

MATERIAL SPECIFICATIONS

Coefficient of Thermal Expansion: (-75 °C to 200 °C)	4 – 6.1 ppm/°C
Equibiaxial 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: (Tested per ASTM C730)	1500 – 1650

*Average strength value for testing is in accordance with ASTM C1499. Value is representative of samples prepared via II-VI Optical Systems fabrication process.

SIZES AVAILABLE

A-plane:
SIZES AVAILABLE UPON REQUEST

Sapphire Panels | EFG

II-VI Optical Systems world-class material experts and growth operation produces A-plane sapphire panes utilizing an Edge Fed Growth (EFG) process that provides extraordinary mechanical strength, high optical transmission and low Transmitted Wavefront Distortion (TWF). These attributes make EFG sapphire a preferred material choice for many defense and aerospace applications that require large non-segmented or segmented window assemblies.

II-VI Optical Systems utilizes a vertically integrated sapphire product line, and has control of growth, window processing, coating and assembly.

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

TYPICAL MEASURED VALUES	Transmission: (0.22" thickness)	λ	0.70 μm	T	86.3%	Index of Refraction:	λ	0.70 μm	n	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

%T - A-plane EFG Sapphire - 0.220" thick

