



PRODUCT DESCRIPTION

Cathode is a specialized carbon fiber velvet that facilitates the generation of high-intensity electron pulses through field emission from the top of its carbon fibers. Designed and manufactured in the United States, these Cathodes can be tailored to suit different application requirements and can be crafted in a diverse range of physical shapes, including simple planar and cylindrical forms as well as intricate lobed configurations. By utilizing KULR Technology's exclusive technique of aligning carbon fibers in the vertical direction, we can incorporate various fiber types and densities onto a variety of substrates, resulting in top-performing solutions that meet your specific application needs.

FEATURES AND BENEFITS

- High performance, high reliability
- Can be applied to a multitude of substrates and geometries
- Maximum Operating Temperature of 1000°C with graphite substrate

TYPICAL APPLICATIONS

Typical applications include the generation of microwaves, x-rays, and laser radiation.

TYPICAL PROPERTIES

Characteristic	Demonstrated Capability
¹ Available Fiber Lengths, Typical (mm)	1 to 5 mm
² Available Fiber Diameters (mm)	5, 7
³ Fiber Density, 4% to 0.4%	% Covered by Area
⁴ Substrate	Graphite, aluminum, stainless steel, copper
Max. Operating Temperature (C)	1000+ for graphite substrate; 150 for metal
CTE	Determined by substrate
<ol style="list-style-type: none">1. 1 to 2 mm commonly used. Other lengths are stocked or are generally available on request, including bimodal (dual length) velvet.2. Area-coverage carbon fiber velvets available with 5 or 7 μm diameter fibers; 20 and 35 μm diam. fibers available only as discrete-fiber emitters with high-precision fiber length and placement.3. Shorter fibers yield higher fiber density; 1 mm fibers yield \sim4% density, while 5 mm fibers yield \sim0.4%.4. These are the most used substrates; inquire for others.	



AVAILABILITY

Please contact KULR Technology Group for additional information.

DISCLAIMER

Data on this Technical Data Sheet (TDS) are typical values and for reference only. The information provided in this TDS, including but not limited to the recommendations for use and application of the product, are based on our knowledge and experience of the product. The product can have a variety of different applications, as well as differing working conditions and environments that are beyond our control. Factors or events that could cause actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We cannot guarantee future results, performance, or achievements. Furthermore, no representations or warranties are made as to the accuracy or reasonableness of any assumptions on which the data or information is based.

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