4-inch production-grade 4H-SiC wafer

High-purity semi-insulating silicon carbide reference configuration for high-power, RF, microwave and advanced device development.

PARAMETER	REFERENCE VALUE	ENGINEERING NOTE
MATERIAL	**4H-SiC**	Wide-bandgap silicon carbide polytype
GRADE / TYPE	**Production Grade / HPSI**	High-purity semi-insulating reference
DIAMETER	**4 inch / 99.5–100 mm**	Nominal wafer format
THICKNESS	**500 ± 25 µm**	Nominal substrate thickness
ORIENTATION	**<0001>**	Reference crystal orientation
OFF-AXIS	**0 ± 0.2°**	Angular tolerance
SURFACE	**Si-face CMP / C-face CMP**	Chemical-mechanical polished
ROUGHNESS	**Ra ≤ 0.2 nm**	Controlled surface finish
RESISTIVITY	**≥ 1 × 10^{10} Ω·cm**	HPSI electrical reference
FWHM	**≤ 45 arcsec**	Crystal-quality reference
BOW	**≤ 5 µm**	Centerline curvature limit
WARP	**≤ 12 µm**	Reference plane deviation limit
MICROPIPE DENSITY	**≤ 0.25 ea/cm²**	Defect acceptance reference
PACKAGING	**Nitrogen-filled / vacuum-sealed**	Protective shipment configuration

REFERENCE CONFIGURATION

4H-SiC HPSI

Custom diameter, thickness, grade, finish, flat or notch and packaging can be reviewed against the device process.



Custom manufacturing: send a drawing or target values, intended application and order quantity for engineering and commercial review.

The values above summarize the supplied reference configuration. Final acceptance values, inspection methods and documentation are those fixed in the approved quotation, drawing and purchase documents. Material comparison values elsewhere on the website are typical references, not device guarantees.

Shanghai Xinkehui New Material Co., Ltd.
Room 1805, Building 1, Wanda Plaza, Dianshanhu Avenue, Qingpu District, Shanghai, China
Factory: No. 1 Jingjing Road, Jingshan, Hubei Province, China

Product inquiries
Phone / WhatsApp
+86 159 2135 5861
Email
ada@xinkehui.cn