### **SPECTROS**<sup>®</sup>

## Organic Material Deposition System



# Kurt J. Lesker® Company PROCESS EQUIPMENT™ DIVISION

#### **Applications**

- · Organic Electronics and Photovoltaics (OPV)
- · OLED Lighting and Displays
- · Integrated Smart Systems
- · Metal Cathode Deposition
- Thin Film Batteries
- MEMS/NEMS

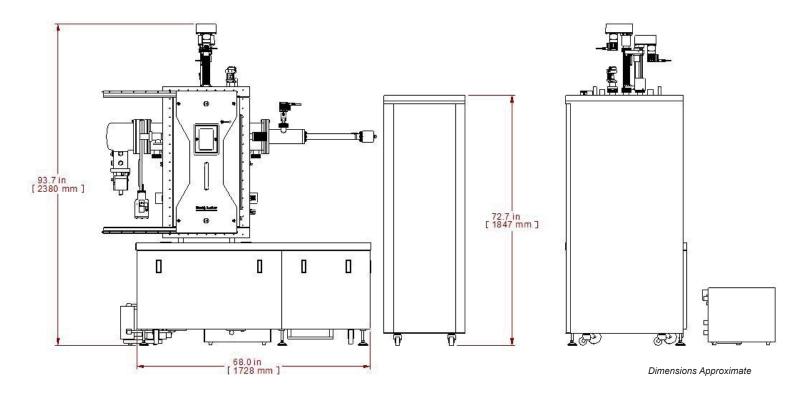
#### **Features**

- · Optimized for organic material deposition
- Up to 10 LTE sources; 1cc, 10cc or 35cc capacity
- Host to dopant ratio 100:0.1
- Up to 3 thermal evaporation sources
- Substrate shutter
- Automatic substrate, mask storage and exchange
- Glovebox interfaceable design with sliding front door and hinged rear door
- · KJLC eKlipse control software
- Rate control resolution 0.05Å/s
- · Recipe based PC based system controls
- Cryopump high vacuum pumping
- · 2-position gate valve

#### **Options**

- Wedge tool for shaped film growth
- Co-deposition
- · Electron beam source
- · Twelve source thermal evaporation source array
- · Caesium, Selenium, or HTE source
- Load lock chamber
- · Plasma clean
- · 3-position gate valve
- · Substrate rotation, heating and cooling
- · Ellipsometer ports
- · KJLC adaptor box and 2-port or 4-port glovebox
- Turbomolecular pumping
- Datalogging

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#### **Specifications**

Process Chamber	UHV grade, 304 stainless steel, 18" width x 21" deep by 37" tall
Framework	Steel construction, enclosed panel base with open chamber access, fully enclosed electronics cabinet
Vacuum Pumping	Brooks 1500 l/s cryo pump with oil-free backing pump standard (8x10 <sup>-8</sup> mbar base pressure)
Vacuum Valves	VAT 2-position pneumatic HV valve. Optional VAT 3-position pneumatic HV valve. All others are KJLC HV valves
Pressure Measurement	Oerlikon Leybold wide range (10 <sup>-1</sup> - 10 <sup>-10</sup> mbar), readout on system control panel
Vacuum Interlocks and Venting	Automatically sequenced vent control & vacuum interlock for process chamber
Deposition Uniformity	≤±5% on a 8" (200mm) diameter or 6" (150mm) x 6" (150mm) Si wafer with a 5mm edge exclusion as measured on an AlQ3 or Al film of >200nm thick
Low Temperature Source	KJLC design low temperature evaporation (LTE) source for controlled deposition of materials up to 600°C
Substrate Platen	Platen for up to 8" (200mm) diameter or 6"(150mm) x 6"(150mm), available with 20 rpm rotation, substrate heating up to 350°C, cooling to -10°C, and substrate bias. 5-shelf cassette for substrate and mask storage with exchange
Film Thickness Control	Film thickness and deposition rate control enabled via system software and controller (no 3 <sup>rd</sup> party hardware required).
System Control	KJLC eKlipse software PC-based HMI manual computer control, with optional recipe control and datalogging
Required Power (typical, based on options)	400VAC, 3Ø, 32A, 50/60Hz, 5-wire (3Ph+N+E)
Compliance	CE, optional CSA and UL
Warranty	12 months upon receipt, extended warranty is available at additional cost

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## Kurt J. Lesker Company

www.lesker.com

Kurt J. Lesker Company United States 412.387.9200 800.245.1656 salesus@lesker.com Kurt J. Lesker Canada Inc. Canada 416.588.2610 800.465.2476 salescan@lesker.com

Kurt J. Lesker Company Ltd. Europe +44 (0) 1424 458100 saleseu@lesker.com Kurt.Lesker (Shanghai) Trading Company 科特·莱思科(上海) 商贸有限公司 Asia +86 21 50115900 saleschina@lesker.com

