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

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

II-VI Optical Systems world-class material experts and growth operation produces A-plane sapphire panels 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.

SIZES AVAILABLE

A-plane:
SIZES AVAILABLE UPON REQUEST

TYPICAL MEASURED VALUES

<table>
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<tr>
<th>Transmission: (0.22” thickness)</th>
<th>λ</th>
<th>0.70 μm</th>
<th>1.06 μm</th>
<th>1.57 μm</th>
<th>3.00 μm</th>
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<tr>
<td>%T</td>
<td>86.3%</td>
<td>86.5%</td>
<td>86.7%</td>
<td>87.8%</td>
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%T - A-plane EFG Sapphire - 0.220” thick

Wavelength (μm)