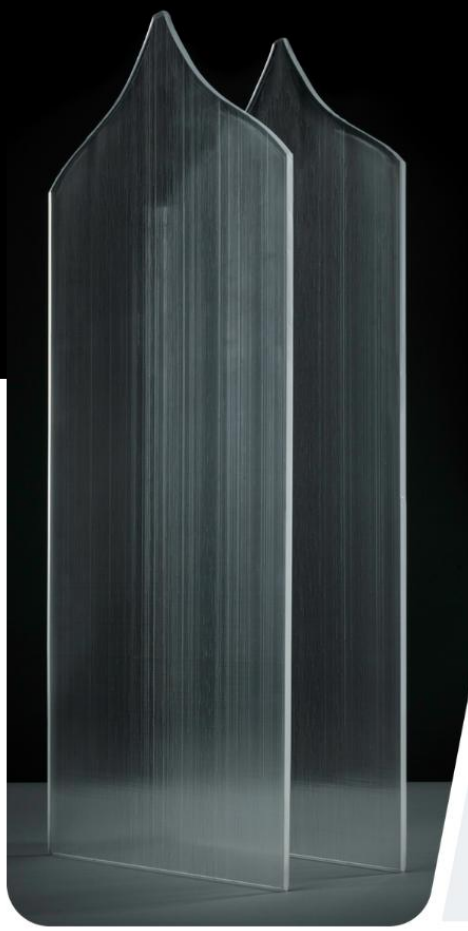
Attalon

Attalon Sapphire Panels

Attalon worldclass material experts and growth operation produces A-plane sapphire panels utilizing a process that provides extraordinary mechanical strength, high optical transmission and low Transmitted Wavefront Distortion (TWF). These attributes make sapphire panels a preferred material choice for many defense and aerospace applications that require large non-segmented or segmented window assemblies.

Attalon utilizes a vertically integrated sapphire and assembly.

Attalon has demonstrated sapphire characteristics consistent with known industry values, and has material experts on staff to answer any technical questions you may have.



MATERIAL SPECIFICARIONS

Coefficient of Thermal Expansion (-75 °C to 200 °C)	**4 - 6.1 ppm/°C**
Euibiaxial Flexure Strength*: (Tested in Ring-On-Ring Configuration)	**56.0 ksi** [66,000 psi, 386 MPa]
Modulus of Elasticity: (Tested per ASTM C1259)	**61E +06 psi** [420 GPa]
Knoop Hardness: (a-plane & c-plane) (Tested per ASTM C730)	**1500 - 1650**

* Average strength value for testing is in accordance with ASTM C1499 Value is representative of samples prepared via Attalon's fabrication process.

SIZES AVAILABLE

A-plane:
SIZES AVAILABLE UPON REQUEST.

*Average strength value for testing is in accordance with ASTM C1499. Value is representative of samples prepared via Attalon's fabrication process

%T - A-PLANE SAPPHIRE - 0.220" THICK

TYPICAL MEASURED VALUES

Transmission: (0.220" thickness) Index of Refraction

λ	T	λ	η
0.70 µm	86.3%	0.70 µm	1.7609
1.06 µm	86.5%	1.06 µm	1.7532
1.57 µm	86.7%	1.57 µm	1.7443
3.00 µm	87.8%	3.00 µm	1.7111
4.00 µm	87.1%	4.00 µm	1.6746
5.00 µm	58.3%	5.00 µm	1.6238