



AeroZero® PhaseBlue™ Film AZ-PB

Product Description

AeroZero® PhaseBlue™ Film is a flexible polyimide aerogel film with a reticulated microstructure that contains 80-85% air. The high air content substrate results in excellent signal propagation properties and superior RF transparency. The polyimide matrix provides mechanical strength, high heat resistance and chemical resistance, which enables the aerogel film to be processed using standard printed circuit board fabrication techniques.

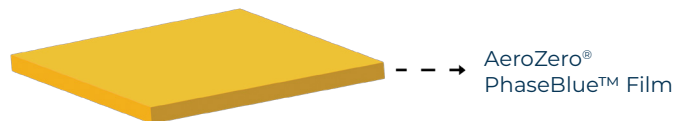
AZ-PB can be processed into copper clad laminates using thermal bonding adhesives.

Features

- ◇ Low dielectric constant and low loss
- ◇ No added reinforcement or fillers
- ◇ High heat resistance
- ◇ Excellent chemical resistance
- ◇ Excellent dimensional stability
- ◇ Flexible/conformable

Applications

- ◇ Antennas
- ◇ Microstrip and Stripline Circuits
- ◇ Millimeter Wave Applications
- ◇ Military Radar Systems
- ◇ Missile Guidance Systems



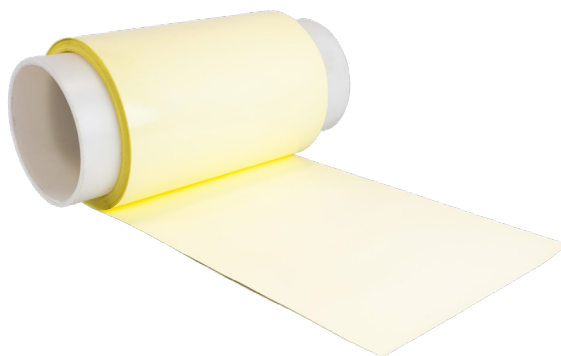
Standard Dimensions

- ◇ Test Sample: 216 x 280 mm (8.5 x 11 in)
- ◇ Sample Roll: 304 mm x 3.05 m (1 x 10 ft)
- ◇ Standard Roll: 304 mm x 30.5 m (1 x 100 ft)

Storage

Recommended Storage Conditions:

- ◇ Temperature: below 25 °C (77 °F)
- ◇ Relative Humidity: below 50%



Lighten. Protect. Perform.



AeroZero® PhaseBlue™ Film AZ-PB

Physical and Mechanical Properties	Method	Value
Product Code	-	1500 - 0000 - 000
Thickness, μm (mil)	ASTM D374, Method C	165 (6.5) +/- 5%
Tensile Strength, MPa (ksi)	ASTM D882-12	7.2 (1.0)
Young's Modulus, MPa (ksi)	ASTM D882-12	250 (36)
Tensile Elongation at Break, %	ASTM D882-12	6.0
Density, g/cm^3	ASTM D202	0.27
Electrical	Method	Value
Dielectric constant, 10 GHz	IPC-TM-650 2.5.5.5	1.45
Dissipation factor, 10 GHz	IPC-TM-650 2.5.5.5	0.004
Volume Resistivity, MOhm-cm	IPC-TM-650 2.5.17E	10^5
Surface Resistance, MOhms	IPC-TM-650 2.5.17E	10^8
Dielectric Strength, kV/mm	ASTM-D149-20	60
Thermal	Method	Value
Thermal Conductivity (25 °C), W/m·K	ASTM C518-21	0.034
Specific Heat Capacity (25 °C), J/g·°C	ASTM E1269	1.00
Glass Transition Temp (T_g , DMA), °C (°F)	ASTM E1640-13	305 (581)
Decomposition Temp (T_d , 10wt% loss), °C (°F)	ASTM E2550-17	530 (986)
Other	Method	Value
Moisture Absorption, %	IPC-TM-650 2.6.2D	2.6
Chemical Resistance	IPC-TM-650 2.3.2G	PASS
UL Flammability Rating	UL94	VTM-0

Data within this table are typical values for the standard AeroZero® PhaseBlue™ film product family.
Product Code # 1500-0000-000

 AeroZero® PhaseBlue™ film: 165 micron (6.5 mil)



Blueshift products are manufactured under a certified AS 9100D/ ISO 9001:2015 Quality Management System facility. See our website for more information on Blueshift products.