

UniversityWafer, Inc. Launches U.S.-Made 150mm and 200mm 4H Silicon Carbide Wafers for Next-Gen Semiconductor Research

150mm and 200mm 4H Silicon Carbide Wafers

SOUTH BOSTON, MA, UNITED STATES, April 24, 2025 /EINPresswire.com/ -- UniversityWafer, Inc., a leading global supplier of semiconductor substrates, is proud to announce the availability of high-quality, low-cost, USA-manufactured 4H Silicon Carbide (4H-SiC) wafers in 150mm and 200mm diameters.



Under the leadership of Christian Baker, Founder and CEO, this new product offering reinforces UniversityWafer's commitment to advancing semiconductor innovation through American-made materials, supporting critical R&D and production in high-performance electronics.

"Bringing U.S.-made 4H-SiC to our product line reflects our ongoing investment in domestic semiconductor capabilities," said Baker. "Our 150mm and 200mm SiC wafers are not only cost-effective but meet the most stringent industry specs for research and device manufacturing."

Key Applications of 150mm & 200mm 4H-SiC Wafers

The 4H-SiC wafers are engineered for advanced research and commercial applications, including:

Power Electronics: MOSFETs, Schottky diodes, and high-voltage switches

Electric Vehicles (EVs): On-board chargers and traction inverters

RF & Microwave Devices: Radar, 5G, and satellite communications

Wide Bandgap Research: Exploration of next-gen energy-efficient semiconductors

Quantum Computing & Harsh Environment Sensors: Radiation-hardened platforms

Superior Specifications at Competitive Prices

UniversityWafer's 4H-SiC wafers are available in multiple grades including Ultra Prime, MOSFET, Diode, and Research grades. Key features of our wafers include:

Crystal Orientation: 4.0° off-axis toward [1120] for improved epitaxial growth

Ultra-low TTV and bow: $\leq 4 \mu\text{m}$ TTV and $\leq \pm 25 \mu\text{m}$ bow for excellent flatness and process control

Low Dislocation Densities:

MPD: $\leq 0.5 \text{ cm}^2$ (200mm Ultra Prime)

BPD: $\leq 1000 \text{ cm}^2$

Threading Screw Dislocation: $\leq 100 \text{ cm}^2$

Surface Roughness: $< 0.2 \text{ nm}$ (both Si and C faces)

Contaminant Control: Metals such as Al, Fe, and Cu $\leq 1 \text{E}11 \text{ atoms/cm}^2$

This balance of quality, scalability, and affordability makes UniversityWafer's 4H-SiC wafers an ideal choice for both cutting-edge academic research and volume industrial prototyping.

About UniversityWafer, Inc.

Founded by Christian Baker, UniversityWafer, Inc. supplies research institutions, national labs, and commercial fabs with one of the world's largest selections of semiconductor wafers. From silicon to compound substrates, our mission is to empower breakthroughs in microelectronics, photonics, and beyond.

Contact:

UniversityWafer, Inc.

11 Elkins Street, Suite 330

South Boston, MA 02127

☎ +1 (617) 268-2595

✉ sales@universitywafer.com

🌐 www.universitywafer.com

Christian J. Baker

UniversityWafer, Inc.

+1 617-268-2595

[email us here](#)

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