



Microwave solutions for the next generation in advanced materials processing

MicroCure 5300 Continuous Flow System



The new MicroCure 5300 is the result of the evolution from standard batch and in-line products that use variable frequency microwave (VFM) for the rapid curing of advanced materials used in electronic packaging to continuous flow.

The MicroCure Continuous Flow family of products was designed to meet the growing demands for applications in the Smart Card / RFID Industry for in-line and reel to reel processing for antenna cure, die attach cure, glob top, flip chip bump and underfill cure.

The use of VFM to significantly reduce the curing cycle allows customers to reduce floor space required by conventional convection ovens. During the convection reel-to-reel process the product is normally stored on large reels and placed in drying and curing ovens for hours. With Lambda Technologies, Inc. new family of reel-to-reel continuous flow curing systems customers has reduced this process from 8-10 hours down to minutes.

While the targeted market for the MicroCure Continuous Flow Series will be Smart Card / RFID Tags Lambda Technologies, Inc. is looking at other opportunities in low cost flexible circuit applications, in-line processing of Fiber Optical Components and for the assembly of polymer dispensed liquid crystal displays (PDLCD).

Lambda Technologies, Inc. * 860 Aviation Parkway, Suite 900 * Morrisville, NC 27560 *
Phone 919-462-1919 * Fax 919-462-1929 * WWW.MICROCURE.COM

MicroCure 5300 Continuous Flow System

System Operating Features

Process control is Windows NT based with a menu driven graphical user interface. Parameters are fully accessible including curing temperature and microwave sweep controls. Multi-level password control user access for operators, supervisors and system administrators. Time-temperature data (ASCII format) is continually logged for the control thermocouple and IR pyrometer. Network access is available to download files and data to a factory host.

The MicroCure 5300 utilizes a serpentine (vertical festoon) path to maximize capacity in a small system footprint. The transport is designed for sprocketed web materials. Engineering support is available to design and integrate compatible drive and guide rollers to meeting customer requirements.

Fully automatic operation incorporates an integral PLC handshake interface with both upstream and downstream equipment. Web drive and microwave power cycling are controlled via this interface. A manual jog function is available for loading and unloading.

Flow through cavity ventilation ensures effluents and volatile materials are safely removed from the system. Incoming air can be preheated if required.

Lambda Technologies offers process development and optimization assistance to customers as part of our comprehensive technical support package. Our goal is to help you improve your process performance, yields, and product throughput.

Technical Specifications

Microwave power Available
7.9 –8.7 GHz 1.8KW
5.8 –6.6 GHz 2.0KW
Variable Frequency Sweep
0.1 to 60 seconds
Temperature Monitor and Control
Thermocouple control
Infra-red pyrometer monitor
Dimensions
71"H x 82"L x 41"D
180cm x 208cm x 104cm
Weight
1900 lbs (862Kg)
Electrical
208VAC-3PH, 50A
Air Requirements
Max 3.0 SCFM at 20 PSI

Transport Specifications

Material Width	up to 4.0"
Curing length	340 linear inches
Transport speed	30 to 90" per
minute (adjustable)	
Tension control	1 to 4 lb
(adjustable)	

Curing Applications

Reel to reel applications
Flexible circuits
Coatings
Encapsulations
Conductive ink drying
Flat panel display processes