Process Capabilities

AIM Photonics Test, Assembly, and Packaging Facility (AIMTAP)
Rochester , NY

Christopher Striemer, Ph.D.
Business Development and Facilities Manager
cstriemer@sunypoly.edu

AIM Photonics Test, Assembly, and Packaging (TAP) Facility

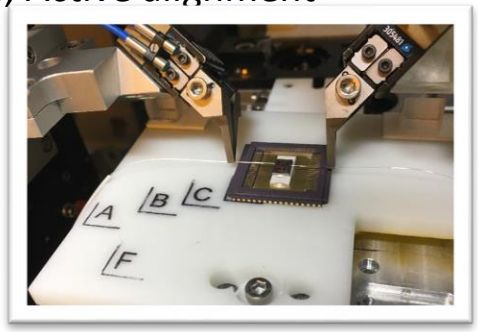
- TAP is an ***accessible*** full-flow packaging facility operated by the AIM Photonics DoD Manufacturing Innovation Institute.
- The facility features a unique combination of 300mm production tools, chip-level packaging equipment and extensive metrology/test capability.

1. ***300mm bumping line:*** Fabrication of Cu pillar and solder (Cu, Ni, Sn/Ag) bumps and ENIG (Ni, Au) receive pads.
   - ***Tools include:*** PVD, photolithography, metal plating, chemical strip, and dicing.
2. ***Chip-level Assembly:*** Die attach, flip chip, wire bonding, and fiber attach.
3. ***Metrology/Test:*** Various microscopy (optical, electron, x-ray, etc.), ellipsometry, spectroscopy, DC/RF/Optical probing and test

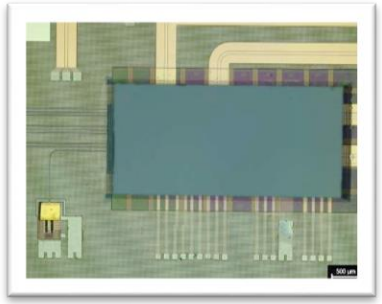
AIM's Photonics Test Assembly and Packaging Capabilities

Fiber Attach

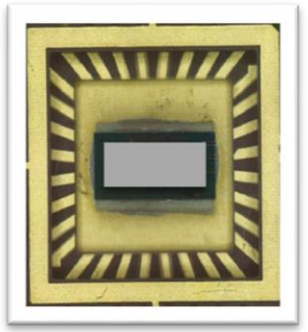
Single Mode Fiber, Arrays, Active alignment



Flip Chip TCB, TSB

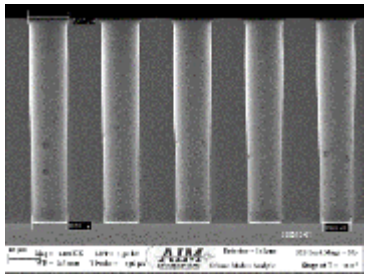


DIE Attach



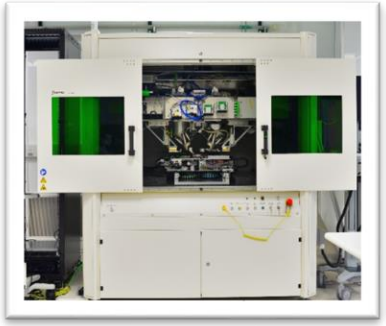
Plating Cu, SnAg, Pd, Ni, Au

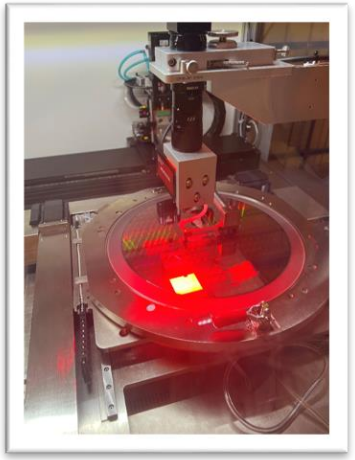
Lithography, Wet and dry resist, Cannon I-line w BSA



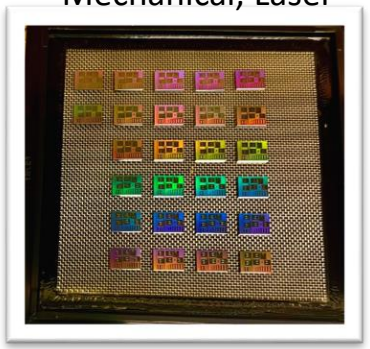
Wafer Probing and Test

Laser Sources, Photodetectors, Power Meter, Optical Amplifiers, Optical Modulators, Vector Analyzer,

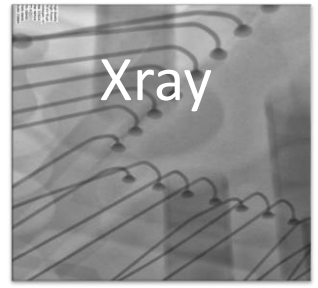




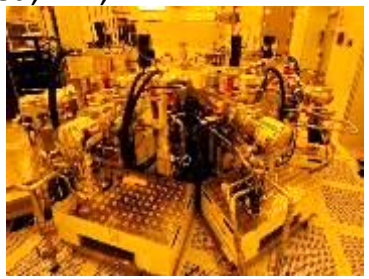
Dicing Plasma, Mechanical, Laser

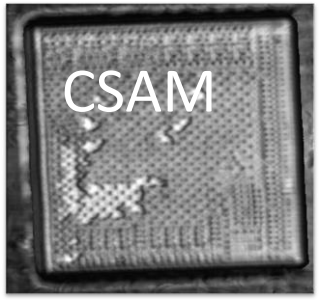


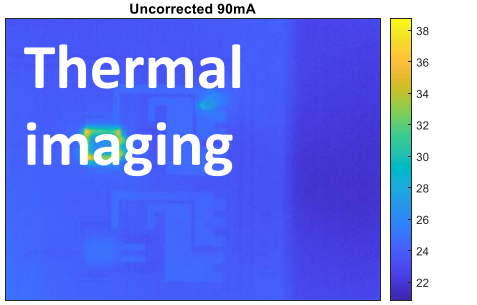
Failure Analysis SEM, FIB, EDX, SIMS, X-Section, CSAM, Xray, Ellipsometer



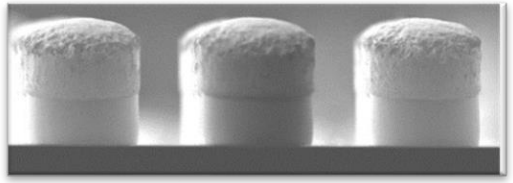
Sputtering Ti, TiW, Cu, NiV, Ni







Bumping >50um Pitch >50um C2,C4



Wire Bond Gold Wire