## **Bringing tomorrow's** electronics to life



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## MRSI-HVM **1.5 MICRON DIE BONDER**



MRSI Systems has been serving optoelectronic and microelectronic customers for the past 35 years and understands their requirement to scale efficiently in today's fast-paced marketplace.

Applications are found across a wide range of market segments, such as life & health sciences, aerospace, defense, automotive, lighting, communications, and more.

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MRSI's die bonding solutions help our customers to enable just-in-time supply and fast-pace innovations of critical components for high-growth market segments. The MRSI-HVM and MRSI-H provide industry-leading high-speed for high-volume manufacturing.

These die bonding solutions are built with the same hardware and software platforms configured to minimize process deviations, reduce NPI cost, and increase ROI for customers with MRSI's long proven product reliability and global customer support.



## **MRSI-HVM** Applications

#### CoS/CoC/CoB



• The MRSI-HVM is designed for specific applications such as: Chip-on-Carrier (CoC), Chip-on-Submount (CoS), and Chip-on-Baseplate (CoB). These assemblies use eutectic and/or epoxy stamping die bonding.

#### Heated Head (Optional)

• Option for a heated head on the right side, heating at a fixed temperature or pulsed heating. The left side remains the same standard MRSI-HVM head. This heated option is specifically designed for eutectic bonding of multiple die onto a common carrier without reflowing the neighboring solder pads.

#### AOC/PCB/GOLD-BOX



• The conveyor version is equipped with inline conveyor for single fixture or multiple cassette inputs. Large forms of carriers of the die are automatically transported, for Active Optical Cables (AOC) or similar chip-on-printed circuit board (PCB) applications, gold-box packaging, and CoC in fixture. The process options include eutectic, epoxy stamping, UV epoxy dispensing, and in-situ UV curing.

#### **Conveyor (Optional)**



• Equipped with inline conveyor for single fixture or multiple cassette inputs that can automatically transport large forms of carriers of the dies for Active Optical Cables (AOC) or similar chip-on-printed circuit board (PCB) applications, gold-box packaging, and CoC in fixture.

#### Value to our customers

- Industry leading high-speed for high-volume manufacturing
- Industry leading high-accuracy for better assembly yield and future higher density packaging
- volume high-mix manufacturing

• Industry leading high-flexibility for true multi-die multi-process production in high-

• Industry leading local technical support teams and application expertise • 35+ years of experiences in industry with reliable 24/7 field operations

### **MRSI-HVM 1.5 Micron Die Bonder**

HVM				
CONFIGURATION	STANDARD	HEATED HEAD	CONVEYOR	CONVEYOR WITH HEATED HEAD
APPLICATIONS				
CoC/CoS/CoB	•	٠	•	•
CoC Silicon Photonics	•	٠	•	•
3D Die Stacking	•	٠	•	•
Pillar-to-Pillar Bonding	•	•	•	•
AOC/PCB			•	
Gold Box	•		•	
PROCESSES				
Multi-die, Multi-process	•	•	•	•
Eutectic	•	•	•	•
Epoxy Stamping	•	•	•	•
Epoxy Dispensing			•	
UV Curing			•	
Localized Heating		•		•
Flip-chip Bonding	•	٠	•	•
Co-planarity Bonding	•		•	
FEATURES & OPTIONS				
Composite Base	•	•	•	•
Dual Gantry/Head	•	•	•	•
Heated Head (R)*		•		•
Dual Ultrafast Eutectic Station	•	•	•	•
On-the-fly Tool Change (L)	•	•	•	•
On-the-fly Tool Change (R)	•		•	
Remote Auto Tool Change (R)		٠		•
Inline Conveyor			•	•
Input GP/WP & Wafer	٠	٠	•	•
Output Stage (L)	•	•		
Output Stage (R)			•	•

\*R=Right Side, L=Left Side