



*Insight™*

## Dielectric Cure Monitoring for Composites

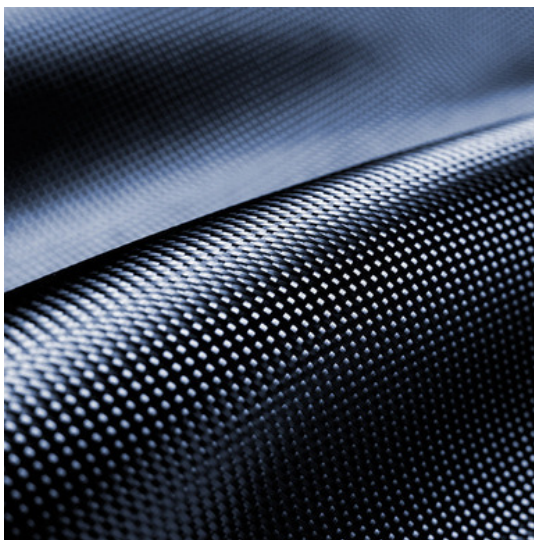
Solutions for Research & Development, QA/QC, and Manufacturing  
[www.lambient.com](http://www.lambient.com)



Advanced composite materials have revolutionized the development and manufacture of wind turbines, aircraft, aerospace vehicles and automotive structures. These materials offer a host of advantages, including high strength and light weight. But companies using composites are often hindered by a limited understanding of how these materials cure and harden during manufacturing.

The result is that the structural integrity of the material often can't be determined until the end of the process—too late to make necessary improvements. And for critical applications failure is not an option. Only dielectric cure monitoring provides critical insights into composite processing in real time. This assures users of the integrity of their processes and their materials—and of the reliability and safety of the finished product.

Lambient Technologies' principals have been at the forefront of innovations in dielectric cure monitoring, also known as Dielectric Analysis (DEA) for the last 30 years. Lambient Technologies' products are developed and manufactured entirely in the U.S.A. We offer global reach, unparalleled composites experience, and customer service that is second to none.



**Dielectric cure monitoring: Saves time. Saves effort. Saves money.**

## Dielectric Cure Monitoring: 30 Years of Benefits to Composites Development

Dielectric cure monitoring empowers manufacturers working with advanced composite materials, giving them critical insights that vastly improve the integrity and performance of their finished products. Companies across the U.S. and the world save time, effort, and money thanks to ongoing innovations in this technology. NASA, for example, has used dielectric cure monitoring in the development of solid rocket boosters for the space shuttle and in producing specialized adhesives for repairs in space. Researchers are investigating ways to improve wind turbine manufacturing through the application of the technology.

Dielectric cure monitoring is the only method that can be easily and cost-effectively used in research and development, quality assurance/quality control, and manufacturing. Real-time information gained from this process is applicable and transferable to every aspect of composite processing – and such data can't be obtained from any other method.

Lambient Technologies' instruments, software and sensors are designed for maximum flexibility and ease of use. Together these products form an integrated system for studying composites and using the results to optimize the final product.



**LT-451 / LTF-631 Dielectric Cure Monitors with CureView Software**

### Instruments

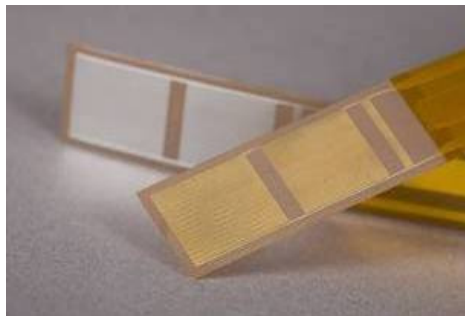
- **LT-451 Dielectric Cure Monitor**—Wide frequency range, versatile, optimized for research and development
- **LTF-631 High Speed Dielectric Cure Monitor**—Cost effective, optimized for QA/QC and rapidly curing materials
- **LT-439 Dielectric Channel**—*NEW*—Compact, multi-channel capability, optimized for manufacturing

### Software

- **CureView for the LT-451/LTF-631/LT-439**—For instrument control, cure monitoring, and data analysis

### Sensors

- **Varicon/Mini-Varicon/Micro-Varicon**  
—Disposable, flexible, inexpensive
- **Ceramicomb-1"**  
—Reusable, rugged, cost effective



**Varicon sensor**



**Ceramicomb-1" sensor**



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