

Lithography and Via Generation

High-Throughput, Large-Area Patterning System for Electronic Modules

The Anvik HexScan™ 2150 SXE patterning system represents a revolutionary advance in large-format lithography and via generation systems. It offers the unique combination of high-resolution *projection* imaging and large-area substrate handling, making it the ideal patterning tool for high-volume, cost-effective production of multichip modules and printed circuits. With its excimer laser illumination source emitting 40-50 watts of UV radiation, this low-cost system serves both as a volume-production resist lithography tool, and as a high-speed, batch via generation system for dielectric layers.

Large-Format Substrate Handling

- Designed for projection patterning of substrates of sizes up to 460 x 610 mm (18 x 24 inches)
- Capable of handling substrates of a wide range of thicknesses
- Fully automated mask-substrate alignment and part handling minimizes overhead time



High Resolution

- Doubly-telecentric projection lens provides diffraction-limited resolution of 15 μm (0.6 mil)
- Patented seamless scanning technology delivers lens resolution over entire panel
- High resolution enables excellent line-edge definition and via profiles

**Very High
Exposure
Throughput**

- Exposure throughputs as high as 180 panels/hr (12 x 12 inch panels), made possible by:
 - Seamless scanning with hexagonal illumination
 - Efficient excimer laser illumination system
 - High-speed, high-precision scanning stage

Versatility

- Delivers very high throughput for lithography in a wide range of photoresist materials
- Capable of batch via generation in polymeric dielectrics
- Available with Anvik's patented Variable Area Substrate Tiling (VAST™) technology

**Modularity
and
Upgradability**

- Modular design enables user to define optimum system configuration
- Customer may specify resolution, substrate size parameters, and exposure wavelength
- Upgradability of key subsystems extends system life over multiple product generations

HexScan™ 2150 SXE Specifications

| | |
|-------------------------|---|
| Imaging Technique | Seamless scanning projection |
| Resolution | 15 microns (0.6 mil) |
| Projection System | 1:1 magnification refractive lens |
| Depth of Focus | 1.3 mm (50 mils) |
| Substrate Size | Up to 460 x 610 mm (18 x 24 inches), with or without tiling |
| Illumination Source | XeF excimer laser (other sources optional) |
| Exposure Wavelength | 351 nm (other wavelengths optional) |
| Overlay Precision | 3 microns |
| Alignment System | Automatic |
| Panel and Mask Handling | Automatic |
| Exposure Throughput | > 160 panels/hr (12 x 12 inch panels) |

