XENON™ S-1000

Benchtop Sintering System

The XENON S-1000 system consists of a table top controller and power supply, sintering chamber and an air cooled lamp housing. The controller provides all power and user control of the flash lamp mounted in an air cooled lamp housing. The energy into the flash lamp is user controlled by adjusting the lamp voltage. The S-1000 can be ordered with different configurations.

FEATURES

- Adjustable exposure intensity
- Exposure area options
- Sintering Chamber
- Room temperature process
- Sinter on heat sensitive materials: PET & Paper
- Pulse duration 520 µs

Lamp Housing Options

Three flash lamp housing options are available with optional attached sintering chambers. Selection is based on desired curing area and user adjustable pulse energy range. The same controller is used with both lamp housings.

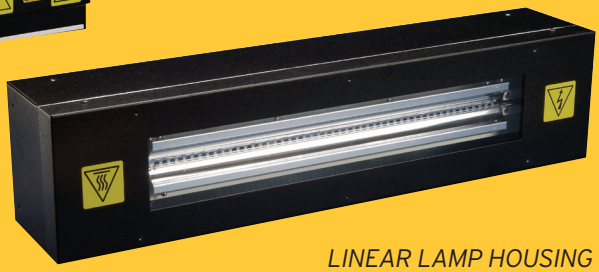
Spiral Lamp Housing

The LH-910 spiral lamp housing provides a curing area of 7.6 x 7.6 cm at a distance of 2.5 cm from the lamp housing window. An optional lamp chamber, model LC-915 integrates the LH-910 optical source to provide a light blocking chamber with an adjustable platform to place samples. The height of the sample platform can be user adjusted from 2.5 to 7.5 cm from the lamp housing window. The chamber access door has an interlock to prevent the lamp from flashing when open.

Linear Lamp Housing

The LH-840 linear lamp housing provides a curing area of 1.9 x 30.5 cm (0.75" x 12"). The flash lamp is mounted inside the housing with provisions for external air cooling.

SPIRAL LAMP HOUSING
Model LH-910
Shown with model LC-915 chamber



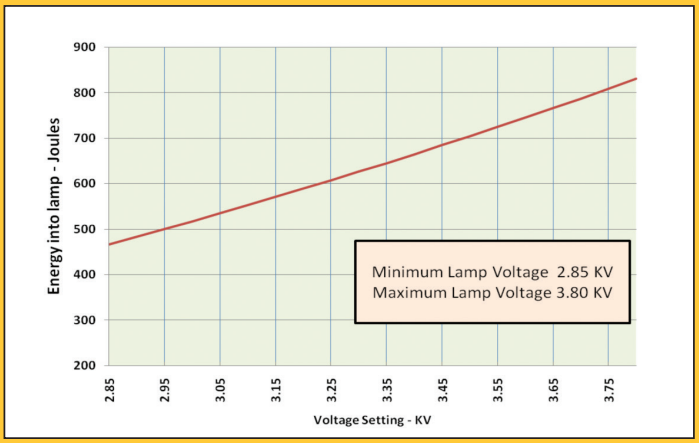
LINEAR LAMP HOUSING
Model LH-840

Linear Stage

The XENON linear stage (model -845) integrates the LH-840 optical source to provide a single axis linear motion for area sintering applications. The sample tray is 35.6 x 45.7 cm (14" x 18") with a treatment area up to 30.5 x 30.5 cm (12" x 12"). The linear stage offers precise adjustment for the speed of the sample up to 2.5 cm/s (1"/s) or 1.5 m/min (5'/min). The height of the sample from the lamp can be adjusted up to 5.5 cm (2.25") starting at a distance of 1.3 cm (0.5") from the lamp window. The focal plane for the lamp housing is approximately 2.5 cm (1") from the lamp window. A stepper drive allows for precision staging of the sample with digital control of the speed and pulses. The linear stage has internal interlocks for door and light shielding for safe and easy usage.

Pulse Energy

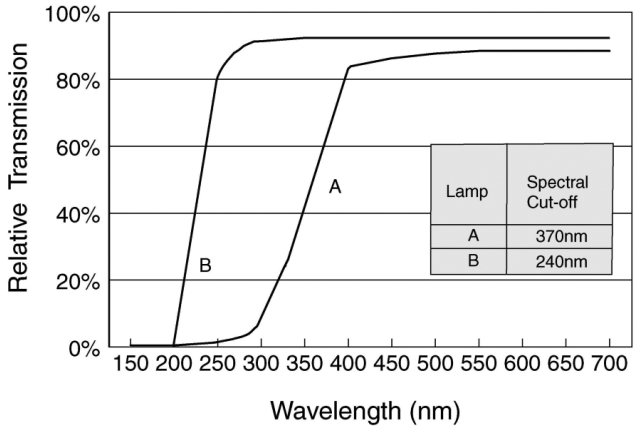
Pulse energy is controlled by adjusting the lamp voltage as shown in graph 1 and 2. It is important to note the recommended operating voltage range.



XENON **S-1000** Benchtop Sintering System

Lamp Spectra

The XENON flash lamp produces a broadband spectrum suitable for materials that absorb UV light from 190 to 1100 nm. Lamps are available with two different spectral cutoffs, as illustrated in graph 3, producing unique wavelength properties suitable for specific types of substrate materials. Both lamp types do not produce ozone.



Specifications

User Controls		
Mains voltage	ON/OFF	
High voltage[1]	ON/OFF	
Manual flash trigger mode	OFF/CONT/BURST	
Lamp select[2]	Lamp A / No Lamp / Lamp B	
Continuous flash trigger mode	START/STOP	
Lamp operating voltage[3]	Spiral Lamp: 2.85 KV - 3.80 KV	Linear Lamp: 2.25 KV - 3.80 KV
Programmable timer	1-999 seconds in 1 second interval	
Pulsed Light		
Power output to flash lamp	2300 Joules/second, max	
Pulse rate	1.8 pulses/second max, factory set	
Pulse duration	520 µs	
Dose[4]	Spiral Lamp: 4.0 J/cm^2	Linear Lamp: 4.9 J/cm^2
Pulse energy safe operating range[3]	Spiral Lamp: 465-830 Joules/pulse	Linear Lamp: 290-830 Joules/pulse
Controller Cooling	Internal fan, continuous ON	
Power Input	40.64 cm x 274.3 cm (16" x 108")	
Controller	1-phase 200-240 Vrms, 50/60 Hz. 30 amps, max	
Mains power cord	2.4 meters (8 feet)	
Controller Outline Dimensions (HxWxL)	226 x 480 x 706 mm (8.8" x 18.9" x 27.8")	
Controller Weight	39 kg (87 pounds)	
Operating Environment		
Temperature	0°C - 40°C (32° - 104°F)	
Humidity	10% to 90% relative humidity (non-condensing)	

1. There is a 5 second delay after the HV ON switch is turned ON. The HV light will indicate when power is ON.
2. System may be configured with two lamp housings. Consult with factory for information on this operation.
3. Pulse energy is set by adjusting lamp voltage using potentiometer located at rear of controller.
4. Measured @ 2.54 cm (1.0") from lamp housing window.

Specifications subject to change without notice.

XENON™
The Pulsed Light Experts

XENON Corporation
37 Upton Drive
Wilmington, MA 01887-1018

Telephone 978-661-9033
Toll Free 800-936-6695 (U.S.A. only)
Fax 978-661-9055
Web www.xenoncorp.com