

SVTA-EBS COMPACT E-BEAM



Description

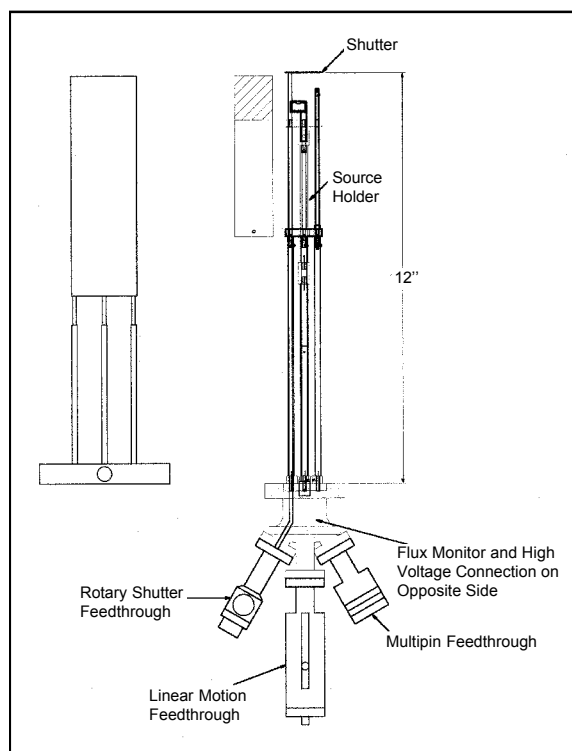
SVTA-EBS COMPACT evaporator is a very versatile source for depositing thin layers of Carbon, Silicon, Tantalum, Molybdenum, and most other refractory metals manufactured in wire form. Its exclusive design utilizes an electron beam power supply for electron emission and an integral flux monitor to regulate the deposition rate. The source material is typically a rod of 1-5mm in diameter. When held at a positive potential, it attracts electron emitting from the filament and is heated to evaporation temperature to produce a flux of atoms. A linear motion feedthrough provides adjustment of the source position. Alternatively, materials in chunk or powder form may be evaporated from a special crucible.

Specifications

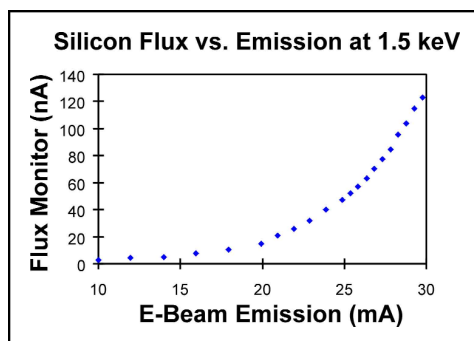
Maximum Power.....300 W
 Emission Current.....100 mA
 Maximum Temperature.....3000 °C
 Electrical Connectors.....Filaments: Amphenol Circular
 High Voltage: SHV
 Mounting Flange.....2.75" or 4.5" CFF
 Length.....12" (or Custom)

Typical Applications

- Silicon MBE
- Metallization
- Magnetic Thin Films
- Doping
- Interface Studies



Schematic drawing of a compact electron beam source showing linear motion feedthrough.



Flux monitor current as a function of emission current between tip and filament for a silicon rod.

E-Beam Source	Description
SVTA-EBS-275	12" Standard Compact Electron Beam
Electronics	Description
SVTA-EBS-PS	Power Supply, Controller and Cable
Add on Options	Description
SVTA-EBS-LF2	2" Linear Feed
SVTA-EBS-WCS	Water Cooling Shroud
SVTA-EBS-IS	Integral Shutter
SVTA-EBS-CR	Crucible Option