



Alpha **SAPPHIRE**

The world's most sustainable synthetic sapphire glass.

SUSTAINABLE FUTURE-FOCUSSED CLEANER PROCESS

Low carbon, high quality. The future of sapphire glass.

The synthetic sapphire glass boules we produce are manufactured with the world's most sustainable, ultra-high purity alumina from Alpha HPA and forged with Ebner-Fametec's low-carbon crystal growth technology.

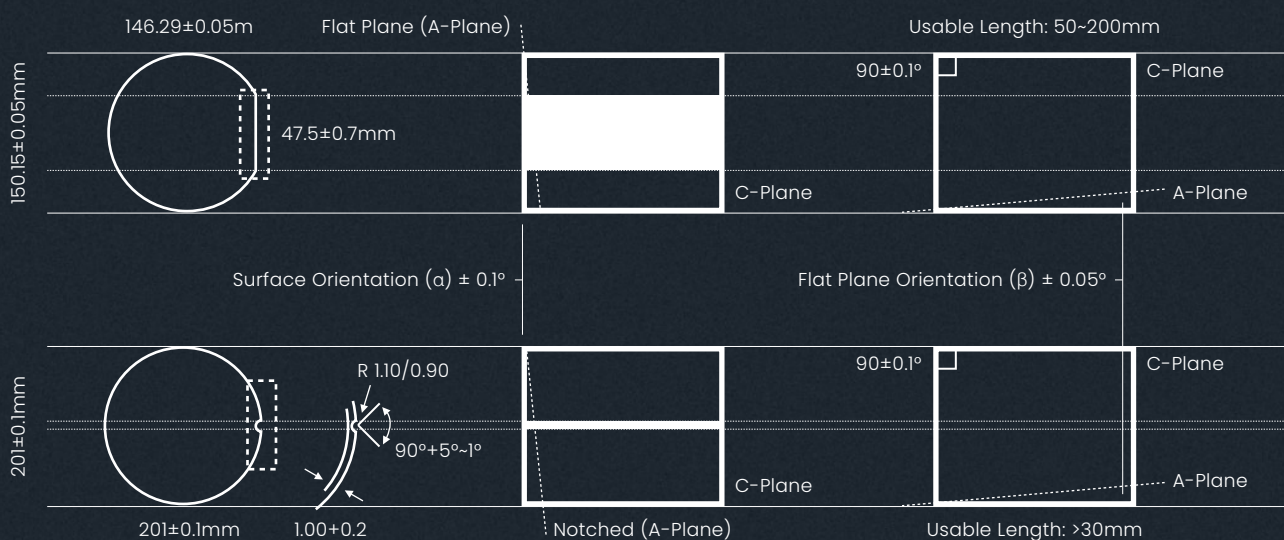
Uncompromised quality with unparalleled sustainability.

We provide high quality, sustainable synthetic sapphire products worldwide from Australia. Learn more about our Ultra Sapphire™ on our website.



McSAP Typical Ingot Specification

Item	Unit	Target/Tolerance	
Surface Orientation		C-Plane/ A-Plane/ M-Plane (as requested)	
Off-Angle Toward (M-Axis)	degree	0.0	±0.05
Off-Angle Toward (A-Axis)	degree	0.0	±0.05
Primary Flat/ Notch Orientation		Customisable	
Diameter	mm	6" / 8" / +	±0.1
Length	mm	avg. 150mm	
Exclusive Zone	%	Customisable	
Surface Condition		As-Ground/ Customisable	

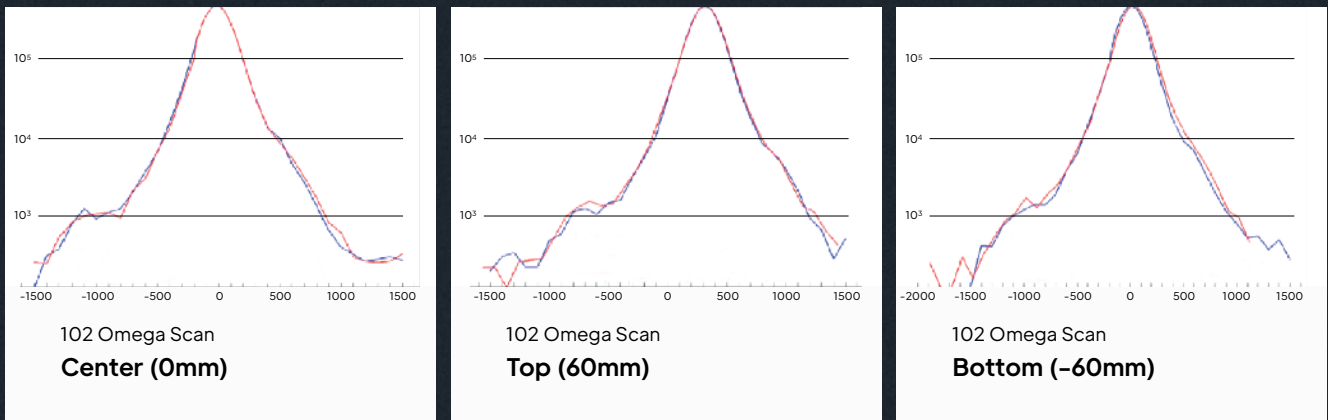


Advantages McSAP Technology

McSAP provides uniform product dimensions, up to 80% raw material utilisation, low CO₂ footprint and low electricity use (8% vs. 40% KY) 100% renewable energy growth sapphire. It also offers higher throughput with multi-core growth (5" x 8" boules or 6" x 6" boules rep run).

Sapphire Wafer X-Ray Scan

High quality of crystal by XRD analysis (rocking curve measurement) with McSAP 6" wafer evaluated by third party.

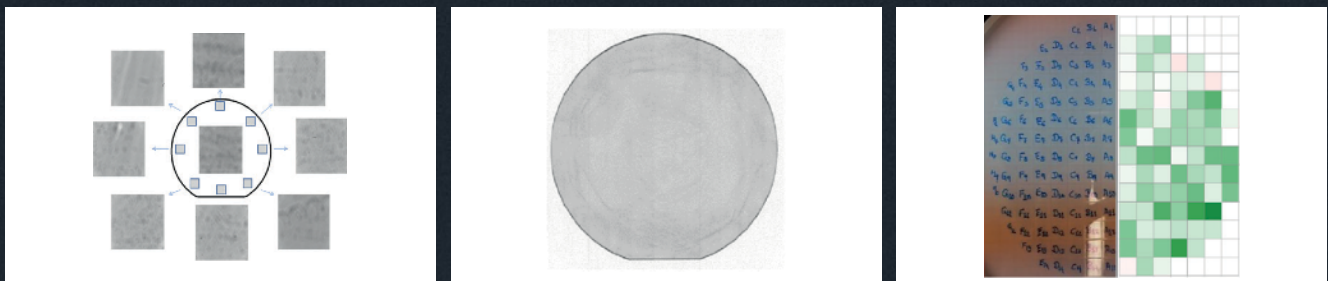


McSAP Sapphire

KY Sapphire

Homogeneity of Crystal Property

Homogeneous structure represented by a distribution of bi-axial tensile, verified by crystal-structure analysis and XRT, assessed through the B3B test on a McSAP 6" wafer by a third party.



High Quality Single Crystal (SEM)

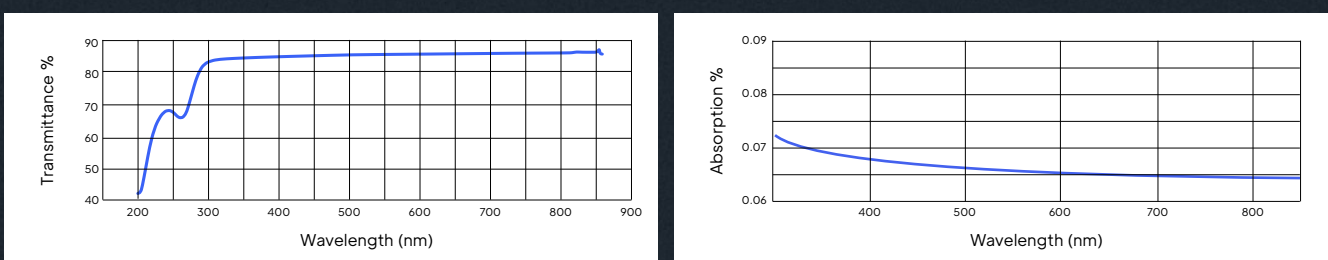
Uniform XRT Image of 6" Wafer

Uniform Distribution of Tensile Strength

max [MPa]

Transmittance and Absorption

The McSAP wafer demonstrated over 85% transmission in the wavelength range of 400nm~850nm and consistent optical characteristics across three independent wafers.



Introducing Ultra Sapphire™

Sustainable synthetic sapphire, grown in Queensland, Australia using ultra-high purity sintered alumina.

6 and 8-inch Boules

Larger boules provide greater growth area for semiconductors and more capacity for optical faces.



A and C-Axis Growth

We can grow our sapphire boules on a-axis and c-axis, with ~80% boule utilisation with c-axis crystal growth.

Low Carbon

Produced using ultra-high purity, sustainable materials and 100% renewable energy.

Future-focussed product applications.

LED TECHNOLOGY ELECTRONICS OPTICS

Our Ultra Sapphire™ is used across a diverse array of industries, thanks to its exceptional quality and precision.

