Wide Band Cascade Absorber IP-090BL

The TDK IP-090BL cascade absorber is the most technically advanced ultra wide band absorber. Its computer designed, lightweight structure offers superb mechanical strength combined with exceptional performance.

The IP-090BL combines the magnetic resonance loss characteristics of TDK IB-011 ferrite tiles with a performance matched styrofoam absorber (a concept invented by TDK). High absorption performance is achieved as TDK is the only absorber supplier who manufactures both ferrite tiles and resistive absorbers, ensuring exact impedance matching from design to manufacture. The closed cell structure of the polystyrene produces an even and consistent carbon density throughout the absorber and enhances absorption performance. With a reflection attenuation of greater than 20dB at the frequency range from 30 MHz to 2,000 MHz and 30dB from 20 GHz to 40 GHz, the IP-090BL can achieve a deviation between theoretical NSA and measured NSA within ±3.5dB (ANSI C63.4 1992 & EN 50147-2).

![Graph of Frequency Characteristics](image)
With a length of 95 cm, the IP-090BL cascade absorber is the world’s shortest absorber over its given frequency range and performance. 10 meter semi-anechoic chambers can be constructed with dimensions of 18 m L x 12 m W x 8.4 m H, with a 20% increase in usable chamber space.

**Physical and Chemical Characteristics**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>600 mm x 600 mm x 950 mm (23.6” L x 23.6” W x 37.4” H)</th>
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</thead>
<tbody>
<tr>
<td>Basic Composition</td>
<td>Closed cell styrofoam/ferrite tiles. Does not soil hands or clothes on contact.</td>
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<tr>
<td>Mechanical Strength</td>
<td>4 kg/cm² tensile strength. Lightweight 5.5 kg. No damage to tips or tapers.</td>
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<td>Humidity Resistance</td>
<td>No deterioration with water. No hydrolysis effect.</td>
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<td>Chemical Stability</td>
<td>Not readily attacked by acids, alkalines and petroleum-based liquids.</td>
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<td>Product Life</td>
<td>15 years</td>
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<td>Fire Retardancy Certfication</td>
<td>NRL class 1, 2 and 3, UL 94 HBF, DIN 4102 class B</td>
</tr>
</tbody>
</table>

10 meter test range semi-anechoic chamber constructed by TDK utilizing IP-090BL absorbers.

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