



Making the world brighter - LEDs

## Meeting the challenges of high-volume LED manufacturing

The AccuScribe™ 2210 is a production-proven, high-throughput laser scribing solution for LED manufacturing. Up to 18 wafers per hour can be achieved for superior productivity and significant reduction in cost of ownership with high system reliability. Process extendibility enables customers to leverage the system for multiple product classes.

### Highlights

- Patented laser scribing technology for LED sapphire substrates
- Automated loading and scanning of wafers for high throughput
- Regional-based field service to provide quick, knowledgeable service and support

## Revolutionizing high-volume LED manufacturing

The AccuScribe™ 2210 LED laser scriber is the latest generation of ESI's LED laser scriber built on patented, industry-leading AccuScribe technology. With its patented technology in sapphire scribing, the AccuScribe 2210 delivers higher LED light output extraction efficiency over conventional laser scribing systems. At greater wafer throughputs, the AccuScribe 2210 continues to drive down the cost of ownership for LED manufacturers. The system delivers:

- Highly precise stage and laser controls to minimize scribe line widths
- Effective debris contamination control ensures higher system availability for high volume manufacturing
- Robust image enhancement for accurate scribe alignment
- Wafer contour mapping accommodates variation wafer thickness uniformity
- Operating flexibility to allow fully automated operation as well as manual operation for process development, monitoring or "hot-lot" operation





# AccuScribe™ 2210

## Specifications summary

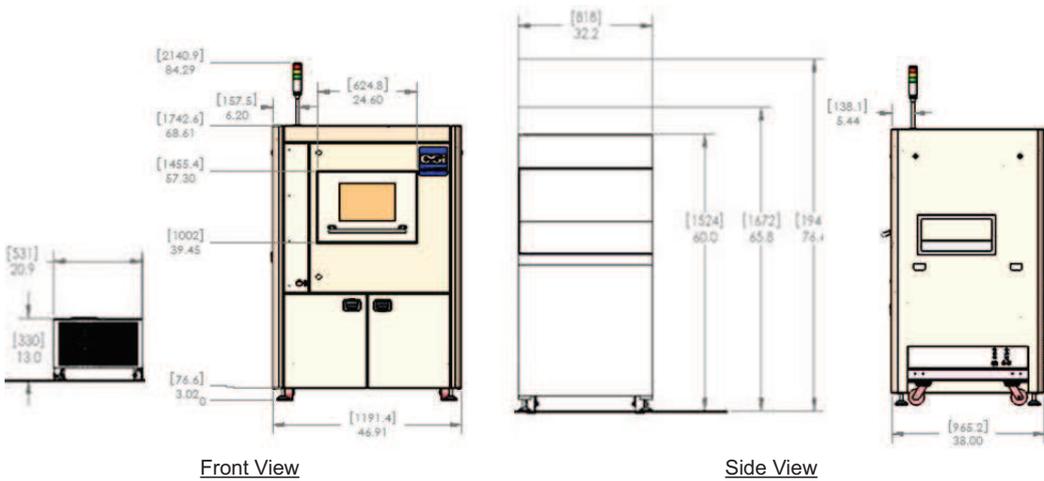
### System Performance\*

- System throughput: >18wph
- Scribe depth: 25 ±2µm
- Kerf width: <8.0µm
- Rotational resolution: 0.0003°
- X-Y range: 110mm x 110mm
- Stage accuracy: ±2µm
- Stage repeatability: ±0.5µm, 3σ

\*Specifications are based on 50mm diameter, 90µm thick, LED sapphire wafer. Overall flatness of the wafer is ±2µm. LED die size is assumed to be 350µm x 350µm

### System Specifications

- Power: 100-120Vac (15A) or 200-240Vac (7.5A), 50/60Hz, single phase, Earth ground
- Ambient temperature: 20-30°C
- Relative humidity: <80% (non-condensing)
- Wafer vacuum: 24" Hg, 1.1CFM, regulate to 15" Hg
- Debris vacuum: 26" Hg, 4.5CFM, regulate to 2CFM
- Clean dry air: 30PSI, regulate to 10 psig and 15SCSH



13900 NW Science Park Drive, Portland, OR 97229

U.S.A.  
+1.800.547.5746 or  
+1.503.641.4141

China  
+86.21.3392.7070

Japan  
+81.3.3533.8444

Korea  
+82.2.3473.9900

Singapore  
+65.6455.5158

Taiwan, R.O.C.  
+886.3.552.6788

United Kingdom/Europe  
+44.1480.456.566



© 2010 Electro Scientific Industries, Inc. Printed in U.S.A. ESI reserves the right to change specifications and other product information without notice. Effective January 2010. System and products offered by ESI and its subsidiaries are covered by issued and pending US and foreign patents. Products mentioned are for identification purposes only and may be trademarks or registered of their respective companies. ESI, the ESI logo, and Electro Scientific Industries, Inc. are registered trademarks of Electro Scientific Industries, Inc.

