

Anechoic Chambers and RF Pyramidal Absorbers

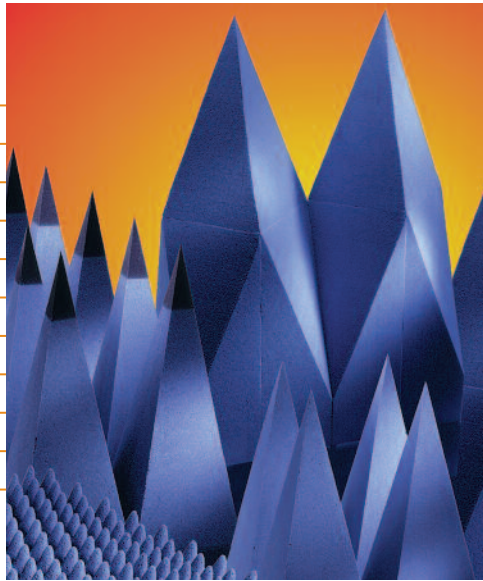


- Absorber Manufacturing
- Chamber Design & Layout
- Absorber Installation
- Full Turn-Key Solutions

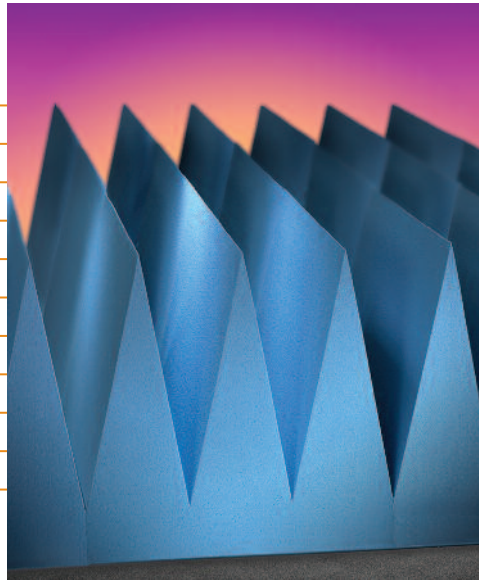
 **CUMING MICROWAVE**

Anechoic Chambers and EMC Chambers

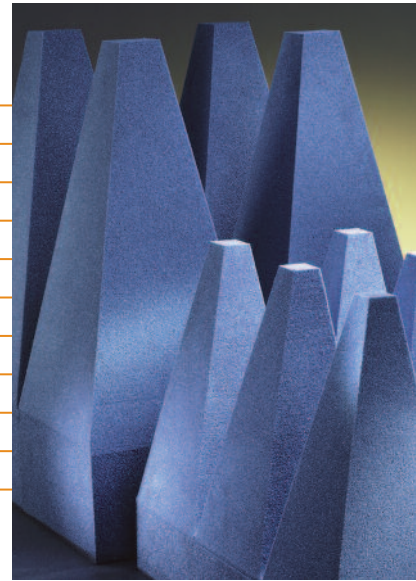
C-RAM SFC – TB 390-1



C-RAM SFC Wedge – TB 390-2



C-RAM SFC-EM – TB 390-3



C-RAM SFC – TB 390-1 and C-RAM SFC Wedge – TB 390-2 Comprise a full product line of premium-grade, pyramidal and wedge-shaped absorbers for anechoic chambers and laboratory test setup.

A full complement of matching vent absorbers: C-RAM EVA (TB 390 - 9) and walkway absorbers C-RAM SFC Walk Way (TB 390 - 14) are available.

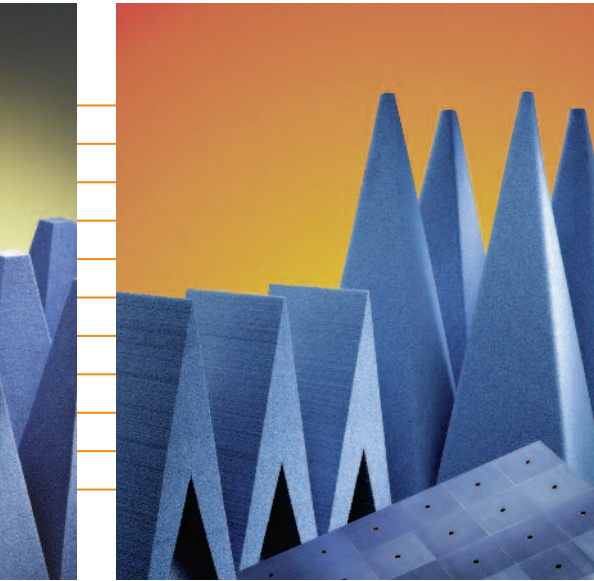
C-RAM SFC and associated products cover the frequency range from low MHz through millimeter wave.

The SFC-EM products are optimized for low frequency performance. C-RAM SFC-EM are truncated to save space and yield a rugged product. Ideal for MIL SPEC 462 – C, D, and E and CISPR-25 chambers. Also a low cost solution for EN 1000-4-3 and derivative specifications from 80 MHz through 40 GHz.

Product	<i>C-RAM SFC</i>	<i>C-RAM SFC Wedge</i>	<i>C-RAM SFC-EM</i>	<i>C-RAM FT</i>	<i>C-RAM HFP</i>	<i>C-RAM FAC</i>	<i>C-RAM EVA</i>	<i>C-RAM CFC</i>
TB Number	390-1	390-2	390-3	390-5	390-6	390-7	390-9	390-10
Function	<i>high performance pyramidal absorber</i>	<i>high performance wedge absorber</i>	<i>truncated pyramidal EMC absorber</i>	<i>low frequency ferrite absorber</i>	<i>low frequency hybrid absorber</i>	<i>high performance convoluted absorber</i>	<i>open cell absorber for outdoor & ventilation applications</i>	<i>clean room absorbers high performance</i>
Operating Frequency	<i>100 MHz & up</i>	<i>100 MHz & up</i>	<i>70 MHz and up</i>	<i>20 MHz to 1.5 GHz</i>	<i>20 MHz to 40 GHz</i>	<i>2 GHz & up</i>	<i>100 MHz & up</i>	<i>100 MHz to 30 GHz</i>
Thickness	<i>2.0" to 72"</i>	<i>6.0" to 24"</i>	<i>12" and 36"</i>	<i>0.25"</i>	<i>12" through 48"</i>	<i>0.75" to 4.0"</i>	<i>2.0" to 72"</i>	<i>4.0" to 36"</i>
Benefits	<i>broadband high performance pyramidal absorber</i>	<i>broadband wedge absorber</i>	<i>space saving low profile and rugged</i>	<i>ceramic (ferrite) tile absorber</i>	<i>very broadband EMC absorber</i>	<i>high performance high frequency</i>	<i>high power & ventilation applications outdoor pyramidal</i>	<i>clean room environment</i>
Relative Cost	<i>low to moderate</i>	<i>low to moderate</i>	<i>low cost</i>	<i>moderate to high</i>	<i>moderate to high</i>	<i>low</i>	<i>moderate</i>	<i>average</i>

Cummins

C-RAM FT & HFP – TB 390-5 and -6



A full product line for treatment of EMC test chambers—both for emissions testing and susceptibility testing. C-RAM FT, ceramic ferrite tiles and C-RAM HFP, hollow impedance-matched hybrid absorbers for 26 MHz through 40 GHz performance, meeting all the prevailing U.S. and European specifications.

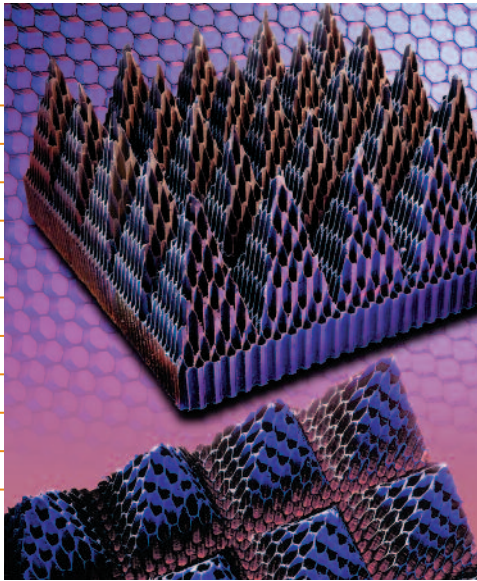
Absorber Installation:

Adhesive Bonding: Most common installation technique and most cost effective. Involves the use of a solvent based rubber contact adhesive for reliable mounting.

Velcro™ Fastening System: Ideal for small absorbers (SFC-18 or less) on ceilings and walls. Allows for easy dismounting and relocation. Can be used for wall mounting 24" and 36" absorber.

Clip and Rail Mounting: This is a mechanical fastening system ideal for large absorbers. It also allows removal and relocation of absorber with little or no damage.

C-RAM SFC-HC – TB 390-16



A product line of pyramidal-shaped, high-power absorbers, based on a fiber-reinforced, phenolic honeycomb structure and phenolic binder of the lossy coating.

Power ratings of 10 W/in² - C.W. without forced air cooling. Can handle almost a decade higher power density with adequate air cooling. Standard sizes are 4" through 24" and in increments matching standard SFC absorber.

Power Handling:

Standard Power Handling	0.8 W/in ²	C-RAM SFC, FAC and Corner Block with forced ventilation
	1.25 W/in ²	
Medium Power Handling	2.0 W/in ²	C-RAM EVA, RFA and HPA with adequate forced ventilation
	3.0 W/in ²	
High Power Handling	10.0 W/in ²	C-RAM SFC-HC Phenolic Honey Comb Absorber with adequate forced ventilation
	80.0 W/in ²	

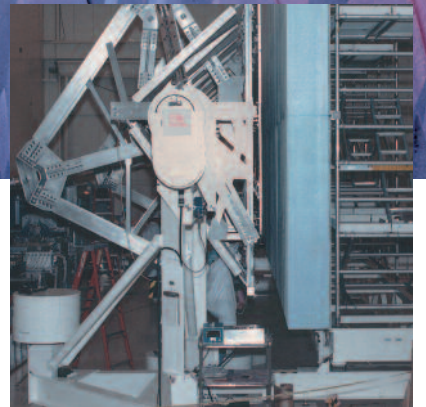
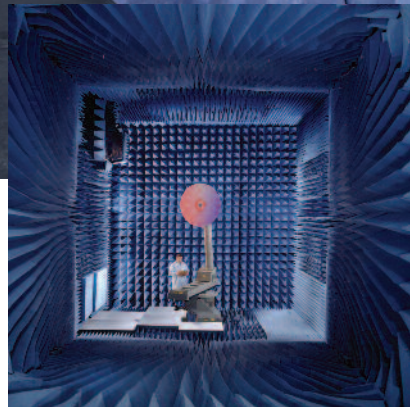
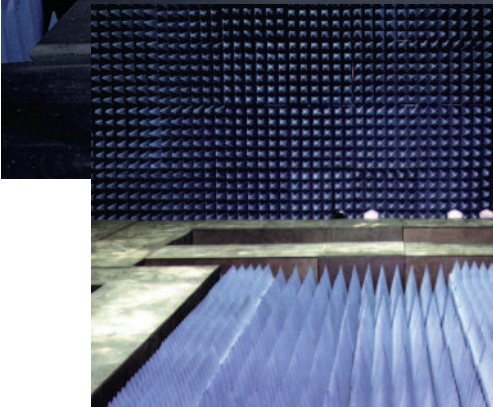
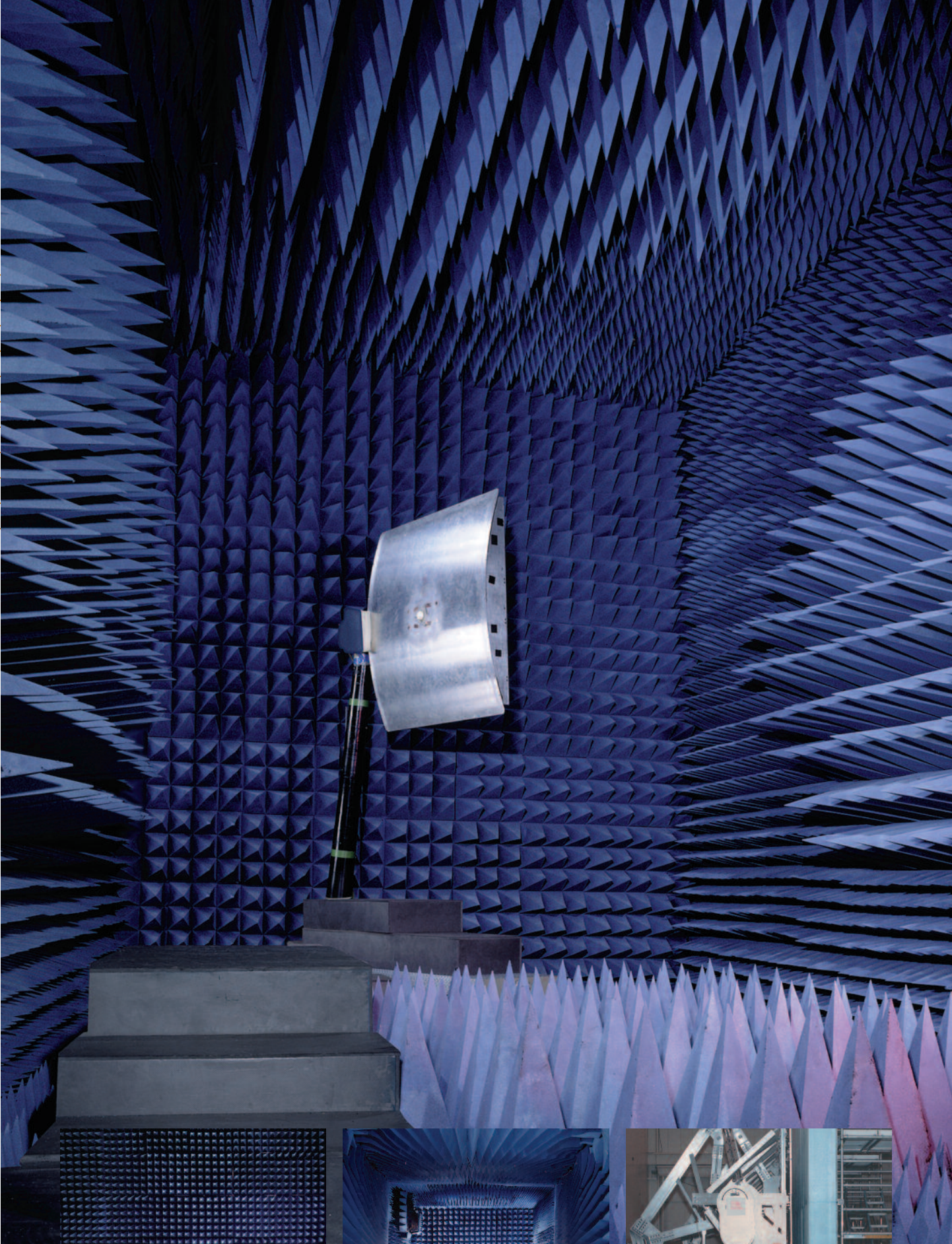
C-RAM CFC – TB 390-10



A fire-retardant, anti-static, clean room absorber ideal for clean room testing of satellites and other very-sensitive, electronic components.

Six standard grades from 4" through 36" tall are available. Taller units may be supplied as custom parts.

g Microwave



Cuming Microwave Corporation

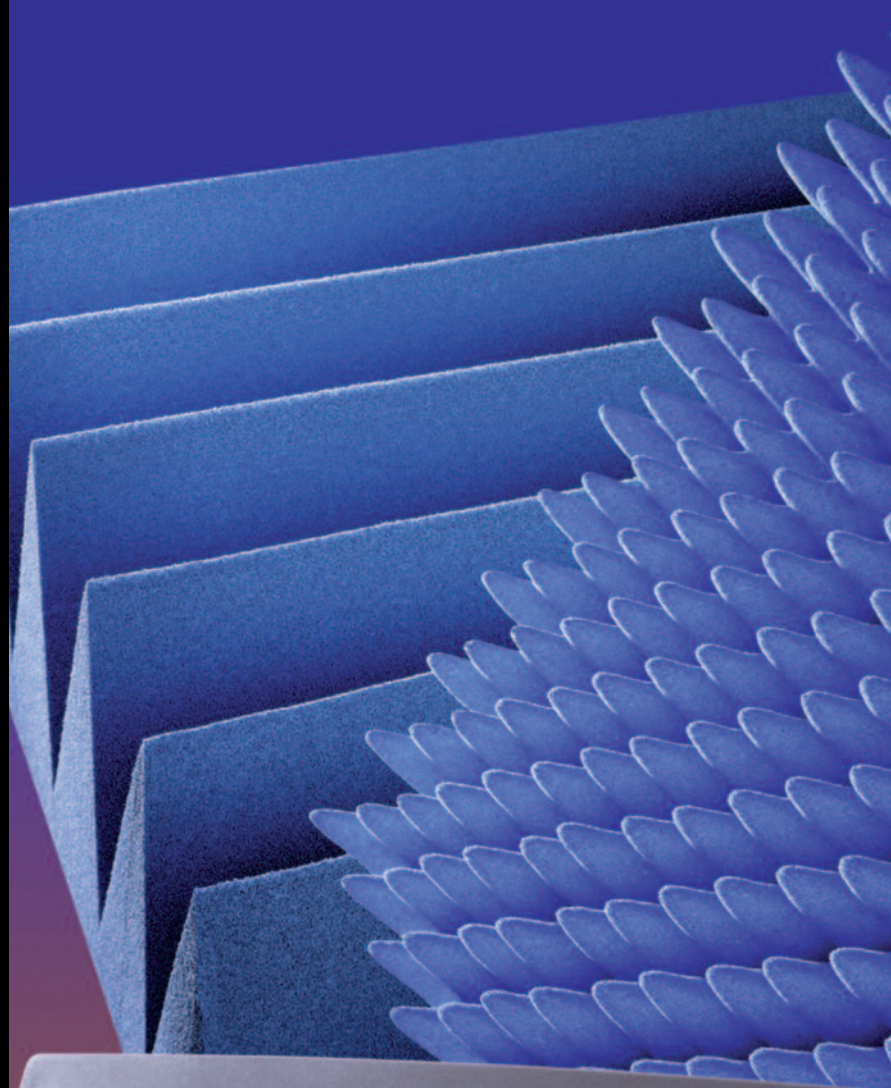
Cuming Microwave Corporation was formed to focus on technology products for the RF and the EMC industry. We manufacture absorber materials, we design and install anechoic chambers for all RF and EMC applications, and we provide a team to offer full turn key solutions.

In addition, we provide a very broad line of specialty absorber products based on magnetic and dielectric lossy materials, and also provide low loss dielectric materials, for applications ranging from space to supersonic airborne to subsea naval.

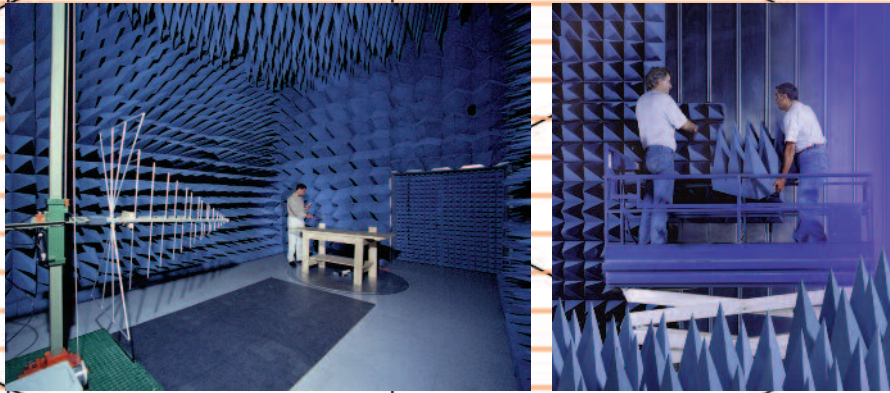
Founded in 1980 by noted, material scientist Dr. William R. Cuming, Cuming Microwave Corporation provides innovative materials for the electronics and microwave industry. Our microwave material manufacturing facility is located in Avon, Massachusetts, USA.

Cuming Microwave engages in extensive research and development activities to provide customers with cost-effective and creative materials for their specific applications. Custom engineered products and solutions are our specialty.

Contact our local representative or find us on the web at www.cumingmicrowave.com.



Microwave



 **CUMING MICROWAVE**

264 Bodwell Street, Avon, MA 02322 T: 508 521-6700 F: 508 584-2309
sales@cumingmicrowave.com www.cumingmicrowave.com