



Saturn™ DUV Lamp Subsystem Electrodeless 10 kW DUV Light Source

The fully integrated Saturn™ DUV (Deep Ultra Violet) Lamp Subsystem from Energetiq Technology provides maximum short-wavelength DUV light for uniform illumination across a 300mm wafer or substrate in cleaning and photoprocessing applications. Short-wavelength DUV light provides energy for thin-film and surface processes without electrical charge or heating damage.

The Saturn lamp subsystem uses a unique inductive coupling technology* to drive an electrical current in a Xenon/Mercury plasma located inside an electrodeless toroidal bulb. The electrical current heats and sustains the plasma, causing a high intensity emission of DUV radiation. The proprietary coupling technique, in conjunction with the particular gas mixture chosen by Energetiq, lead to maximum DUV output at wavelengths down to 170nm.

The Energetiq Saturn lamp subsystem provides the highest power density available today at the lowest cost of ownership. The Saturn subsystem is a compact integrated package that features an on-board power supply, integral water cooling to avoid cleanroom-unfriendly forced-air cooling, and recirculating nitrogen cooling to eliminate toxic ozone production. In addition, the long-life low-temperature bulb minimizes wafer or substrate heating, allowing greater process flexibility.

About Energetiq.

Energetiq Technology, Inc. is a developer and manufacturer of advanced short-wavelength light products that enable nano-scale structures and products. The Energetiq team combines its deep understanding of the high power plasma physics needed for short-wavelength light generation with its long experience in building rugged industrial and scientific products. The result is that users can expect the highest levels of performance combined with the highest reliability.

* Patent Pending



Features & Benefits

- High Intensity 10 kW DUV Lamp
- Unique Inductive Coupling Technology
 - More short-wavelength DUV
- Long-life Electrodeless Toroidal Bulb
 - >500 mW/cm² from 170-400nm
- Uniform Illumination of 300mm Wafer
- Low Bulb Temperature
 - Minimizes wafer heating
 - Increases process flexibility
- Fully Integrated Subsystem
 - All water cooled
 - No ozone production
 - Integrated power supply
 - Integrated DUV reflector for max. DUV output

Applications

- UV Cleaning
- Photoresist Processing
- Research



Energetiq Technology, Inc.
7 Constitution Way
Woburn, MA 01801
Phone: 781-939-0763
Fax: 781-939-0769
www.energetiq.com

Specifications are subject to
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