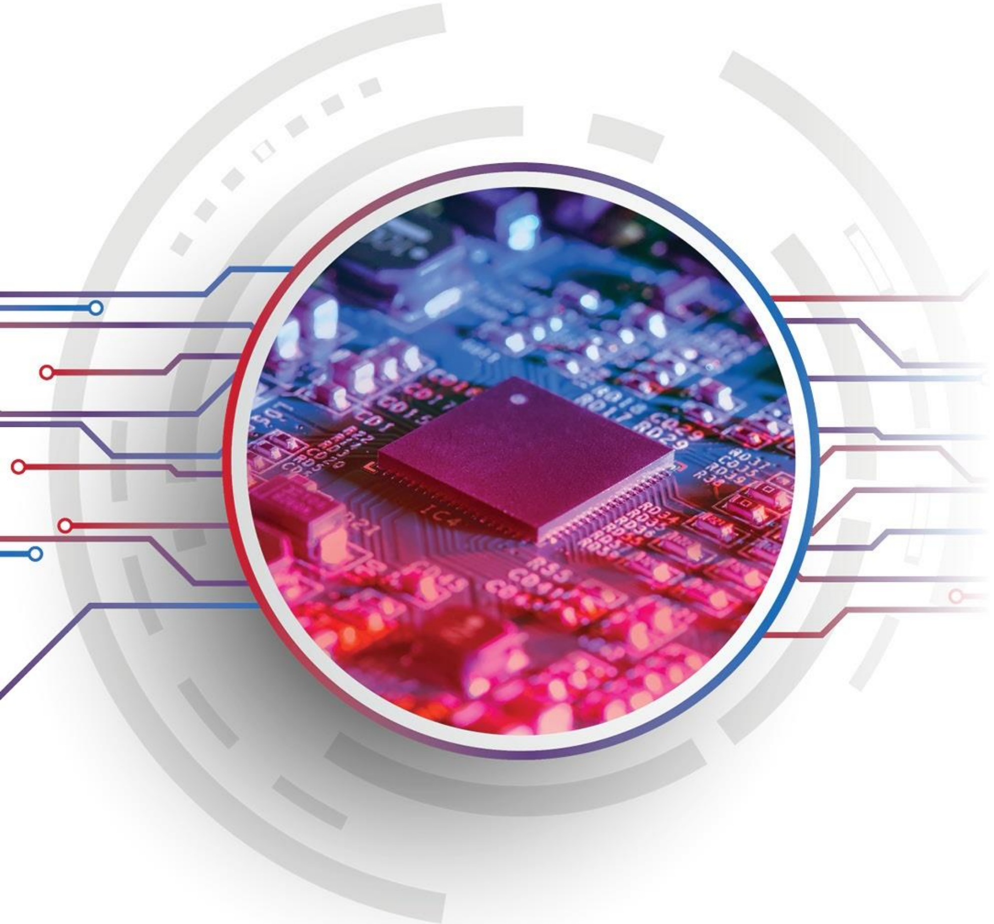


MacDermid Alpha Electronics Solutions

April 2022

About Us - Element Solutions, Inc.

Our operating businesses are part of Element Solutions, Inc. publicly traded on NYSE as ESI, a $2.4 billion advanced materials and specialty chemicals manufacturer with operations in 50 countries

MacDermid Alpha Electronics Solutions

MacDermid Alpha
ELECTRONICS SOLUTIONS

Integrated electronics capabilities for assembly, printed circuit boards and semiconductor applications

MacDermid
OFFSHORE SOLUTIONS

Environmentally friendly pressure and temperature sensitive formulations used for offshore oil & gas production

MacDermid Enthone
INDUSTRIAL SOLUTIONS

Functional and decorative solutions used for various commercial and industrial end markets

MacDermid
GRAPHICS SOLUTIONS

Polymer based chemistries used to create plates and sheets for printing high quality packaging

Our Family of Specialty Chemicals & Materials

element™
solutions

BUSINESSES

- MacDermid Alpha ELECTRONICS SOLUTIONS
- MacDermid Enthone INDUSTRIAL SOLUTIONS
- MacDermid GRAPHICS SOLUTIONS
- MacDermid OFFSHORE SOLUTIONS
- MacDermid ENVIO SOLUTIONS

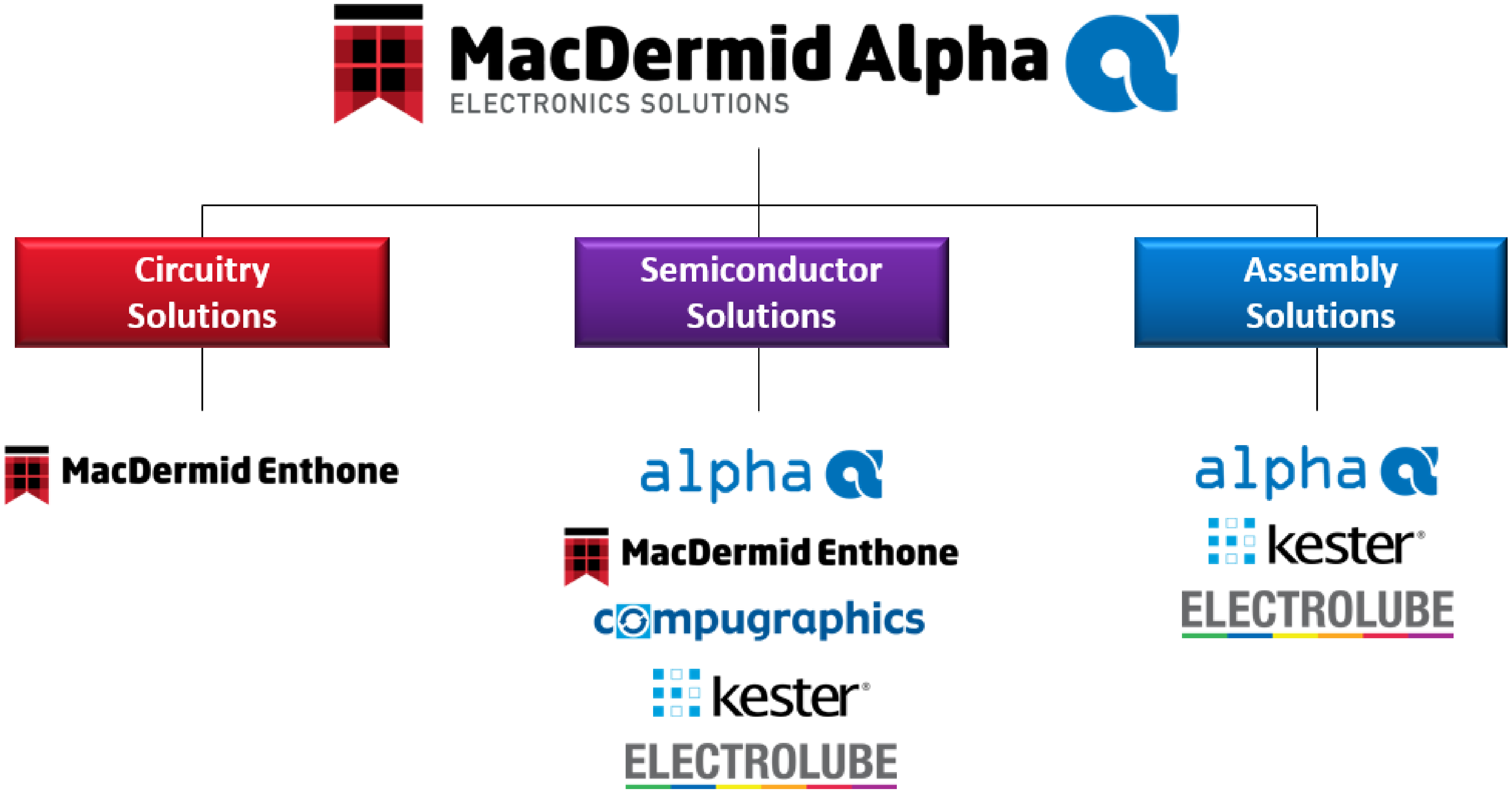
BRANDS

- alpha
- kester®
- compugraphics
- MacDermid Enthone
- ELECTROLUBE THE SOLUTIONS PEOPLE
- FERNOX MAKES WATER WORK

INITIATIVES

- esi automotive
- esi sustainability

The Brands in our Business Divisions



MacDermid Alpha
ELECTRONICS SOLUTIONS

Circuitry Solutions
- MacDermid Enthone

Semiconductor Solutions
- alpha
- MacDermid Enthone
- compugraphics
- kester
- ELECTROLUBE

Assembly Solutions
- alpha
- kester
- ELECTROLUBE

1 **BUSINESS**
Supporting divisions focused on key nodes of the supply chain

3 **DIVISIONS**
Leveraging strengths in innovation, applications, and customer support

5 **PRODUCT FAMILY BRANDS**
Products that transform ideas into the next generation electronic devices

Key Statistics - MacDermid Alpha

As a $1.5+ billion business, we have the resources to support long-term partnership

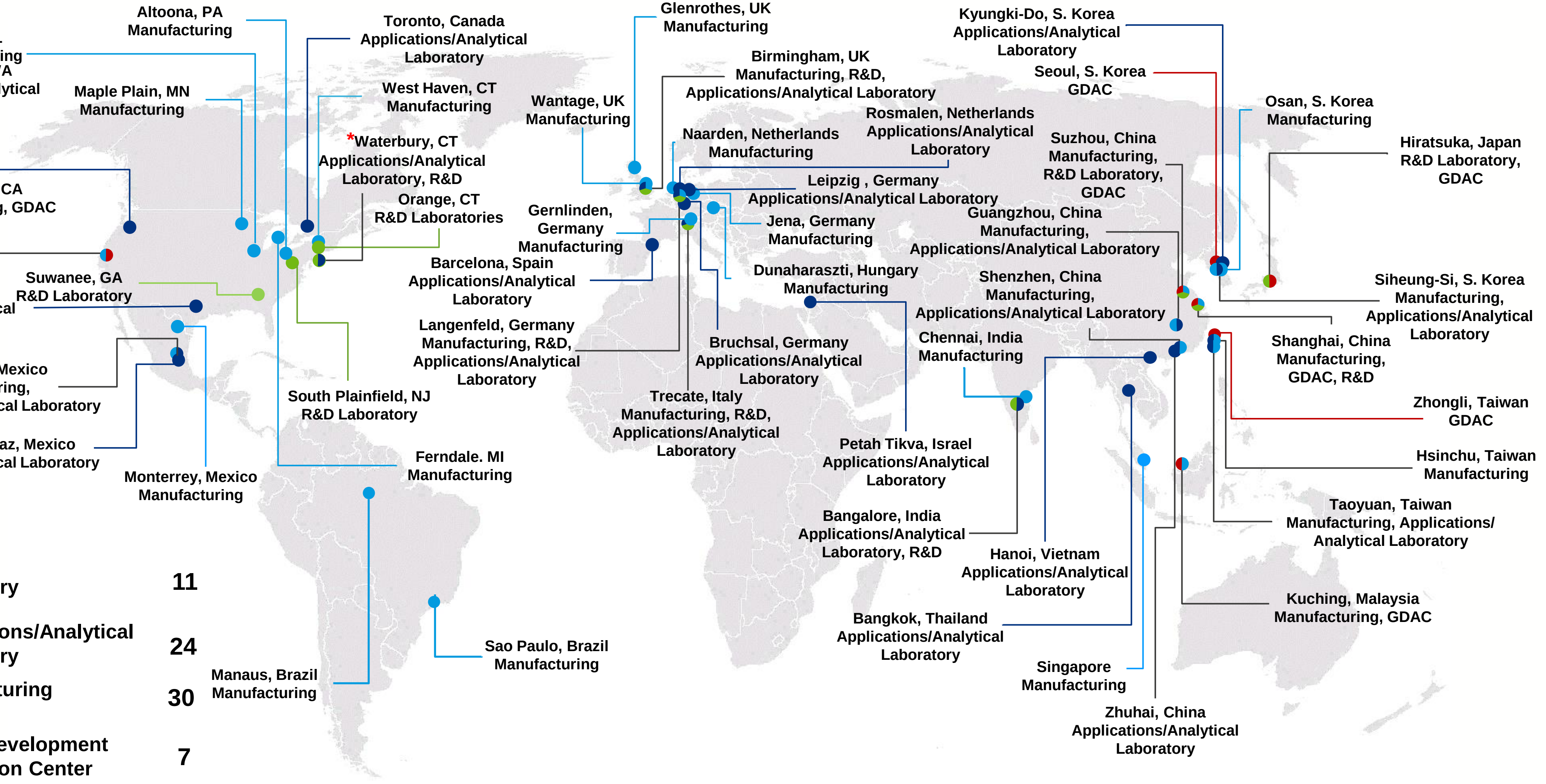
Operating in over 30 countries, we stay with you as you expand globally

Our staff provides local service to over 10,000 customers

Connections among our 2,200 employees to assure subject matter expertise

More than 50% of our employees serve in innovation, technical, and service roles

Electronics Solutions – Key Locations



Itasca, IL
Manufacturing

Vancouver, WA
Applications/Analytical
Laboratory

Altoona, PA
Manufacturing

Maple Plain, MN
Manufacturing

Toronto, Canada
Applications/Analytical
Laboratory

West Haven, CT
Manufacturing

*Waterbury, CT
Applications/Analytical
Laboratory, R&D

Orange, CT
R&D Laboratories

Fremont, CA
Manufacturing, GDAC

Suwanee, GA
R&D Laboratory

Austin, TX
Applications/Analytical
Laboratory

Mexico City, Mexico
Manufacturing,
Applications/Analytical Laboratory

Tlalnepantla de Baz, Mexico
Applications/Analytical Laboratory

Monterrey, Mexico
Manufacturing

South Plainfield, NJ
R&D Laboratory

Ferndale. MI
Manufacturing

Manaus, Brazil
Manufacturing

Sao Paulo, Brazil
Manufacturing

Glenrothes, UK
Manufacturing

Wantage, UK
Manufacturing

Birmingham, UK
Manufacturing, R&D,
Applications/Analytical Laboratory

Naarden, Netherlands
Manufacturing

Rosmalen, Netherlands
Applications/Analytical
Laboratory

Leipzig , Germany
Applications/Analytical Laboratory

Gernlinden,
Germany
Manufacturing

Jena, Germany
Manufacturing

Barcelona, Spain
Applications/Analytical
Laboratory

Dunaharaszti, Hungary
Manufacturing

Langenfeld, Germany
Manufacturing, R&D,
Applications/Analytical
Laboratory

Bruchsal, Germany
Applications/Analytical
Laboratory

Trecate, Italy
Manufacturing, R&D,
Applications/Analytical
Laboratory

Petah Tikva, Israel
Applications/Analytical
Laboratory

Kyungki-Do, S. Korea
Applications/Analytical
Laboratory

Seoul, S. Korea
GDAC

Osan, S. Korea
Manufacturing

Hiratsuka, Japan
R&D Laboratory,
GDAC

Suzhou, China
Manufacturing,
R&D Laboratory,
GDAC

Guangzhou, China
Manufacturing,
Applications/Analytical Laboratory

Shenzhen, China
Manufacturing,
Applications/Analytical Laboratory

Siheung-Si, S. Korea
Manufacturing,
Applications/Analytical
Laboratory

Chennai, India
Manufacturing

Shanghai, China
Manufacturing,
GDAC, R&D

Zhongli, Taiwan
GDAC

Hsinchu, Taiwan
Manufacturing

Bangalore, India
Applications/Analytical
Laboratory, R&D

Hanoi, Vietnam
Applications/Analytical
Laboratory

Taoyuan, Taiwan
Manufacturing, Applications/
Analytical Laboratory

Kuching, Malaysia
Manufacturing, GDAC

Bangkok, Thailand
Applications/Analytical
Laboratory

Singapore
Manufacturing

Zhuhai, China
Applications/Analytical
Laboratory

●	R&D Laboratory	11
●	Applications/Analytical Laboratory	24
●	Manufacturing Facility	30
●	Global Development Application Center	7

*Corporate Headquarters

We Touch Every Aspect of Electronics Manufacturing

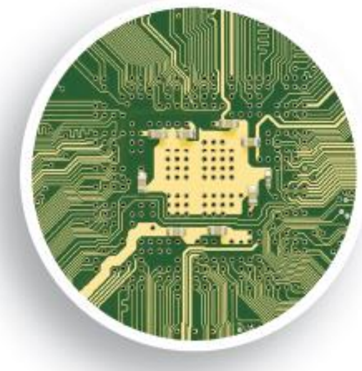
- Deep expertise throughout the electronics supply chain
- In every component of an electronic device
- Unique position in the industry

ONE
SOLUTIONS SUPPLIER
for
ONE
ELECTRONICS INDUSTRY

Device Design

Material Supply

Circuit Fabrication



Component Assembly

Original Equipment

Device End Use

Traditions of Success – Our Roots

MacDermid	enthone	alpha®	OMG Electronic Chemicals
➢ Founded in 1922	➢ Founded in 1930	➢ Founded in 1872	➢ Founded in 1910
➢ Waterbury, CT	➢ West Haven, CT	➢ Somerset, NJ	➢ Cleveland, OH

50	Operations in more than 50 countries
10000	Over 10,000 customers served worldwide by direct sales/service
5000	More than 5000 employees
	A majority of employees in technical roles

India Capabilities Overview - Locations

Technical Test Center, Manesar
Applications Lab, Faridabad
Warehouses, Faridabad, Gurgaon

Manufacturing, Applications Lab and Warehouse, Pune
Warehouse, Mumbai

Manufacturing, Applications Lab and Warehouse, Chennai

Global R&D and Tech Ctr, Manufacturing Bengaluru

India HQ and Manufacturing Chennai

- Present in India since 1931 – 91 years
- Chennai facility – 4 acre campus, since 1970s
- Manufacturing, Apps Lab, Warehousing, Offices
- Businesses- MacDermid Alpha Electronics Solutions, MacDermid Enthone Industrial Solutions, MacDermid Graphics Solutions,
- All functions including Management, Finance, Sales and Marketing, Operations, HR, IT
- Six Sigma focus – 6 Black Belts in Chennai, 11 Nationally
- Quality Management Systems - ISO9001:2015, ISO14001:2015, ISO45001:2018, IATF 16949:2016 (Alpha)

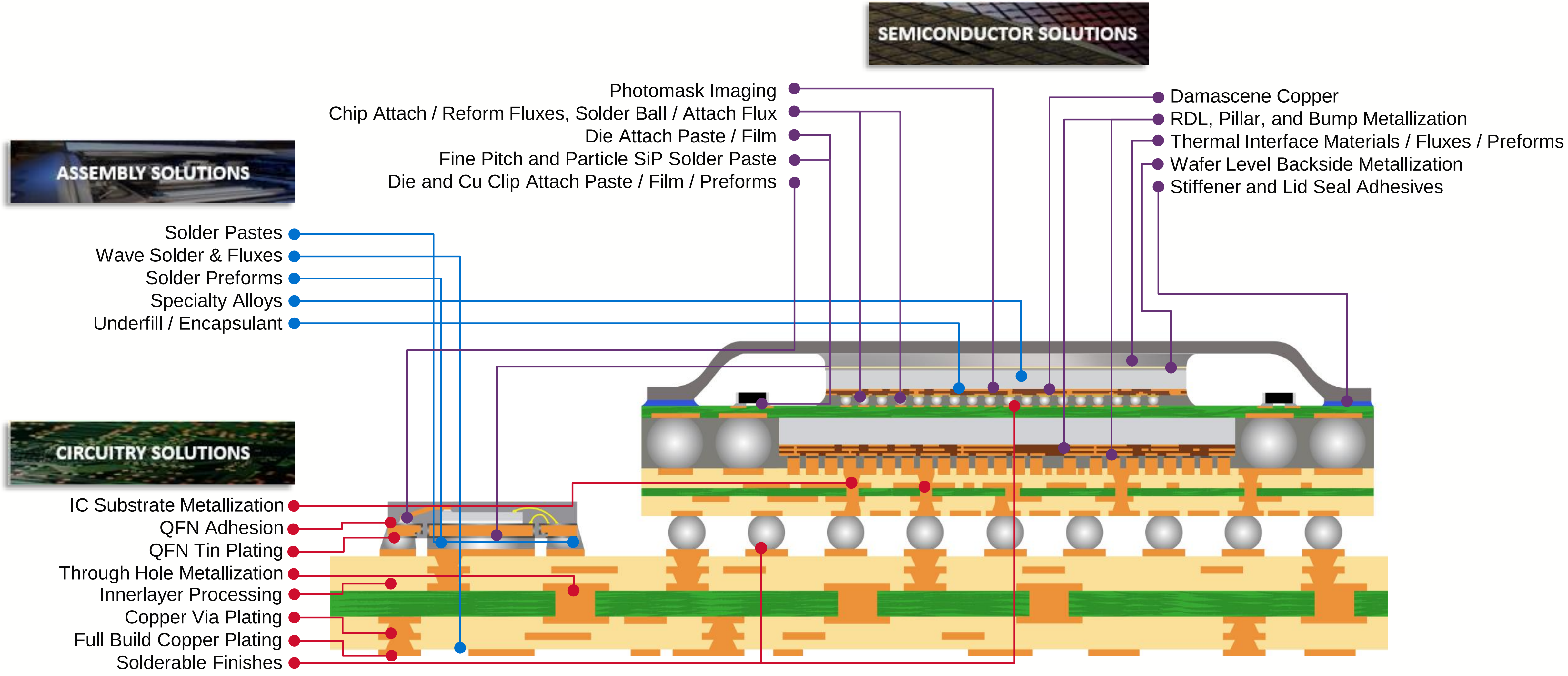
R&D, Application and Testing Labs

- Five Locations
    - Bengaluru – Global R&D Center and Applications Laboratory (MAES and MEIS)
    - Chennai – Quality, Test & Applications Laboratory (MEIS) and Quality Laboratory (MAES)
    - Manesar – Test & Applications Laboratory (MEIS)
    - Faridabad – Test & Applications Laboratory (MEIS)
    - Pune – Test & Applications Laboratory (MEIS)
- Capability to conduct analysis and testing for:
    - Packaging and Board Assembly Materials
    - POP, Anti-Corrosion and Wear Resistant Coating products.

Global R&D and Technical Center - Bengaluru

- Global R&D in India since 2004
- Bengaluru facility – 55,000 sq. ft. facility
- Businesses: MacDermid Alpha Assembly Solutions, MacDermid Alpha Semiconductor Solutions, MacDermid Enthone Industrial Solutions, Fernox
- Top tier technical staff
- Collaborations with major research institutes, including Indian Institute of Science
- State of the art synthesis, formulation, analytical and testing lab, with pilot line capability

We are INTEGRAL to Electronics Manufacturing



SEMICONDUCTOR SOLUTIONS

- Photomask Imaging
- Chip Attach / Reform Fluxes, Solder Ball / Attach Flux
- Die Attach Paste / Film
- Fine Pitch and Particle SiP Solder Paste
- Die and Cu Clip Attach Paste / Film / Preforms
- Damascene Copper
- RDL, Pillar, and Bump Metallization
- Thermal Interface Materials / Fluxes / Preforms
- Wafer Level Backside Metallization
- Stiffener and Lid Seal Adhesives

ASSEMBLY SOLUTIONS

- Solder Pastes
- Wave Solder & Fluxes
- Solder Preforms
- Specialty Alloys
- Underfill / Encapsulant

CIRCUITRY SOLUTIONS

- IC Substrate Metallization
- QFN Adhesion
- QFN Tin Plating
- Through Hole Metallization
- Innerlayer Processing
- Copper Via Plating
- Full Build Copper Plating
- Solderable Finishes

Our Ecosystem, Key Trends and Our Key Initiatives

Major Electronics Trends

Increasing complexity of electronic content

Increasing durability and reliability requirements

Emerging Technologies

- Autonomous Transportation
- Flexible and Wearable Electronics
- Smart Homes/IoT
- Cloud Computing

Current Technologies

- Smartphones & Tablets
- Car Infotainment
- Cloud Storage
- Auto Safety and Powertrain Systems

Past Technologies

- Televisions
- Early-Gen Wireless
- Desktops / Laptops
- Analog Cellular Phones

Automotive Electronic Content

- Increasing electronic content in automotive systems compounded by growth in electric vehicle markets

5G Technologies

- Higher density and reliability requirements for 5G technologies in both telecom infrastructure and mobile phone units

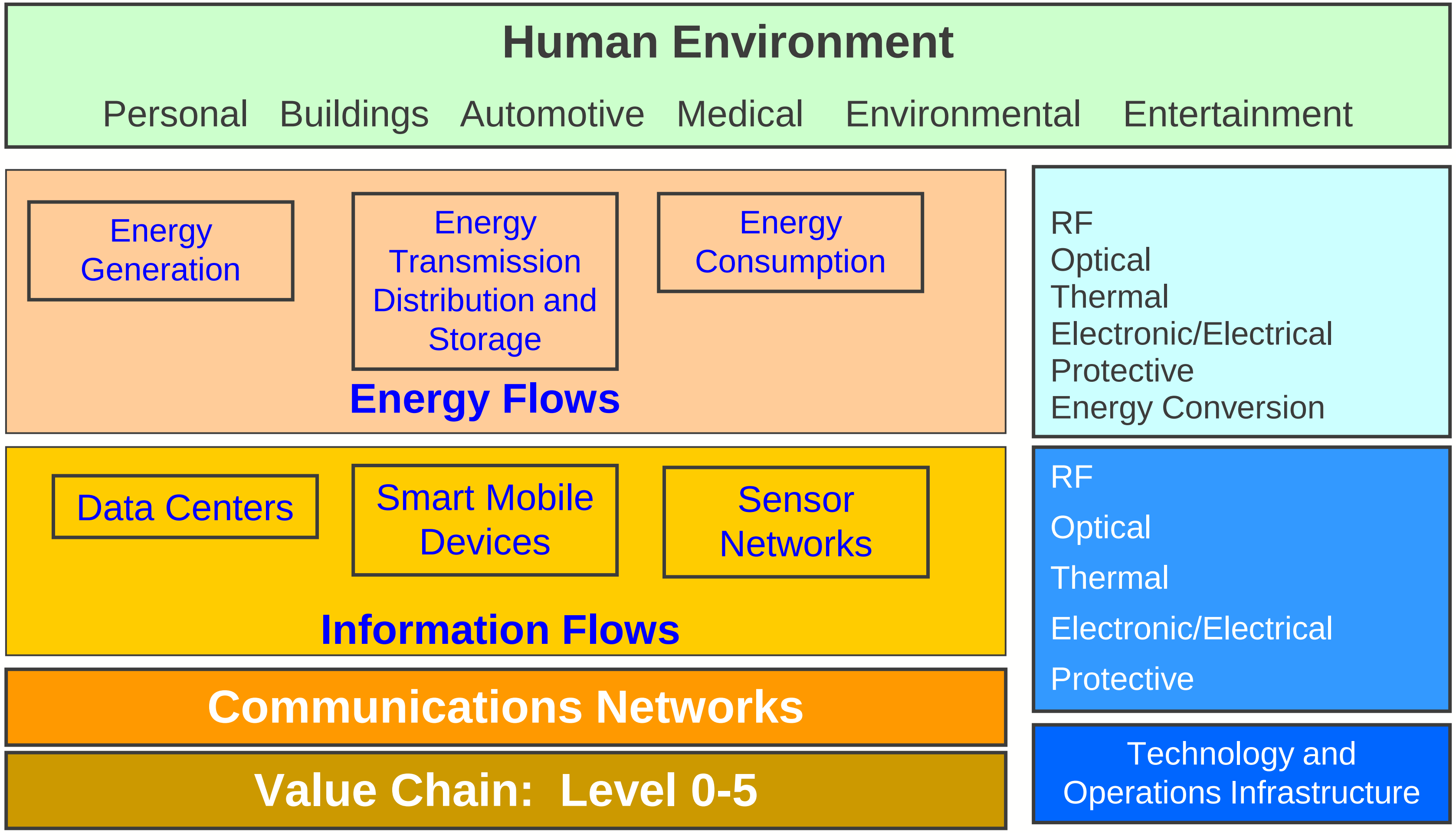
Internet of Things

- Growing focus on connectivity in everyday life through the electrification of consumer goods

Environmental Awareness

- REACH, custom formulations to enable LED and Photovoltaics, energy efficient electronics, and industry leading recycling programs

Our Ecosystem



Human Environment

Personal Buildings Automotive Medical Environmental Entertainment

Energy Generation

Energy Transmission Distribution and Storage

Energy Consumption

Energy Flows

RF
Optical
Thermal
Electronic/Electrical
Protective
Energy Conversion

Data Centers

Smart Mobile Devices

Sensor Networks

Information Flows

RF
Optical
Thermal
Electronic/Electrical
Protective

Communications Networks

Value Chain: Level 0-5

Technology and Operations Infrastructure

Source: R Bhatkal, Element Solutions, Inc.

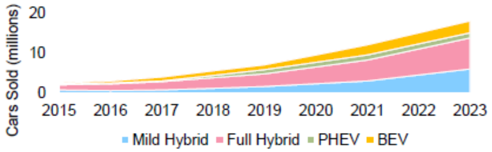
Element Solutions, Inc. works across the entire chain of Energy and Information Flows and the entire Electronics Value Chain from “Chip-to-Box”

esi automotive

Our commercial initiative connecting innovation and technical service resources from within all our operating businesses to more effectively serve the automotive industry

Electric Vehicles

EV / HEV Market Evolution *(Yole - 2018)*



- New materials and engineering with a focus on increased performance & range

Vehicle Automation

More ADAS Sensors = More Interconnects

- *Cameras*
- *Short & long range RaDAR*
- *3D Flash LiDAR*
- *Ultrasonic Sensors*

- Reliability is a critical concern with >50,000 interconnections – many critical to safety in ADAS systems hardware

Interiors & Displays

Design Flexibility for Personal Consumer Experience

- Replacement of mechanical switches with touch sensitive displays and fully integrated displays

A TEAM OF CROSS-FUNCTIONAL AND TECHNOLOGY EXPERTS DEDICATED TO SUPPORT OEMS, TIER 1'S AND SPECIFIERS

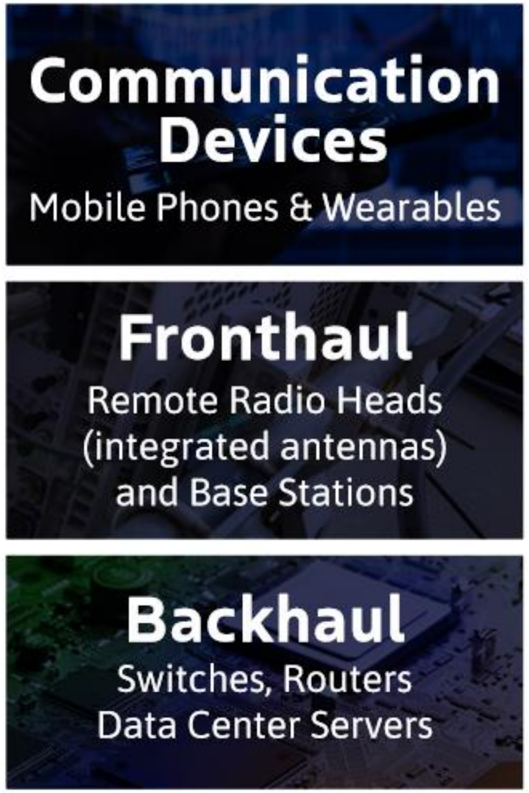
5G solutions

We are supplying innovative specialty processes and materials across the entire 5G electronics supply chain:

Circuitry Solutions: Circuit manufacturing solutions that address 5G challenges and opportunities from high speed innerlayers on exotic board materials to circuit density improvements in power hungry electronic devices.

Semiconductor Solutions: The highest technology electronics metallization and packaging assembly processes that are powering the processors of next-generation mobile, mm-Wave devices, fiber optic networks and more.

Assembly Solutions: High reliability joining / soldering material solutions for electronic assemblies used in a broad range of 5G related equipment; from wearable and handheld mobile devices to antennas and high speed infrastructure hardware.



Communication Devices

Mobile Phones & Wearables

Fronthaul

Remote Radio Heads (integrated antennas) and Base Stations

Backhaul

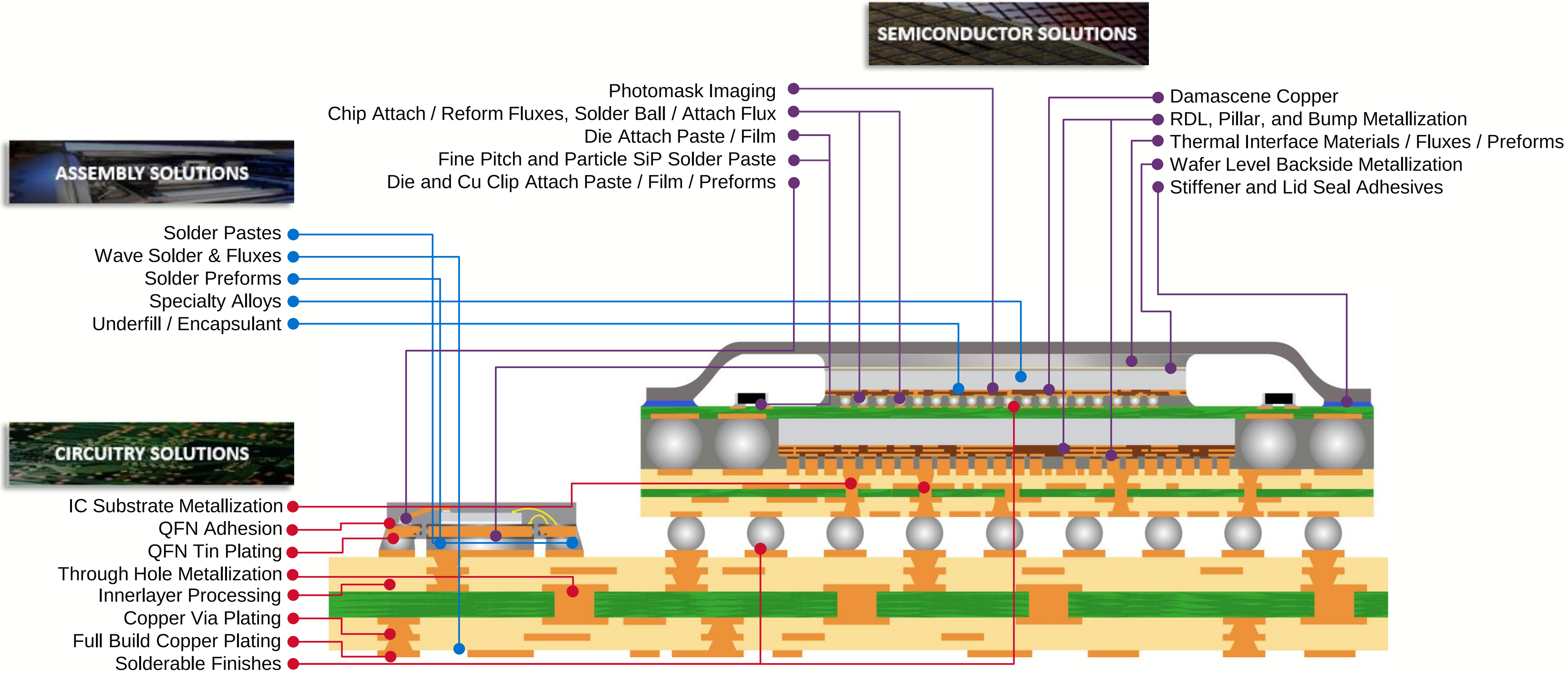
Switches, Routers Data Center Servers

Divisional Focus

Product Portfolios, Roadmap and Responsiveness to Industry Needs

MacDermid Alpha
ELECTRONICS SOLUTIONS

We are INTEGRAL to Electronics Manufacturing



SEMICONDUCTOR SOLUTIONS

- Photomask Imaging
- Chip Attach / Reform Fluxes, Solder Ball / Attach Flux
- Die Attach Paste / Film
- Fine Pitch and Particle SiP Solder Paste
- Die and Cu Clip Attach Paste / Film / Preforms

- Damascene Copper
- RDL, Pillar, and Bump Metallization
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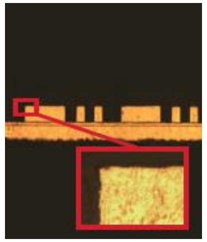
- IC Substrate Metallization
- QFN Adhesion
- QFN Tin Plating
- Through Hole Metallization
- Innerlayer Processing
- Copper Via Plating
- Full Build Copper Plating
- Solderable Finishes

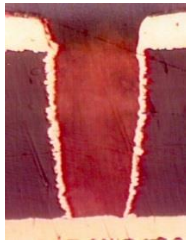
Circuitry Solutions - Product Portfolio

IC SUBSTRATE SOLUTIONS



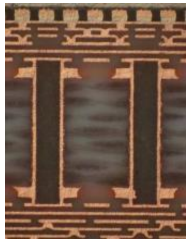
- High Speed Signal Integrity
- SAP / mSAP
- Primary Metallization
- Through hole filling
- Laser direct drilling coating
- Embedded Trace Substrates
- 2-in-1 Via Fill RDL Plating

PRIMARY METALLIZATION



- Electroless Copper
- Direct Metallization
  - Conductive Polymer
  - Carbon
  - Graphite

ELECTROLYTIC METALLIZATION



- Electrolytic Coppers
  - High Throw DC
  - Periodic Pulse Reverse
  - Via Fill / Through Hole Fill

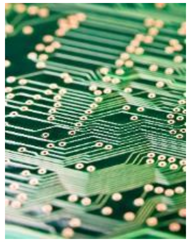
FINAL FINISHES

- Organic Solderability Preservative
- Immersion Tin
- Immersion Silver
- Electroless Nickel Immersion Gold
- Electroless Nickel Electroless Palladium Immersion Gold

MEMORY DISK

- Preclean and Zincate Solutions for Al substrate
- High Quality Electroless Nickel

ELECTRONICS SPECIALTIES

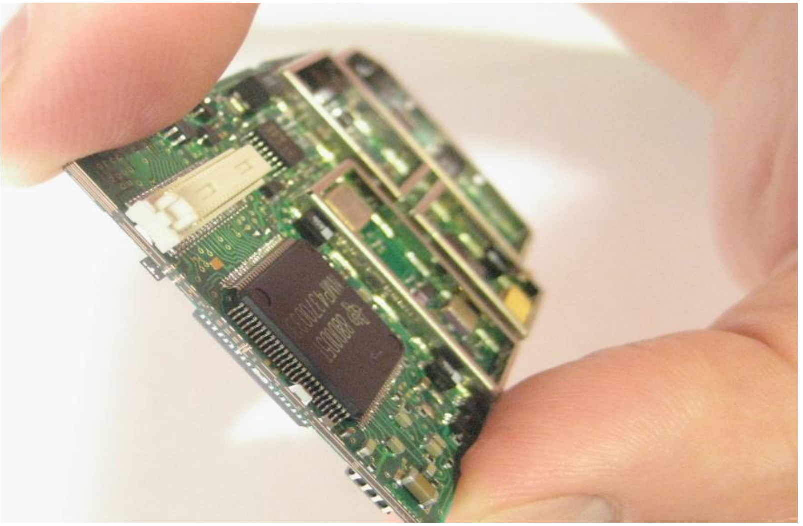


- Leadframe Adhesion Promotion
- Component Termination Solderability
- Molded Interconnect Devices
- Solar Cell Metallization
- Develop, Etch, Strip
- Oxide and Oxide Alternatives

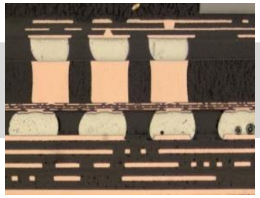
Achievements in… PCB and IC Substrate Fabrication

Industry Demands	***Innovation Initiatives***	***Our Solutions***

- Heterogenous integration
- GHz signal speeds
- Balance performance and cost
- Microvia reliability

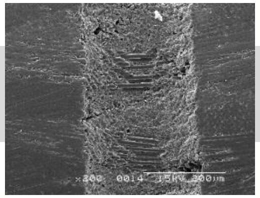


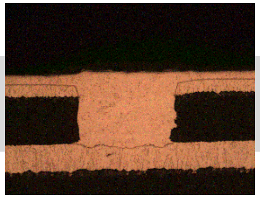
- Broad selection of processes for advanced substrates
- Environmentally friendly and highly reliable direct metallization
- Reliable copper interfaces
- Innovative new gold and palladium final finishes



Systek UVF, ETS

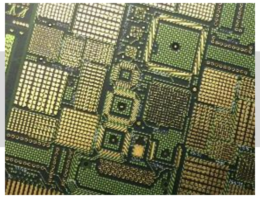
Blackhole, Shadow





M-Copper and AVF

Affinity Family



Achievements in… Formable & Flexible Circuitry

Industry Demands

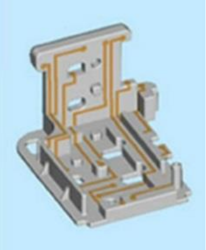
Mechanical Parts

and

Electrical Pathways

become

Electromechanical Devices

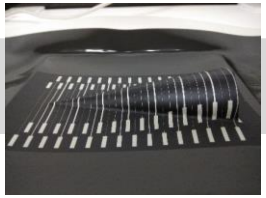


Innovation Initiatives

- Performance needs
  - Strength in 3-D
  - Flexible conductivity
  - Precise circuit patterns

Our Solutions

Film Insert Molding

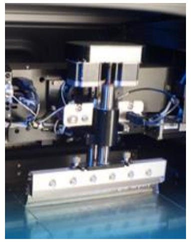


Formable Inks

Flex Processing

Assembly Solutions - Product Portfolio

SURFACE MOUNT TECHNOLOGIES



Printing & Dispensing

- Solder Paste
  - OM & WS Series Pastes
- Stencils
  - Laser Cut Stencils
  - tensoRED® Tensioning Frame

Jetting

- Solder Paste
  - JP Series Pastes

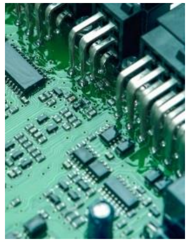
Pick & Place

- Solder Preforms
  - Tape & Reel
  - Flux Products

Rework & Repair

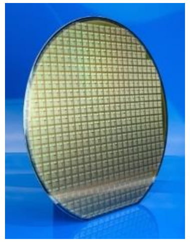
- Cored Wire
  - HF & XL Series Wire
- Stencils
  - Repair Stencils

WAVE/SELECTIVE SOLDERING



- Bar and Solid Wire
  - SAC Series Alloys
  - SACX Series Alloys
  - SnCX Series Alloys
- Liquid Flux
  - EF Series Flux
  - Halogen Free Family

DIE ATTACH/SINTERING



- Sinter Paste, Films & Preforms
- High Reliability Solder Preforms
- Conductive Adhesive

ADHESIVE SOLUTIONS

- SMD Adhesives
- UV Adhesives
- Encapsulants
- Underfill/Cornerfill

FHE, IMSE & PRINTED ELECTRONICS

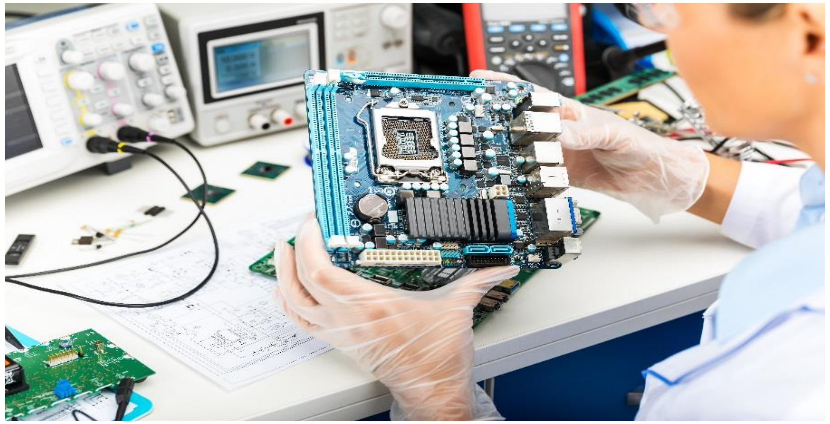
- Solder Paste
  - Ultra Low Temperature Alloys
- Inks
  - Conductive Silver Inks
  - Carbon Inks
  - UV & Thermally Curable Dielectric Inks

Achievements in… Circuit Board Assembly

Industry Demands	*Innovation Initiatives*	*Our Solutions*

Engineered materials that…

- Provide lowest total cost of ownership
- Anticipate next-gen designs
- Perform in the harshest environments

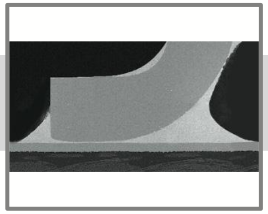


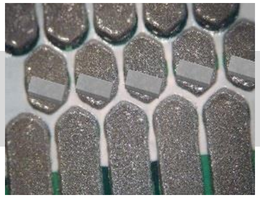
- Novel lead-free alloys
- Sourced ‘conflict-free’ and active recycling programs
- High-reliability, low temperature alloys
- Best-in-class void prevention

Innolot, HRL 1

Alpha Flux

Alpha Paste



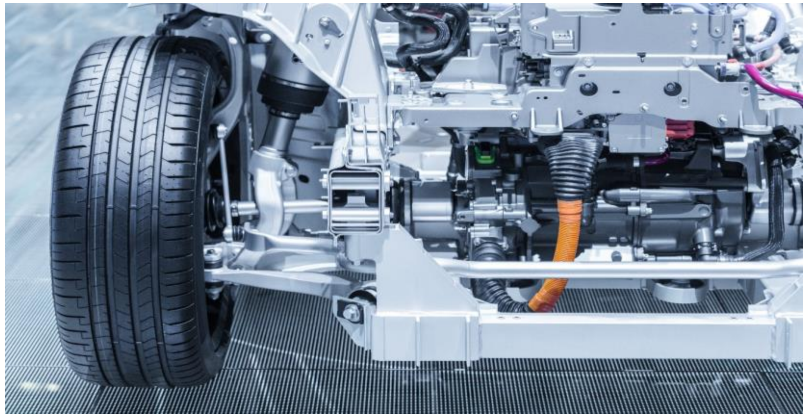


Preforms

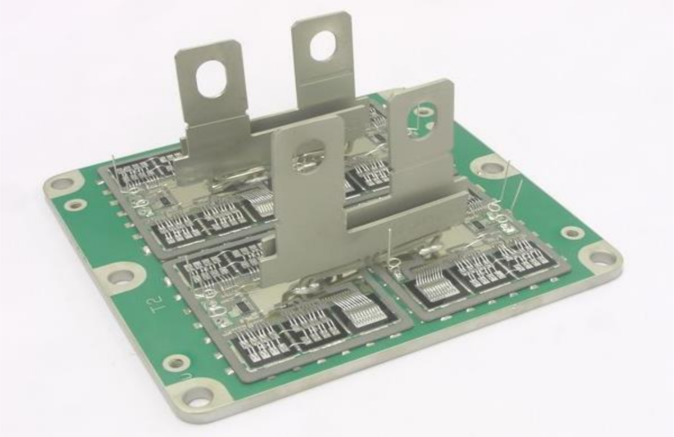
Achievements in… Specialized Materials

Industry Demands

- Low resistance for high current EV inverters
- New materials for bending, stretching, and expansion
- Low temperature bonding on sensitive substrates



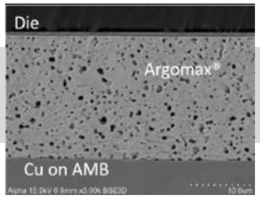
Innovation Initiatives

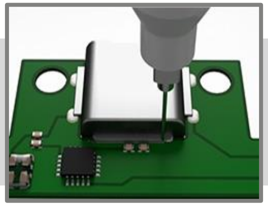


- Sintered nano particle silver & hybrid paste
- Thermal interface materials
- Novel metal connector finishes

Our Solutions

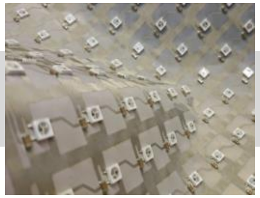
Argomax, Atrox

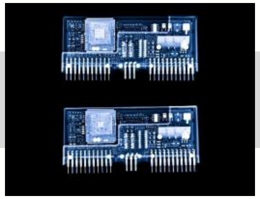




Non-Conductive Adhesives

Low Temp Alloys

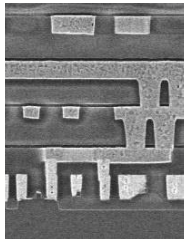




Connectors

Semiconductor Solutions - Product Portfolio

DAMASCENE COPPER – MacDermid Enthone brand



- Advanced copper interconnects
- Void Free Via Metallization
- Products Ranging from 130nm – 10nm+ Node Size

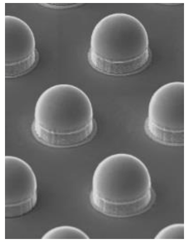
HYBRID SILVER SINTERING DIE ATTACH – Alpha brand

- Pressure-less Ag Sintering
- Rapid heat dissipation from die
- High thermal conductivity > 50 W/m-K up to 250 W/m-K
- Superior Reliability Performance
  - DA for QFN, SO, QFP, PBGA
- MSL1 Reliability performance

SOLDER SPHERES– Alpha brand

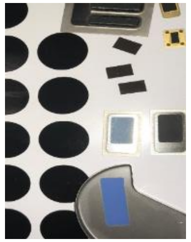
- High Reliability Alloy’s
  - SACX, Innolot
- Low Temp Alloy’s
  - SBX02, HRL1
- Low Cost Alloy
  - SNCX

WAFER LEVEL PACKAGING – MacDermid Enthone brand



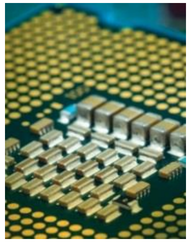
- Tin / Tin-Silver Wafer Bumping
- Copper Pillars
- Redistribution Layers
- Under-Bump Metallization

MOISTURE & HYDROGEN GETTERS – Alpha brand



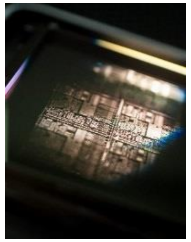
- Paste and film formats, 2-in-1 PSA film attach materials (3--30MIL)
- Custom designed preforms for shaped applications.
- High capacity moisture & hydrogen absorption (~5-15% by weight)
- OPTO, MIL and Medical applications

SOLDERING FLUXES/Pastes – Alpha/Kester brand



- Water soluble
- No-clean, low and ultra low residue
- Polymer based
- Large variety alloys
- High yield on Cu & CuOSP finish
- Fine iitch

PHOTOMASKS – Compugraphics brand



- Stepper & Scanner Reticles (1X, 2X, 4X, 5X)
- 1X Masters
- Large Area Photomasks
- 1X Submasters & Copyplates
- Mask Protection Technology
- Wet-Etch & Dry-Etch Processing
- Reticle Enhancement Techniques (OPC, Grayscale & other RET)
- Quick-Turn Pellicle/Repell & Mask Cleaning
- Direct Write Wafers
- Mask Layout/CAD Services

THERMOPLASTIC REWORKABLE ADHESIVES- Alpha brand

- Paste and film formats, PSA film attach materials (0.5-20MIL)
- Custom designed preforms for shaped applications
- Various fillers; Ag, AlN, Al_2O_3, BN, custom & non-filled systems.
- OPTO, MIL and Medical applications
- Meets MIL-STD-883

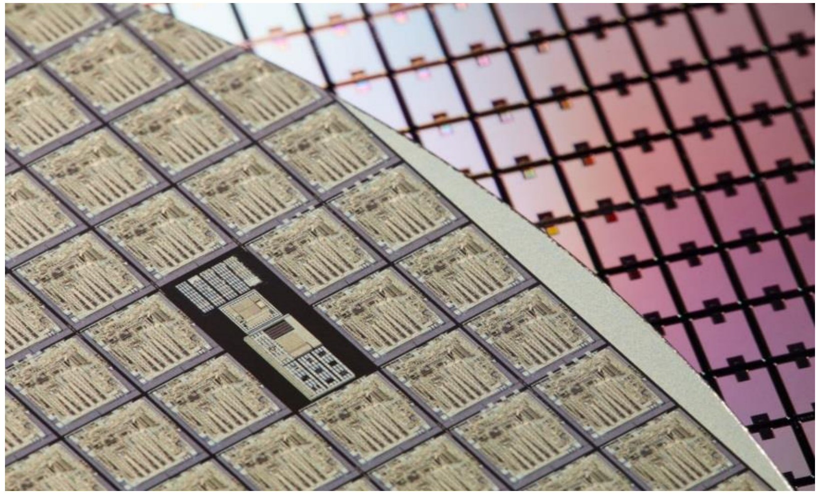
THERMAL INTERFACE MATERIALS – Kester brand

- High degree of flexibility
- No-clean, very low flux residue
- Excellent mechanical strength and wetting to various metallizations
- Extremely wide processing window in multiple reflow profiles

Achievements in… Semiconductor Fabrication

Industry Demands

- Cost effective scaling of transistor nodes
- Ship-to-control quality
- Multi-dimensional interconnectivity

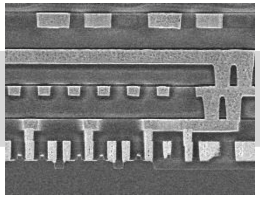


Innovation Initiatives

- Lower resistivity interconnection
- Production scale capability at ≤7nm
- 3D silicon packaging

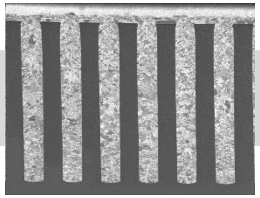
Our Solutions

ViaForm Copper



ViaForm Cobalt

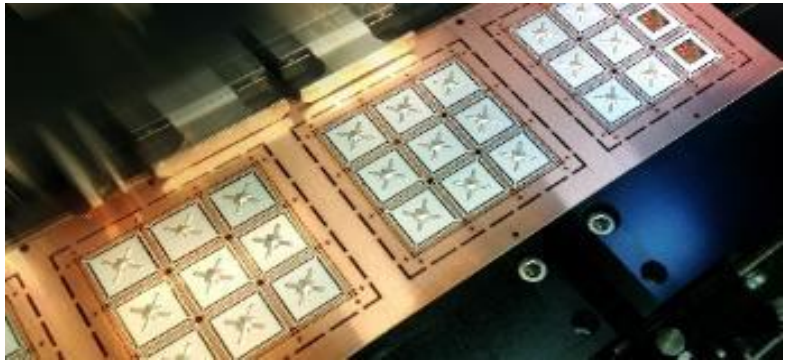
ViaForm TSV



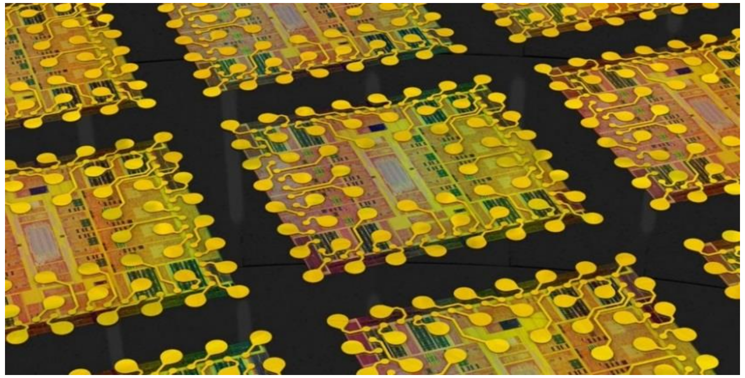
Achievements in… Semiconductor Packaging & Assembly

Industry Demands

- Interconnect sub-micron transistors to the outside world
- Enable "More-than-Moore" packaging solutions
- Increased power density in power semiconductor



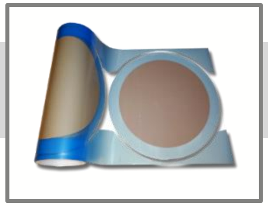
Innovation Initiatives



- Increased power density
- Adhesive solutions
- 3 dimensional interconnects
- CTE compatibility

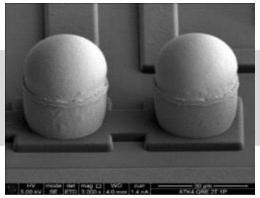
Our Solutions

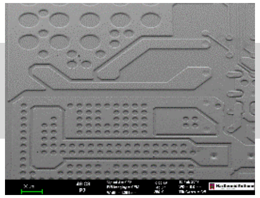
Atrox, Argomax



Adhesives

MicroFab



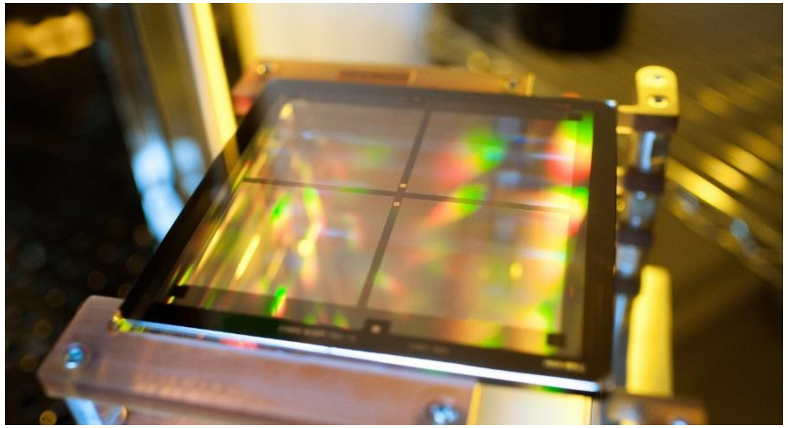


RDL

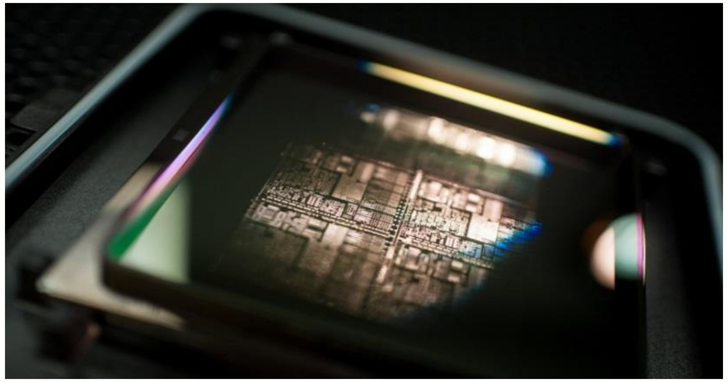
Achievements in… Semiconductor Photomasks

Industry Demands

- Projection lithography for 300 mm wafer fabs
- IOT & Sensor Explosion
- Increased network speeds and bandwidth
- Reduced cycle times, time to market



Innovation Initiatives



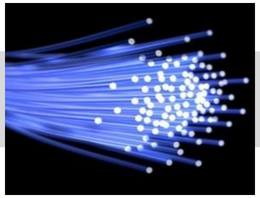
- Niche material solutions
- Efficient printing of non-traditional semiconductor geometries
- Tailored customer AI solutions for CAD support, order processing and shop floor workflow automation

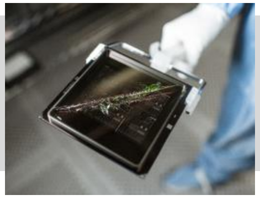
Our Solutions

Large Area Masks

MEMS Masks

Opto/Photonic Masks





Pellicle Repair/
Re-Certification

Global Innovation and Service Support

- Key technical facilities for high level development and support
  - Global Development Application Centers (GDAC) – Circuitry Solutions & Semiconductor Solutions
  - Global Applications Technology Engineering Group (GATE) – Assembly Solutions

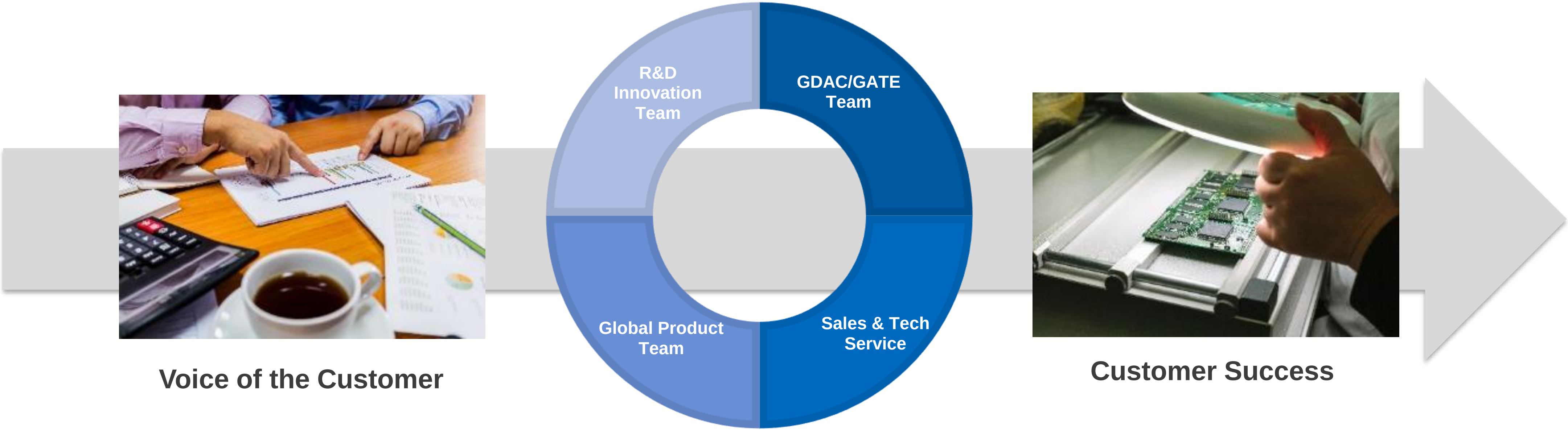
Technical Expertise for Troubleshooting

Fast Customer Response

Joint Customer Development Projects

Support for Alpha and Beta Site Testing

Connecting Global R&D to Regional Sales + Service



Voice of the Customer

R&D Innovation Team

GDAC/GATE Team

Global Product Team

Sales & Tech Service

Customer Success

Environmental, Social and Governance

Element Solutions, Inc. Initiatives

Element Solutions, Inc. ESG Initiatives

Element Solutions, Inc. (ESI) has committed to setting company-wide goals across four key areas that were deemed material to our company:

- Reducing our energy use and emissions
- Improving employee health and safety performance
- Increasing diversity, equity and inclusion (DE&I)
- Increasing growth through sustainable chemistry solutions

- ESI has set goals related to the above key areas. Details can be found in the Sustainability section of the Element Solutions, Inc. website (link below).

https://elementsolutionsinc.com/sustainability

Element Solutions, Inc. ESG Initiatives

ESG commitments

In 2021, we continued to further our ESG commitments and established goals against each of these ESG priorities.

These goals align with our sustainability and business strategies and are closely aligned with the United Nations Sustainable Development Goals (UNSDG). We intend to report our progress toward these goals on a periodic basis.

Sustainability goals tracking and monitoring

ESI collects environmental and social data, and tracks related KPIs, which are reviewed by local managers and functional leadership. Performance against our Energy Use & Emissions and Health & Safety goals is discussed regularly within our Supply Chain Sustainability Council. Performance against our DE&I and Sustainable Chemistry goals is discussed regularly with HR and Finance leadership. Where deemed appropriate, progress against our goals is reported to senior management and our ESG Executive Steering Committee.

Our Sustainability Goals support our alignment with the following United Nations Sustainable Development Goals:

Element Solutions, Inc. – Industry Recognition

- Element Solutions Inc. is ranked among America’s most responsible companies by Newsweek Magazine. ESI ranked #46 overall in the list and #9 within the Materials and Chemicals industry classification.

- Element Solutions, Inc. has achieved EcoVadis Silver Sustainability Rating, ranking ESI among the top 10% of the companies rated by EcoVadis globally, a testament to our strategy of enabling sustainability and the big steps we are taking to achieve a smaller footprint. EcoVadis is a leading provider of sustainability ratings across environmental, social and ethical performance, rating more than 75,000 companies in over 200 industries.

Element Solutions, Inc.
India Corporate Social Responsibility

Key Initiatives

Element Solutions CSR Statement

Element Solutions Inc., the ultimate parent company of Cookson India Private Limited is an organization mindful of ethical and environmental responsibilities. We pledge to uphold operational excellence while providing high quality, innovative products to advance green initiatives in the industries and supply chains in which we participate. We aim to provide a high-level of protection to human health and the environment, not only in the way that we make the products, but in the way the products are used and disposed of by customers. Through our charitable giving and volunteer initiatives, we aim to have a positive impact on local communities.

Elements of Our Culture

Challenge

We establish ambitious goals, take calculated risks, maintain high standards and seek to exceed expectations

Commit

We make commitments and hold ourselves accountable, individually and as teams, to deliver on them

Collaborate

We value teamwork, with our customers and our colleagues, in pursuit of excellence and improvement in everything we do

Choose

We empower our employees to make choices and take calculated risks. We choose to hire, recognize and reward people who demonstrate good judgement and choose to have good attitudes and strong work ethics

Care

We care about our customers, our colleagues, our environment and our place in the world at large

Our CSR Initiatives Are Reflective of Our Culture

India CSR Initiatives

Healthcare, Including Preventive Healthcare

Education and Skills Development, Technology Incubation and Research

Environment – Green Cover and Water Conservation

We have chosen education, healthcare and environment as focus areas with a view to **support sustainable development**. These focus areas are consistent with ESI’s CSR statement, Culture, the Government of India guidelines on CSR, as well as the United Nations Sustainable Development Goals.

CSR Initiative – Example Project
Education, Skills Development, Technology Incubation & Research at IIT Madras

- Cookson India Private Limited (Element Solutions Inc. India business) has provided a CSR grant to build a Center of Excellence for Advanced Electronics Manufacturing and Skills Development at IIT Madras.
  - Lab being constructed for the Center at the Central Electronics Center (CEC) at IIT-Madras.
  - SMT line and test bed and training center at CEC
- Objectives of this project are:
  - Enable better matching between end user skills and personnel requirements with availability and capability of graduating engineers.
  - Support the Electronics Hardware Start-up Ecosystem within the universities, to enable first article and prototyping runs of PCB Assemblies and to support industry in the respective geographic clusters.
  - Serve as a starting point and an anchor initiative, to further expand such programs to include topics related to Advanced Electronics Technology, Electronics Product Design, Electronics Packaging, PCB Design, PCB Manufacturing, Prototyping, Electronics Manufacturing Excellence.
  - Build Research Test Bed for 5G, IoT, Embedded Systems and Smart Manufacturing concepts.

CSR Initiative – Example Project
Education, Skills Development, Technology Incubation & Research at IIT Madras

- **Scholarships and Fellowships:**
- Cookson India Private Limited (Element Solutions Inc. India business) has provided scholarships to deserving and underprivileged undergraduate students in Metallurgy and Materials Science, Chemical Engineering and Electrical Engineering at IIT Madras, IIT Delhi and College of Engineering Pune.
- At IIT Delhi, preference is given to women pursuing engineering in Electronics.
- Cookson India Private Limited (Element Solutions Inc. India business) has provided fellowships to M-Tech students in Metallurgy and Materials Science, Chemical Engineering or Electrical Engineering at Indian Institute of Science, Bengaluru, for their second year of study at the Center for Nanoscience and Engineering (CeNSE) at IISC.

CSR Initiative – Example Project
Education, Skills Development, Technology Incubation & Research at IIT Madras

- **Technology Incubation**:
- Cookson India Private Limited (Element Solutions Inc. India business) has provided technology incubation funding and support to Incubation Centers at IIT Madras (IIT-M Incubation Cell) and College of Engineering Pune (Bhau Institute of Innovation, Entrepreneuship and Leadership) to support multiple start-ups in relevant fields.

CSR Initiative – Example Project
Healthcare – COVID Relief Projects

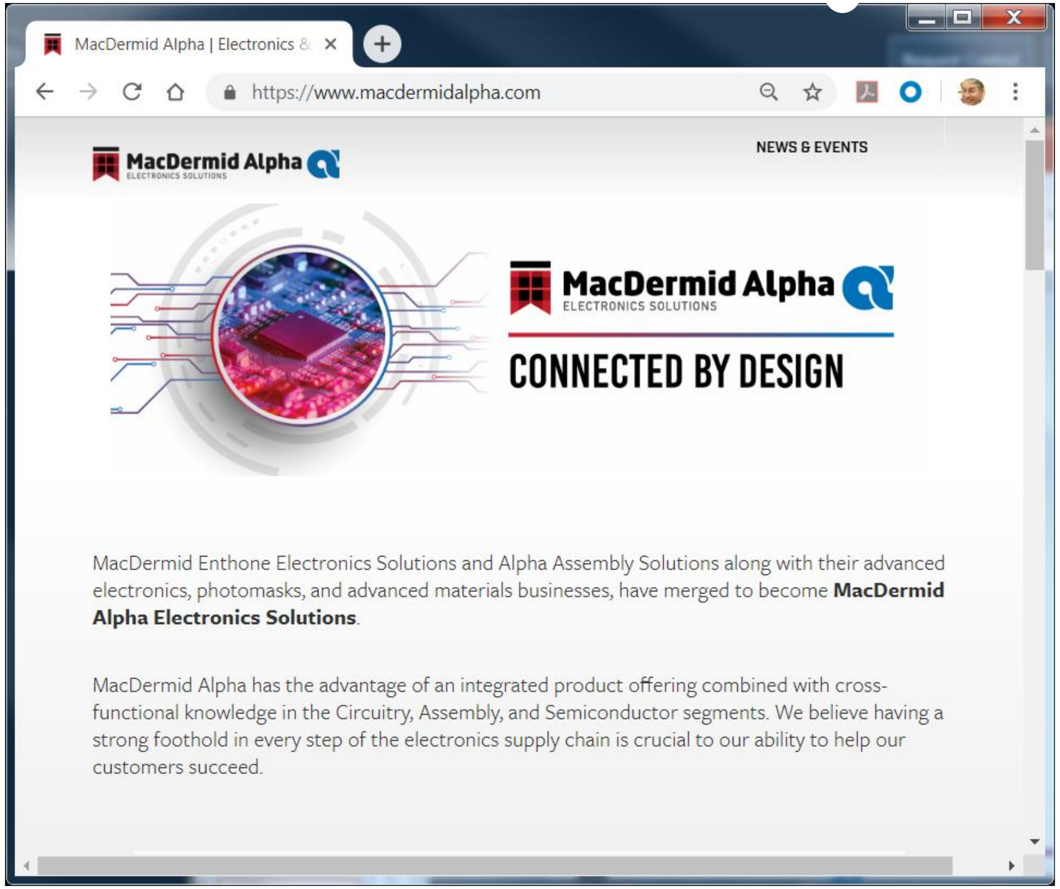
Cookson India Pvt. Ltd. (ESI’s India business) contributed to Rotary Club of Madras Charitable Trust for two 14 ft refrigerated trucks with a total capacity of transporting 2.75 million vaccine doses from the Central Vaccine Store to the Zonal Vaccine Stores in the Tamil Nadu Government’s Vaccine Cold Chain. Subsequently, Cookson India contributed to Rotary Club of Madras to partially fund a Rapid Vaccination Mobile Unit which was handed over for use to the Government of Tamil Nadu and is in use in Chennai City. This unit is capable of delivery in arms of up to 200-300 vaccine doses per day. It is also being used for eye camps and other medical camps.

CSR Initiative – Example Project
Environment – Plantation Drive

Cookson India Pvt. Ltd. (ESI’s India business) conducted a tree plantation drive in five government schools close to our Manesar Haryana facility. Over 400 saplings were planted by our North India team members in partnership with the school staff.

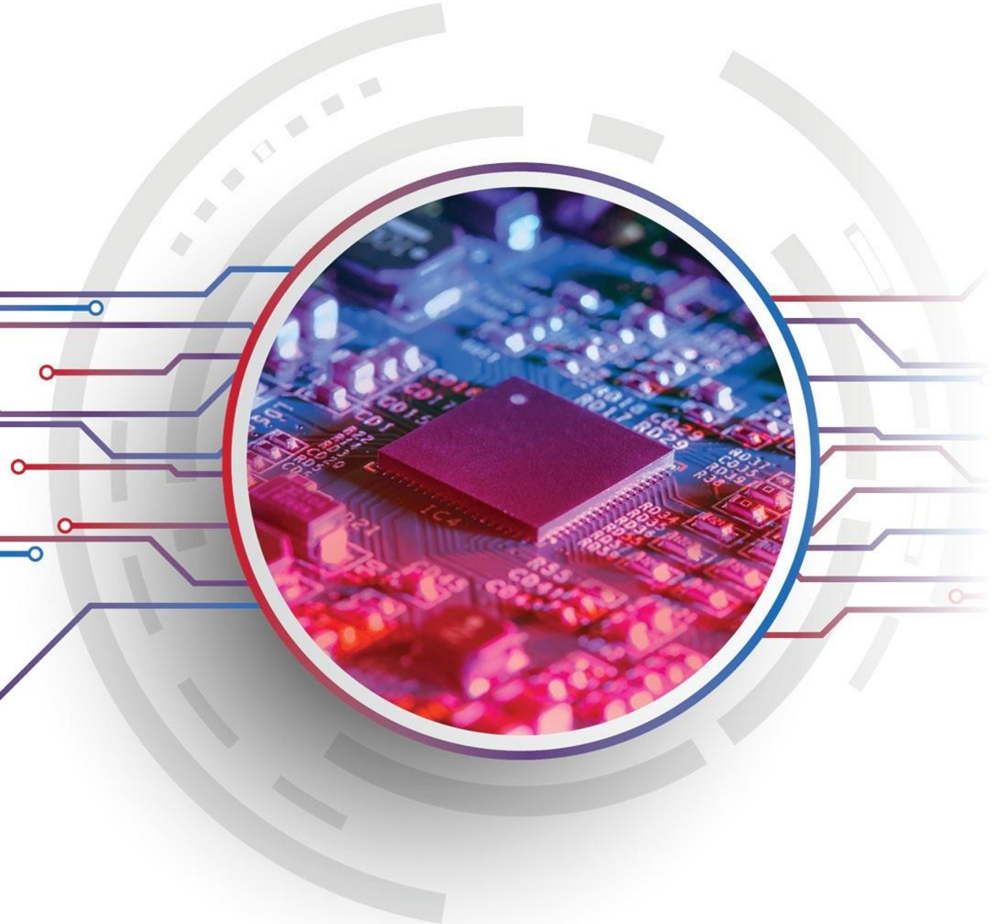
Stay Connected…

Please contact us for further information on how MacDermid Alpha Electronics Solutions can help you today.



MacDermid Enthone Electronics Solutions and Alpha Assembly Solutions along with their advanced electronics, photomasks, and advanced materials businesses, have merged to become **MacDermid Alpha Electronics Solutions**.

MacDermid Alpha has the advantage of an integrated product offering combined with cross-functional knowledge in the Circuitry, Assembly, and Semiconductor segments. We believe having a strong foothold in every step of the electronics supply chain is crucial to our ability to help our customers succeed.



Thank you