Coherent Expands Thermal Management Portfolio with High-Performance Bondable Diamond Solutions

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SAXONBURG, Pa., Jan. 19, 2026 (GLOBE NEWSWIRE) -- Coherent Corp. (NYSE: COHR), a global leader in photonics, today announced the launch of its state-of-the-art Bondable Diamond solutions for thermal management: a diamond solution engineered with a specialized surface finish that enables direct bonding to semiconductor die for electronic and opto-electronic applications. By eliminating or dramatically reducing thermal interface resistance, bondable diamond significantly improves device cooling performance.

Coherent's bondable diamond features precisely controlled surface roughness, flatness, coatings, and preparation, enabling direct bonding to semiconductor materials including silicon, silicon carbide, gallium nitride, aluminum gallium nitride, gallium arsenide, and indium phosphide. Bonding solutions may also incorporate high-thermal-conductivity interlayers and metallic coatings to meet customer requirements.

Conventional thermal spreaders rely on Thermal Interface Materials (TIMs), whose thermal resistance limits overall performance. Direct bonding – enabled by Coherent's bondable diamond through fusion, hybrid, or metallic bonding – reduces interface thermal resistance by up to 99% and can be implemented on die sizes up to 100mm square.

COHERENT THERMAL MANAGEMENT PORTFOLIO WITH HIGH-PERFORMANCE BONDABLE DIAMOND SOLUTIONS



Coherent announced the launch of its state-of-the-art Bondable Diamond solutions for thermal management

Coherent uniquely combines production-scale diamond growth, world-class surface finishing, advanced coating technologies, and deep semiconductor process expertise. This vertically integrated capability enables the design and manufacture of high-performance, high-yield bondable diamond thermal spreaders at scale.

"As one of the world's largest producers of technical diamond since 2010, and a pioneer in diamond fabrication and coating, Coherent is uniquely positioned to deliver breakthrough thermal performance through processes tailored to our customer needs," said Steve Rummel, Senior Vice President, Engineered Materials Business Group at Coherent.

Coherent partners closely with customers to solve complex thermal and process-integration challenges on die sizes up to 100mm. Bondable diamond can be combined with other Coherent materials, including solutions from Coherent Ceramics, and may incorporate features such as conductive elements, vias, channels, and optical structures. Coherent is actively collaborating with customers today to develop materials, coatings, and bonding processes compatible with their device fabrication workflows. Attendees can learn more about bondable diamond at Photonics West 2026 in San Francisco.

For more information, visit www.coherent.com.

About Coherent

Coherent is the global photonics leader. We harness photons to drive innovation. Industry leaders in the datacenter, communications, and industrial markets rely on Coherent's world-leading technology to fuel their own innovation and growth.

Founded in 1971 and operating in more than 20 countries, Coherent brings the industry's broadest, deepest technology stack; unmatched supply chain resilience; and global scale to help its customers solve their toughest technology challenges. For more information, visit us at coherent.com.

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A photo accompanying this announcement is available at https://www.globenewswire.com/NewsRoom/AttachmentNg/8b772ec4-6f1c-4206-a3ca-587482137851