

Volume X

July 8, 2015

Welcome to Solutions Newsletter. This periodic newsletter provides information on our latest happenings and product updates.

Many thanks to our loyal customers for their continued interest in our products.

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SEMICON West July 14-16, 2015  
Moscone Center, San Francisco

Semicon West 2015

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July 14-17

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## Solutions Newsletter

For Dispense and Assembly

### Handling Large Aspect Ratio, Thin, Delicate Die

#### MRSI Die Bonding Machine Provides Required Features

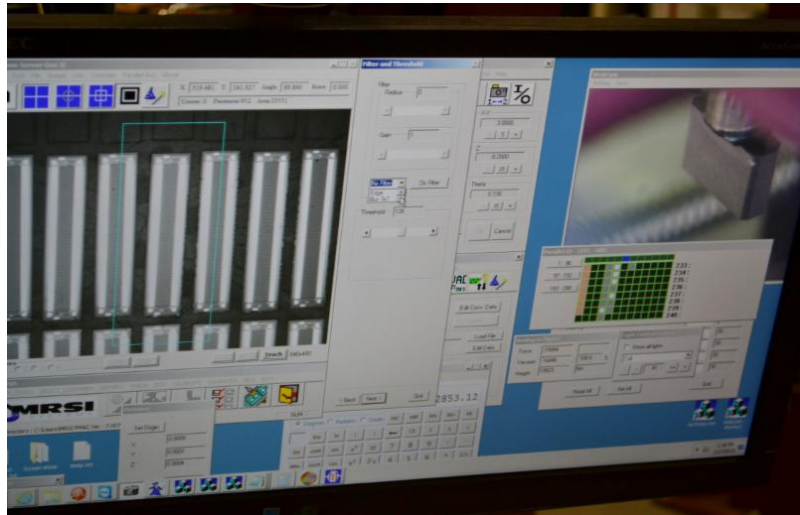
Many applications including RF Power, Optical and MEMS require large, thin, high aspect ratio devices. Aspect ratios can exceed 45 to 1. Examples include: RF Power Die (6 mm x 1 mm), MEMS Die (25 mm x 0.5 mm) and Optical Modulators (90 x 2 mm). These large ratio devices have other characteristics which require delicate and special handling including:

- Ultra-thin ( $\leq 25$  microns)
- Internal features (air bridges, thermal vias, MEMS structures)
- Delicate III - V materials, such as GaN, GaAs, InP
- Eutectic attach of solder alloys, such as AuSn, AuGe, SnAg
- Large aspect ratio

The MRSI Die Bonders have evolved to deliver a robust production solution to successfully overcome these application challenges. The systems design incorporates many advanced features specifically designed for thin, large high aspect ratio devices, including:

- Programmable delicate force handling
- Die ejector synchronized to collet motion
- Automatic wafer theta compensation per die
- Advanced machine vision and lighting
- Excellent co-planarity control
- Bond line control for epoxy die attach
- Eutectic process control for eutectic bonding
- Ultra-precision placement accuracy
- Custom collet designs

If you have similar challenges, give our application experts a call.



Join us at Semicon West

**We hope to see you at the trade show!**

We are exhibiting at the Semicon West trade show. SEMICON West is the flagship annual event for the global microelectronics industry. It is the premier event for the display of new products and technologies for microelectronics design and manufacturing, featuring technologies from across the microelectronics supply chain, from electronic design automation, to device fabrication (wafer processing), to final manufacturing (assembly, packaging, and test). More than semiconductors, SEMICON West is also showcase for emerging markets and technologies born from the microelectronics industry, including micro-electromechanical systems (MEMS), photovoltaics (PV), flexible electronics and displays, nano-electronics, solid state lighting (LEDs), and related technologies.

You are always welcome to come visit us at our Billerica factory. Contact us with your dispensing and assembly challenges. Chances are we have already solved them!



**MRSI - M3**  
Assembly Work Cell



**MRSI-705**  
Assembly Work Cell



**MRSI-175Ag**  
Epoxy Dispenser



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