

II-VI

SAPPHIRE PANELS

II-VI Optical Systems 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.

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.

MATERIAL SPECIFICATIONS

Coefficient of Thermal Expansion
(-75 °C to 200 °C) 4 - 6.1 ppm/°C

Eiubiaxial Flexure Strength*:
(Tested in Ring-On-Ring Configuration) 56.0 ksi
[66,000 psi,
386 MPa]

Modulus of Elasticity:
(Tested per ASTM C1259) 61 E + 06 psi
[420 GPa]

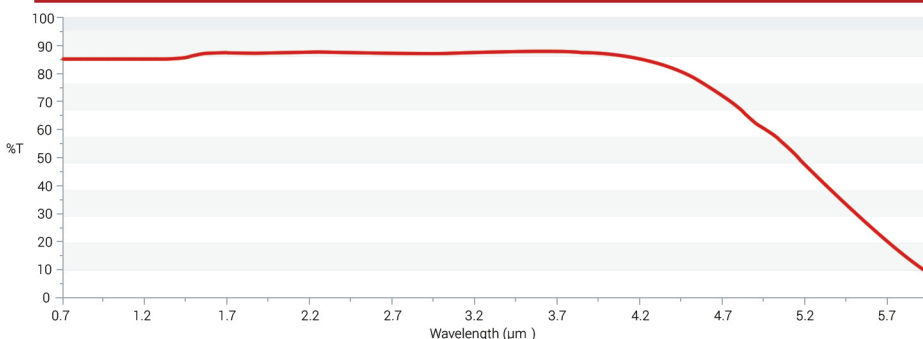
Knoop Hardness:
(Tested per ASTM C730) 1500 - 1650

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 II-VI Optical Systems fabrication process.

%T - A-PLANE SAPPHIRE - 0.220" THICK



TYPICAL MEASURED VALUES

Transmission: (0.22" thickness) Index of Refraction

λ	T	λ	n
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

II-VI OPTICAL SYSTEMS

www.opticalsystems.com

II-VI Optical Systems
36570 Briggs Road
Murrieta, CA 92563

T. 951.926.2994
F. 951.926.9026
E: opticalsystems.sales@ii-vi.com