SU-8 mold station

BlackHole Lab

After several years of research and test, we found a well-thinking set which is working together to give the best answer for microfluidic fabrication. But we are not stopping here ad we always improve or adapt the offer to keep us at the cutting edge of the technology.

We have done the choice to gather numerousPhD inside the compagny to understand your needs and concerns. When dealing with microfluidics, we know the difficulties you may encounter at every step of the microfabrication process. Numerous prestigious labs already trust us for their microfluidic applications, so you can take advantage of our expertise with complete confidence.

Customization

We adjust the offer, together, to be fine-tuned to your needs. Each facility can also be sold individually and/or can be customized according to your specific needs.

Guidance

More than advices on your equipment we are always pleased to discuss about scientific approach, putting at your disposal our experience.

Our expert team

We ensure a clean installation of the facilities in your lab. We also train your team and give you our tips : don't waste any more time with numerous trials and errors. Within a week you will be ready to begin the fabrication of your own chips with serenity.

BlackHole·Lab

They trust us

FEATURES

SU-8 MOLD STATION

Our benchtop SU-8 photolithography station includes everything you need to fabricate molds for microfluidics in your lab and test new experiments fast.

A TURNKEY OFFER

Programmable hot plate

Programmable spin coater

Programmable UV lamp...

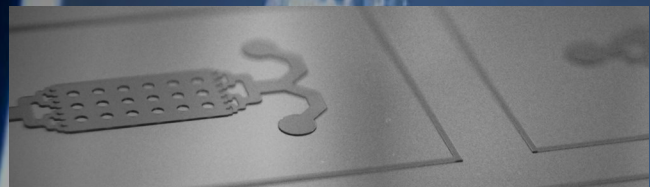*All chemicals for photolithography (SU-8, SU-8 developer, TCMS, Isopropanol, Acetone, etc.) and all associated accessories (Silicon wafers, tweezers, etc.) are included.*

BENEFITS

- Reach the same pattern resolution as in a clean room

- Get strong photoresist patterns for numerous future PDMS moldings

- Work with robust processes which enable easy reproducibility

- Fabricate your molds without initial knowledge in microfabrication

- Get the best equipment to ensure your facility a long lifetime

Each pack can be adapted to your laboratory and technological requirements. We can provide quote for special featured pack however, we do not provide separated quote for individual equipment.

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Technical datasheet

Major strengths

- Designed specifically for ease-of-use

- Simple to program from the operator panel or your PC

- Ability to allow process inputs from external sources

- Designed specifically for continuous process development

- Operational statistics stored continuously & permanently

- Easy to clean

A device adapted for Soft-lithography applications

- Its compact size with the little panel control attached make the device really movable.

- The product has been widely use to resin coating.

- The lid on the lid enables to do dynamic coating.

Safety & protection

- Complete electrical isolation from the operator, fool-proof door interlock, and UL and CSA approval of components assure many years of safe, trouble-free performance.

- Interlocks prevent rotation when the vacuum switch has not been engaged and when the lid is open.

- System are CE and RoHS compliant, and all certificates are sent with each system.

Warranty

Warranty 1 year.

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▶ Spin coater

FEATURES

SPIN COATER system

This spin coater is compact and packed with advanced features. The spin processor system will accommodate up to ø150mm wafers and 5" × 5" (127mm × 127mm) substrates. It is perfectly fine-tuned to do controllable and repeatable resin layer.

SPECIFICATIONS

Weight	12.7 kg (28 lbs)
Power	300 W
Power supply	95-240V ; 47/63 Hz
Dimension (HxWxD)	303x380x380 (in mm)
Need vacuum	20-28 inches Hg
Need nitrogen or CDA	60-70 PSI (4-5 bar)
Round per minute range (RPM)	From 1 to 12 000 RPM
Wafer size	Up to 6 inches

▷ # Hot plate

BLACKHOLE LAB HOTPLATE

Major strengths

- Temperature ramp to heat up and cool down.

- A good temperature uniformity.

- A slowly natural cool down.

- Microprocessor display maintains consistent temperature.

- RS232 port outputs time count, temperature and set point directly to your PC.

A device adapted for Soft-lithography applications

- Its aluminum top plate and its great heating surface area enables to have a wide enough zone where the temperature is homogenous for efficiently bake the resin on a 4 inches wafer.

- The temperature ramp enables to reduce the mechanical stress inside the resin layer.

- The programmable tools enables to do long resin bakes without staying front the device.

Safety & protection

- Walk-away timer shuts off heating after a preset userdefined interval.

- A hot top warning might protects from accidental burns when heating surface is above 50°C (122°F).

Warranty

Warranty 1 year.

BlackHole·Lab

They trust us

▲ **FEATURES**

Digital hotplate

Ensure accurate and stable temperature set points with microprocessor-controlled. Digital Hotplate, which feature electronic feedback. An aluminum top for a better temperature homogeneity. The device enables to do temperature ramp for heating and cooling down. Make your life easier with its programmable controls.

▲ **SPECIFICATIONS**

Weight	8kg (17,6 lbs)
Power	600 W
Power supply	110V or 230V 50/60 Hz
Dimensions (HxWxD)	150x250x350 (in mm)
Heating Surface Area	204x204 (in mm)
Top plate Material	Aluminum
Temperature range	Ambient +1°C to 450°C
Temperature resolution	1°C

Technical datasheet

Majors strengths

- A perfectly monochromatic exposure over the wafer surface area, with a bandwidth lower than 10 nm.

- Cold UV exposure.

- Divergence angle of the light < 2°.

- A strong power density.

- Long LED lifetime : more than 10 000 hours equivalent to 8-10 years of use.

- User-friendly touch screen interface for exposure cycles programming (continuous or cyclic exposure).

- No warm-up time required.

- Computerized control of UV source intensity adjustment is intuitive and straight forward.

- Automated wafer loading and unloading system.

- Low power consumption.

- Usable with glass and plastic mask.

A device adapted for Soft-lithography applications

- With 2µm resolution, the device is particularly well tuned for softlithography applications.

- The exposure in flash mode enables to reduce the internal mechanical stress.

- Its little size enables to install it everywhere you want, especially out side a clean room.

Safety & protection

The device is not heating and the UV light is kept inside without injuring for the user.

Warranty

Warranty 1 year.

BlackHole·Lab

They trust us

▷ UV Lamp

FEATURES

UV LED system

This UV system is a UV LED exposure and masking system with available light sources at wavelengths of 365 nm or 385 nm.

This is a very compact table-top system capable of exposing a wafer surface area of up to 4 inches in diameter. This UV system is compatible with hard (physical) or soft (proximity) masking contacts, and features variable mask to substrate distance control.

SPECIFICATIONS

Weight	8,2 kg (18 lbs)
Power	180 W
Power supply	110V or 230V ; 50 Hz
Dimension (HxWxD)	260x260x260 (in mm)
Emission spectrum	365 nm ± 5 nm / 385 nm ± 5 nm
Resolution	2 µm
Illumination UV power	23,2 mW/cm² ± 10%
Exposure time	From 1s to 18 hours
Time resolution	1s
Number of memorized cycles	10