



Four Methods of Protection

There are four methods of protection commonly used in the aviation industry to protect antennas and other equipment located in composite housing.

One method utilizes solid lightning bars along the composite housing. This method results in significant degradation of the antenna patterns of the antennas that are installed within the composite housing, as well as creating significant drag. Severe strikes have deformed these metal bars causing significant damage to the radome.

A second method consists of installation of foil strips along the composite housing. However, this approach is limited to a single strike capability and must be replaced after each strike.

A third method consists of metal dots mounted flush with the composite housing connected to the aircraft ground (i.e. Dayton Granger Transtrike Diverter Strips). This is an excellent system; however, for low-speed aircraft, the flexibility and ease of installation of Strikeguard offers a significant advantage.

Strikeguard consists of finely-deposited aluminum particles, epoxied on a flexible substrate with an extremely strong adhesive backing. The aluminum particles have an oxidation coating permitting the strip to measure open-circuit at DC potentials; however, during lightning attachment, the

Strikeguard Lightning Diverter Tape- Multiple Part Numbers

The ULTRAGUARD lightning diverter strip consists of a series of rectangular segments that produces a lower breakdown voltage than conventional diverter strips. The new elongated-rectangle design reduces the number of segments per given length. With fewer segments per length, there are fewer air gaps to be ionized during a lightning strike. The segments are much smaller than the radar frequency wavelength and thus are transparent to aircraft radar. ULTRAGUARD is transparent to RF energy up through approximately 40 GHz.

Typically, a 30-inch long diverter strip with round segments ionizes at approximately 40 to 60 kV. A 30-inch long strip of ULTRAGUARD with the same voltage applied ionizes at under 20 kV. This lower voltage represents a substantial advantage in protection of aircraft radomes and the equipment located inside.

All Dayton-Granger diverter strips are custom fit to your specific aircraft and are manufactured in three colors: white, black, and grey. For more information please contact your local distributor or Dayton-Granger, Inc.

Characteristics

Key Characteristics		
Dimension	Width	0.4 inches
	Thickness	0.022 inches
	Weight	1.8 grams/ft.
Electrical Performance	Voltage Breakdown	1.5 kV/inch
	RF Transparency	1 dB at 40 GHz
Environmental Performance	Operating Temperature	-77° F to +165° F
	Altitude	Sea Level to 50,000 ft.
	Fluid Resistance	De-icing, Hydraulic, Jet A
	Salt-Fog	7.5 pH, 5% salt @95° F, 12 psi
Advantages	Transparency	
	Aerodynamic Characteristics	
	Multiple Lightning Strike Capability	
	Replaceability	