

Linear Evaporation Sources In-Line and Roll to Roll Deposition

Description

SVT Associates Linear Evaporation Sources are engineered for in-line and roll to roll processing for thin film solar cells or OLED manufacturing. Based on more than 15 years of effusion cell technology, the Linear Evaporation Source produces controllable deposition on wide area substrates.

The Linear Evaporation Sources are comprised of a bulk evaporator that is capable of temperatures greater than 1,500 °C and a linear distribution manifold that uniformly deposits material across the full length of the substrate. The innovative manifold design eliminates spitting of materials and prevents material defects. Changeable apertures are incorporated in the manifold that can rapidly be changed to optimize the flux profile.

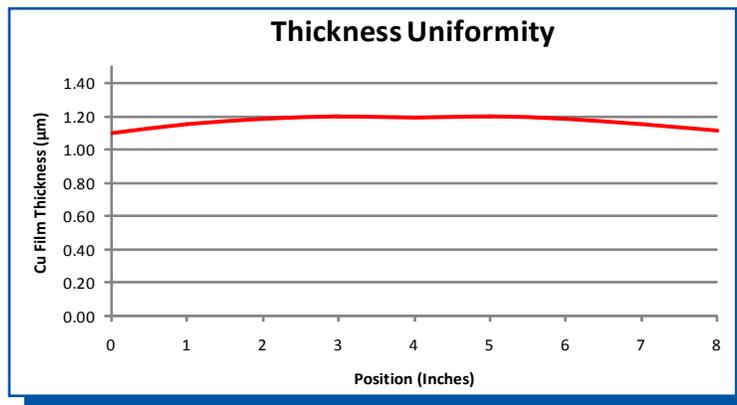
The independently controlled heated regions allow the user to fine tune the deposition process. An optional shutter can be integrated to the source for complete deposition control.

Features

- Distribution Manifold Provides Uniform Deposition Across a Large Moving Substrate
- Independent Thermal Zones for Precision Control
- Changeable Distribution Nozzles for Tailored Flux Profile
- Large Capacity Models for Long Growth Campaigns
- High Temperature Design Provides High Growth Rates



SVTA-300-LES: 300 mm Linear Evaporation Source with Simulated Cu Flux Distribution.



Uniformity data acquired for 200 mm wide sample at 200 mm source to sample distance.



Linear Evaporation Sources Specifications

Linear Evaporation Source Selection Guide

Model	Deposition Width	Material Capacity	Mounting Flange
SVTA-LES-300	300 mm	500 cc	6" (DN100) CF Flange Other Configurations on Request
SVTA-LES-600	600 mm	1,000 cc, 2,000 cc or 5,000 cc	10" (DN200) CF Flange Other Configurations on Request
SVTA-LES-1200	1,200 mm	2,000 cc or 5,000 cc	10" (DN200) CF Flange Other Configurations on Request

Performance Specifications

Maximum Bulk Evaporator Temperature	1,500 °C
Maximum Distribution Manifold Temperature	1,600 °C
Temperature Stability	± 0.1 °C
Typical Flux Stability	< 1%
Maximum Operating Pressure	5 x 10 ⁻⁵ torr
Deposition Uniformity	± 4% at 300 mm Source to Substrate Distance
Bake Temperature	200 °C
Thermocouples	Type C <i>Type K Available on Request</i>
Cool Down Time	< 120 Minutes
Electrical Connectors	Atmosphere Side Filaments: Amphenol Circular T/Cs: Omega Subminiature
Cooling Water Connections	2 x 1/4" VCR (Outlet and Inlet)
Maximum Water Pressure	80 psi
Water Flow Rate	500 ml/min

