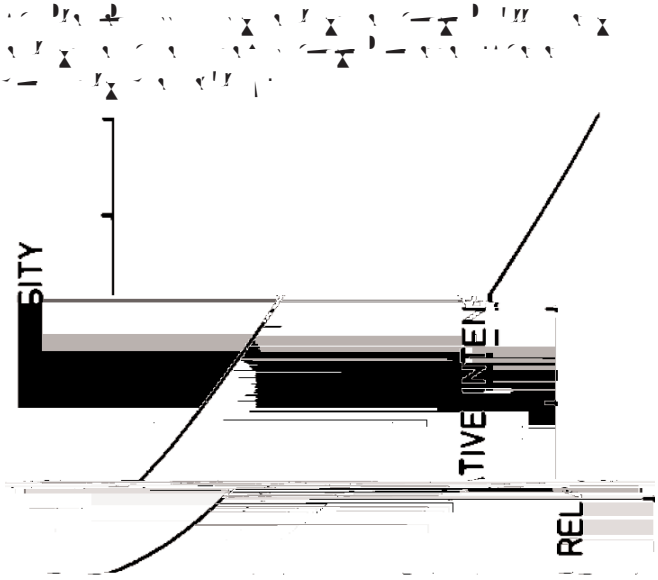


*Figure 2. Intensity as a function of lamp current for Cd at 228.8 nm.*

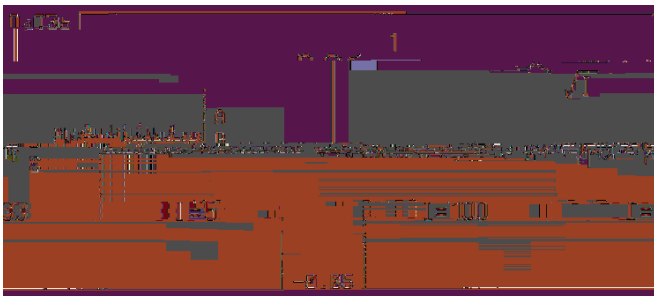

*Figure 3. Relationship between light intensity (I) and absorbance noise level (n) for Ca at 422.7 nm.*

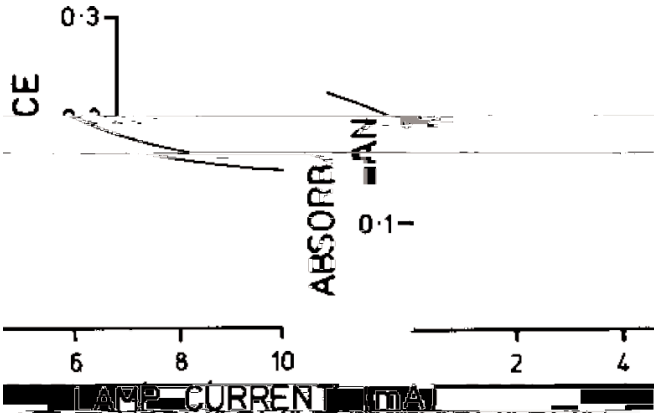


*Figure 4. Sensitivity as a function of current for Cd at 228.8 nm.*

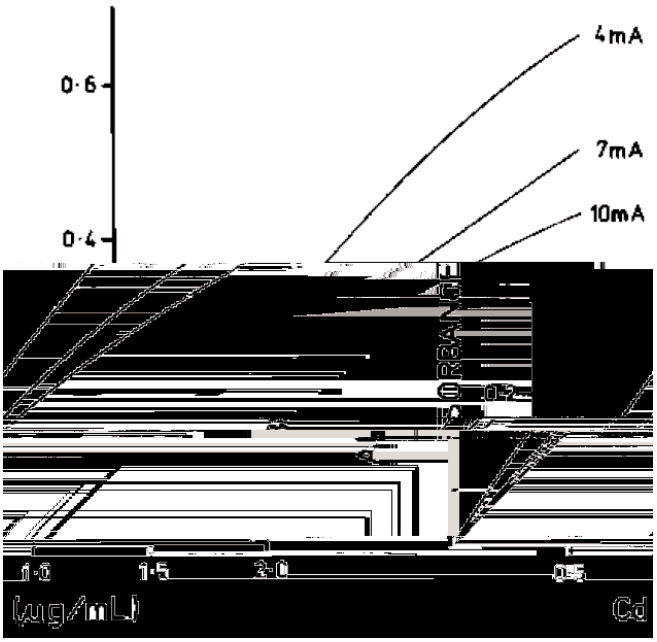


*Figure 5. Calibration graphs for a Cd hollow cathode lamp operated at various currents.*

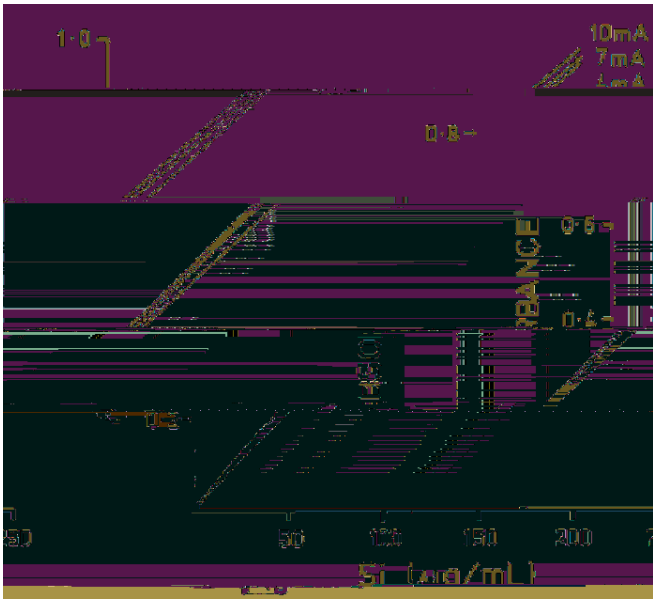


*Figure 6. Calibration graphs for a Si hollow cathode lamp operated at various currents.*

## Lamp Intensity

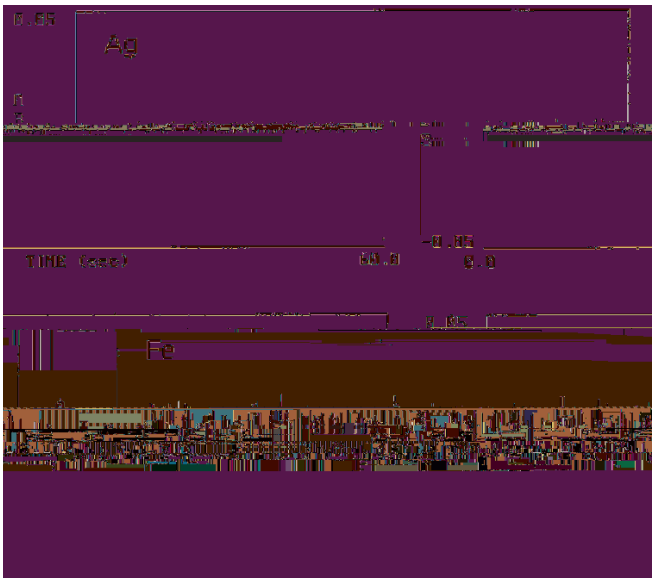


*Figure 7. Inherent noise levels of Ag and Fe hollow cathode lamps operated under recommended conditions.*

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