

Volume XI

August 18, 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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[Trade Shows](#)



China International
OPToelectronics Expo
Aug 31 - Sept 3

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Solutions Newsletter

For Dispense and Assembly

Automatic In-line Eutectic Die Bonding

In-Line Eutectic for Direct Eutectic or Solder Reflow for GaAs & GaN

Applications, such as RF Power devices, require high speed solutions which include automated in-line material handling with integrated eutectic die attach capability. The industry leading MRSI Die Bonders provide a turn-key solution for high speed automated eutectic die attach.

The material handling system loads the boat onto the conveyor. The conveyor transfers the boat to the bonding area as it incrementally heats the package to the process temperature by passing over preheat zones. At the bond station the substrate comes into contact with the pulse heated bonding stage and the eutectic bonding process is performed.

For Gold Silicon direct eutectic, the system aligns the package and then picks and places the die, scrubbing (variable amplitude and frequency) to accomplish the eutectic bonding. A heated cover gas of Hydrogen and Nitrogen is present over the bonding area.

For solder reflow eutectic bonding, such as Gold Tin (Au/Sn) eutectic attach of Gallium Arsenide (GaAs) and Gallium Nitride (GaN) die, the system aligns the package and picks and places and places a preform onto the package (if required, the preform can be pre-deposited). The die is then picked and placed, while the temperature at the bonding position is ramped using a pulse heated eutectic stage and scrubbed (variable amplitude and frequency) to accomplish the eutectic reflow. A heated cover gas of Hydrogen and Nitrogen is present over the bonding area.

The boat is indexed to the next substrate position and the above process is repeated until all the boat positions have been bonded. As the indexer transfers the boat, the parts are incrementally cooled by passing over cool down zone position. When completed the indexing conveyor transfers the boat to the output magazine loader.

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



Join us at China International Optoelectronics Expo

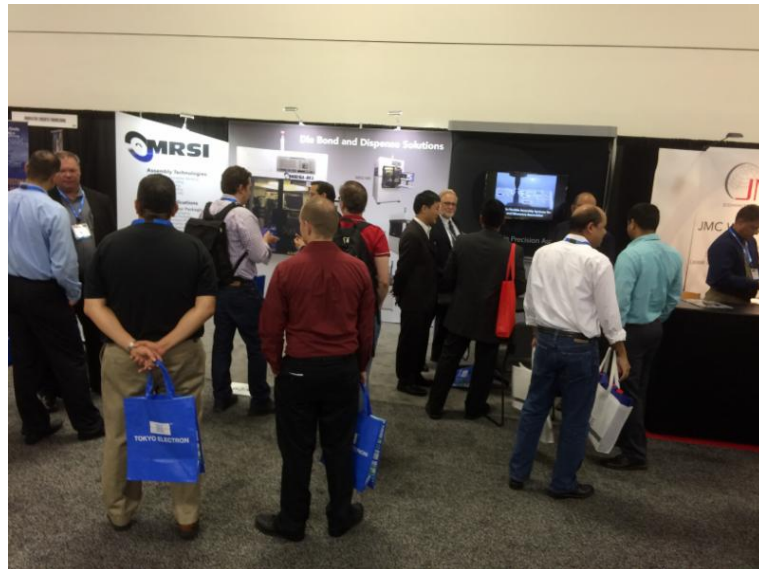
Come see the MRSI-M3 Ultra-Precision Work Cell in Action!

We are excited about exhibiting at the 17th China International Optoelectronic Exposition at Shenzhen Conference & Exhibition Center on August 31 to September 3, 2015. MRSI Systems will be located in our Chinese representative CYCAD's booth 1A80 (1A93). This year more than 3,000 exhibitors and 85,000 delegates are expected to attend including the world leading optoelectronic manufacturers to showcase their latest products and technologies.

The industry leading MRSI-M3 Ultra-Precision Work Cell will be exhibited assembling an Optical Transceiver Package.

The MRSI-M3 meets the unique challenges for volume manufacturing of the next generation optoelectronics packages. These requirements include ultra-high precision placement, in-situ UV curing, advanced vision algorithms, delicate force sensing, material traceability, automated material handling, eutectic bonding, precision dispensing and stamping.

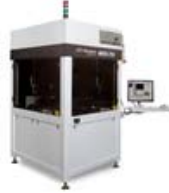
You are always welcome to come visit us at our Billerica factory. Contact us with your dispensing and assembly challenges. Chances are we have already solved them!



MRSI - M3
Assembly Work Cell



MRSI-705
Assembly Work Cell



MRSI-175Ag
Epoxy Dispenser



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