
ORMA

Organic Evaporators

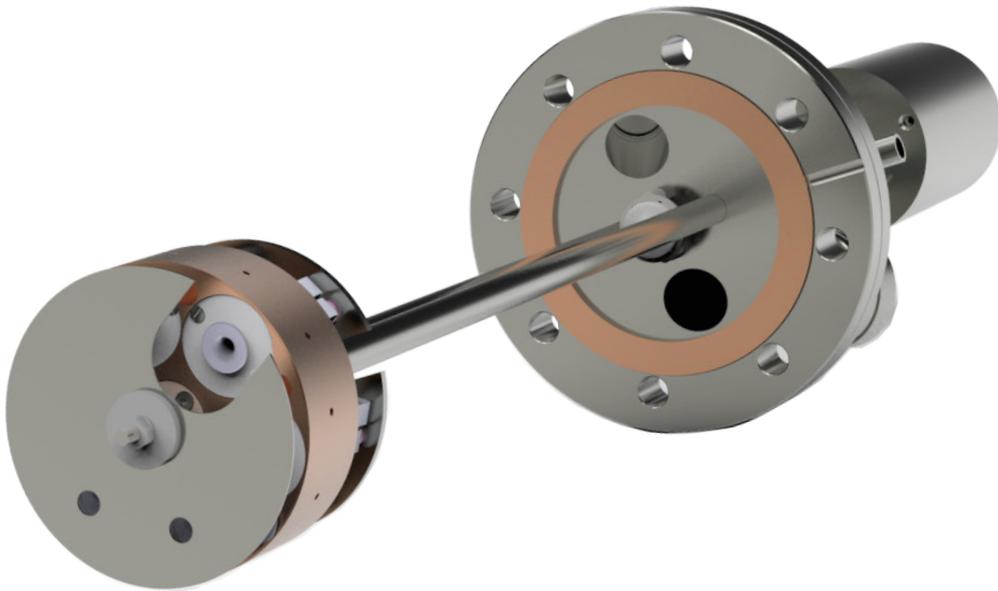
Organic Layer Growth

Molecular Engineering

Surface Science

Epitaxial Film Growth

Electronic Device Doping



Technical Information

The MANTIS ORMA (ORganic MAterials) source is perfectly designed for deposition of very thin coatings, for organic materials with a high degree of precision ranging from submonolayer to continuous films.

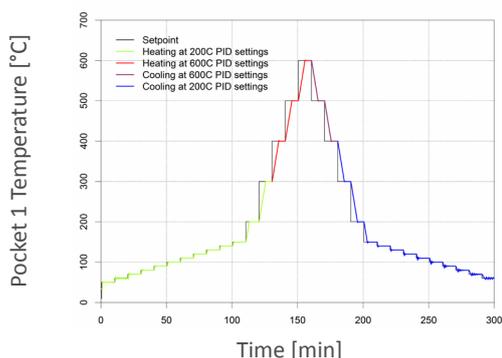
The source has six pockets, which allows the user to evaporate multiple materials simultaneously, the evaporant is placed inside a quartz crucible surrounded by a filament. Heating of the crucible is achieved by passing an electrical current through the filament which heats up the evaporation material. The ORMA provides continuous heating of material up to 600°C.

The temperature inside each pocket is individually monitored by a thermocouple (type K) and is controlled via a dedicated PID controller, in this way a material is evaporated at constant temperature and a stable flux of evaporated material from the crucible towards the substrate should be expected.

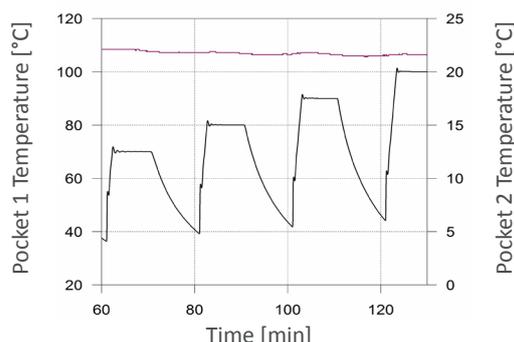
The ORMA is optimised for evaporation over a temperature range of even below 50°C and up to 600°C and its temperature stability at optimal PID settings is more desirable than 0.05°C.

The entire source assembly is water cooled to avoid any temperature cross-talk between the individual crucibles. The water cooling of the ORMA source is very efficient, even when operating for extended periods of time at high powers, resulting in a imperceptible effect on the chamber base pressure.

The crucible capacity is 6 x 60mm³, which makes the ORMA source advisable for the deposition of thin films and functionalisation of surfaces.



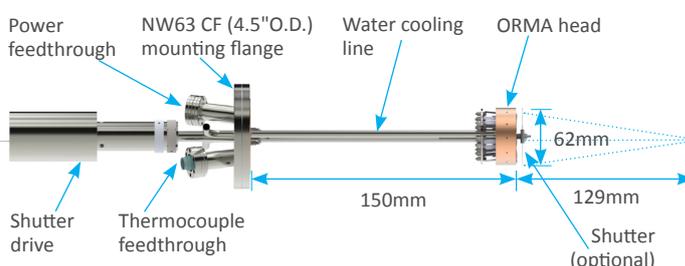
ORMA temperature response curve with PID settings optimised for the low and high ends of the temperature range.



Verification of no thermal cross-talk between ORMA pockets.

Layout Schematics

Focal length: 129mm



Mounting flange	NW63CF (4.5" O.D.)
In-vacuum length	150mm
In-vacuum diameter	62mm
Number of pockets	6
Co-evaporation	Yes
Maximum temperature	600°C, PID control
Crucible capacity	60mm ³
Crucible material	Quartz
Power	10W/pocket
Power supply	Single phase, 100-240VAC, 50/60Hz
Cable length	5m
Shutter	Integral manual or motorised shutter (optional)
Cooling	Minimum water flow of 0.5 l/min

For further information please contact:
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www.mantisdeposition.com