

## LTE: Low-temperature evaporation

### Evaporation sources for organics deposition

#### Key Features:

- Choice of 1 CC, 2 CC or 5 CC capacities
- Highly stable deposition rates
- 80–600 °C temperature range
- Low thermal-mass for tight control
- HV, UHV and glovebox compatible
- Easy filling and maintenance
- Range of power supplies and controllers available

#### Overview:

Moorfield LTE sources are compact thermal evaporation sources that use infra-red technology for the deposition of organic materials.

Crucible materials are either alumina or glass (other options are available by special request). Crucible change/refill are easy, even through glovebox gloveports — an outer heat shield and ceramic top plate assembly are removed allowing for straightforward access. The ceramic top plate is available with various exit aperture sizes, enabling users to accurately define the deposition angle required.

All models are designed to have low thermal-mass in order to achieve fast temperature ramp rates and excellent PID loop control. Stability of circa  $\pm 0.1 \text{ \AA/s}$  is

achievable when used in conjunction with thin-film controller system equipped with an in-chamber quartz crystal sensor (also available from Moorfield).

The sources are gimbal mounted allowing for rotation and tilt. This allows for quick changes in deposition geometry, and also allows for source mounting from chamber side walls.

The sources can be mounted directly on a CF or ISO flange, nude, or on an M6 stud.

A full range of feedthrough and thermocouple flanges and accessories (e.g., heat sinks, shielding, etc.) are available for customers wishing to retrofit the sources. Please contact us for details.



Above: LTE-1CC source fitted into Moorfield MiniLab 026 system.



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## Models:

**LTE-1CC:** 1 CC charge capacity.

**LTE-2CC:** 2 CC charge capacity.

**LTE-5CC:** 5 CC charge capacity.

All with options of mounting and crucible types (alumina or quartz).

## Technical Specification:

**Materials:** All UHV-compatible stainless steel, quartz, alumina, oxygen-free copper, insulating ceramic.

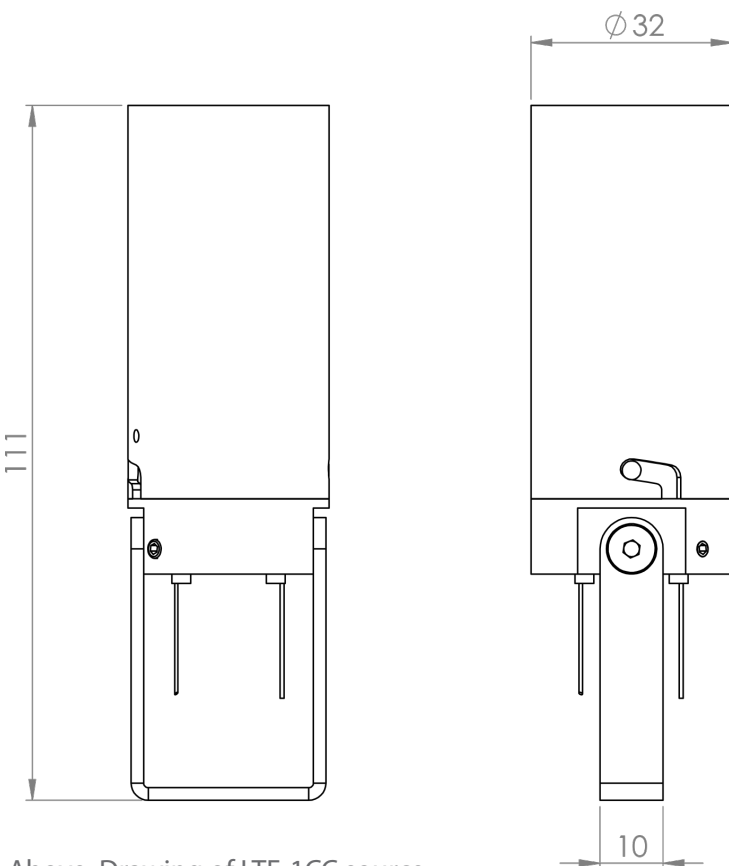
**Mounting:** Screw-in gimbal mount; M6 stud pillar; CF or ISO flange-mounted.

**Shielding:** Removable stainless steel outer heat shielding.

**Operating temperatures:** 80 to 600 °C.

## Applications:

- Organic electronics
- Organic light-emitting diodes (OLED)
- Organic field effect transistors (OFET)
- Organic photovoltaics (OPV)



Above: Drawing of LTE-1CC source.



Above: LTE source power supply/controllers also available (four-channel model LTEC-4S shown) — ask for separate brochure.

## Associated Products from Moorfield:

- LTE power supplies/controllers — ask for separate brochure
- Power/thermocouple feedthroughs
- Stainless steel chambers
- M307 (entry-level) evaporation systems
- MiniLab automatic/manual evaporation systems

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