



- Robust sources of deep blue and ultraviolet light
- Output power to >130 mW
- Excellent TEM<sub>00</sub> beam quality

CVI Melles Griot is the world's largest manufacturer of helium cadmium (HeCd) lasers, which are efficient sources of deep blue and ultraviolet laser light. Our lasers offer the highest performance available anywhere, with guaranteed output power as high as 130 mW at 442 nm and 40 mW at 325 nm. Lasers are available in both single-mode (TEM<sub>00</sub>) and multimode configurations. OEM tube replacement service is also available.

#### DESIGN CONSIDERATION IN HELIUM CADMIUM LASERS

Cadmium, a metal, is a solid at room temperature. Therefore, for lasing to occur, it must be heated sufficiently to obtain and maintain the proper partial pressure of cadmium vapor in the discharge tube. The vapor is propagated through the system by cataphoresis (positive cadmium ions are transported by the discharge through the laser bore toward the cathode). Once the cadmium vapor leaves the bore region, it coalesces on any cool surface, lowering the partial pressure of helium by trapping it under a metal film.

In CVI Melles Griot helium cadmium lasers, current and cadmium pressure are tightly and independently controlled. The discharge tube is carefully designed with cold traps and protective discharges to ensure that the cadmium is confined to the appropriate regions and does not plate out or contaminate critical surfaces such as the laser mirrors or Brewster windows.

## Introduction to Helium Cadmium Lasers

#### THE RIGHT CHOICE FOR CRITICAL APPLICATIONS

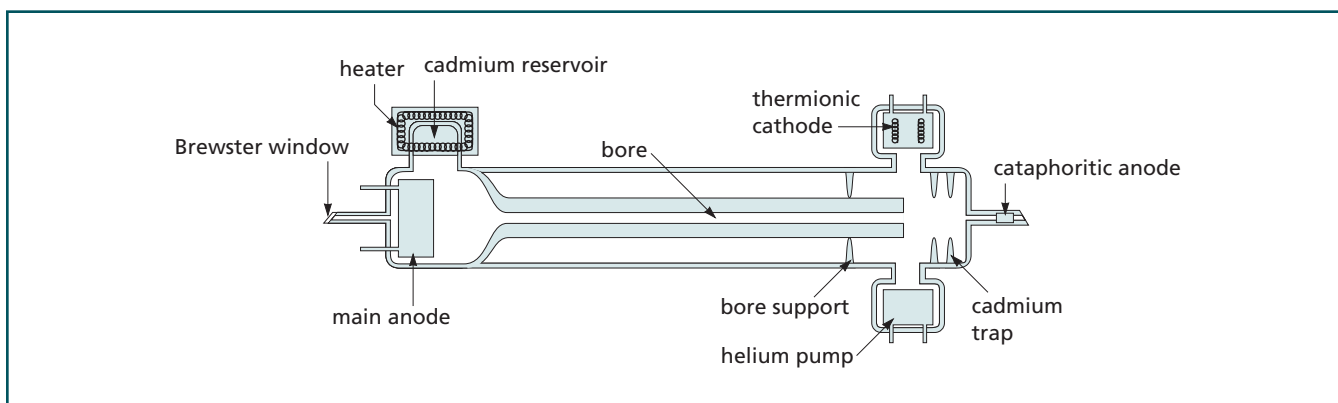
CVI Melles Griot manufactures rugged internal mirror designs which feature high power, fast warm up, and rock-solid stability. Whether in the laboratory or in an OEM system, CVI Melles Griot helium cadmium lasers are the best choice for your deep blue and ultraviolet applications. We are the leaders in the field of stereolithography and inspection.

#### Do you need ...

##### LASER SAFETY EYEWEAR

CVI Melles Griot offers a wide variety of laser-protection eyewear. The following items are specifically designed for ion laser applications, with an optical density of 7 from 193 nm to 532 nm.

- 16 LSK 007 (spectacle style)
- 16 LOG 007 (over the glasses style)



Schematic diagram of a CVI Melles Griot helium cadmium laser