

When **CONFIDENCE**
in **CURE** is **CRITICAL**

FEATURES

QUANTIFIABLE DEGREE OF CURE OF LIGHT CURE ADHESIVES

BENEFITS

- Confirm cure
- Reduce in-process QC testing
- Reduce scrapped parts and resources
- Increase production speeds

ASSURECURE™ SMALL SYSTEM SIZE

- Easy fit into existing production lines
- Minimal space required

CONNECTION TO EXISTING PLCs

- Allows for go/no-go decision
- Data recording

ISO® 10993 BIOCOMPATIBLE ADHESIVES

- Suitable for disposable medical device assembly

FLUORESCENT IN UNCURED AND CURED STATE

- Confirmation of adhesive presence and location on parts

TYPICAL APPLICATIONS

MEDICAL DEVICES



ELECTRONIC COMPONENTS



AUDIOVISUAL COMPONENTS



OPTICAL DEVICES



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ADHESIVES & EQUIPMENT

Adhesives:

AssureCure™ light cure adhesives can be provided in a range of viscosities, physical properties and package configurations.

Visit www.AssureCure.com to learn more about available adhesives.



Equipment:

The Loctite® AssureCure™ Monitoring System is designed to detect, measure, analyze, record and provide a degree of cure metric relative to the transition of specially formulated adhesives from a liquid to a solid (cured).



The AssureCure™ system includes the following components:

System Component	Function	Part Number
Interface Module with LED Light Source	Measures, analyzes and records multiple optical measurements	1470727
Light Source Fiber	Transmits light to adhesive bond line (up to 4 points)	Single - 1470724
		Double - 1470728
		Triple - 1470729
		Quad - 1470730
Detector Fiber	Directs adhesive's optical response to Optic Module	1470771
Optic Module	Analyzes multiple optical measurements	1471134
Optic Processor	Accepts input from multiple optic modules and provides output to PC/PLC	1470726

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A System to Quantifiably Measure the
Degree of Cure of Adhesive Bonds



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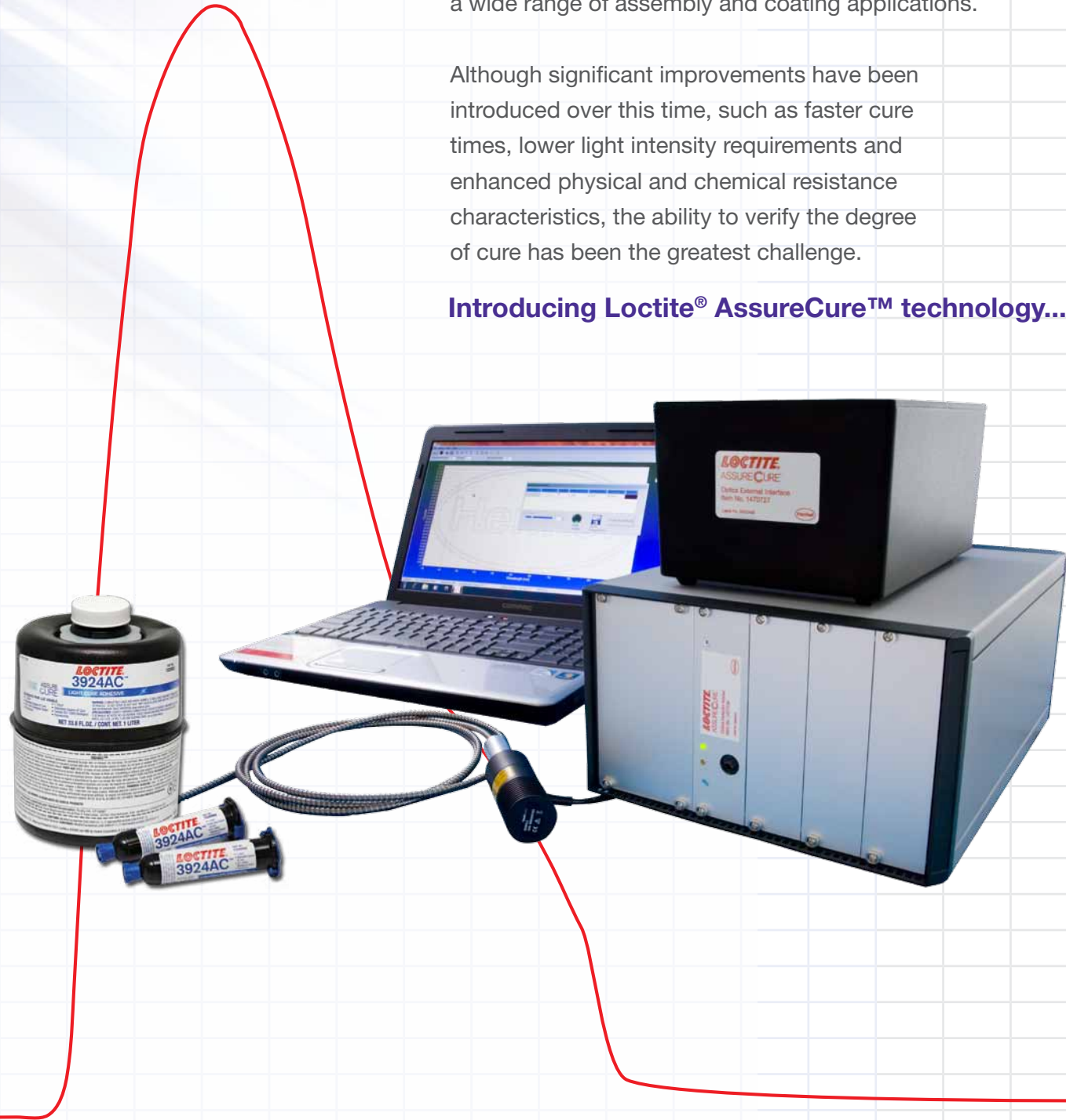
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Light cure adhesive technology was introduced more than 20 years ago and has gained use in a wide range of assembly and coating applications.

Although significant improvements have been introduced over this time, such as faster cure times, lower light intensity requirements and enhanced physical and chemical resistance characteristics, the ability to verify the degree of cure has been the greatest challenge.

Introducing Loctite® AssureCure™ technology...



TECHNOLOGY OVERVIEW

Loctite® AssureCure™ is a revolutionary technology that combines adhesive, a detection system and software to provide a quantifiable confirmation of cure level for light cure acrylic adhesives. The operation is easily integrated into existing production lines immediately following the light curing system.



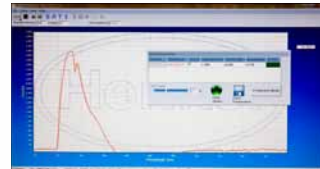
The AssureCure™ system includes:



**INTERFACE MODULE/
LIGHT SOURCE**
Illuminates the adhesive bond line. Light must reach the bond line directly or through light transmissible materials.

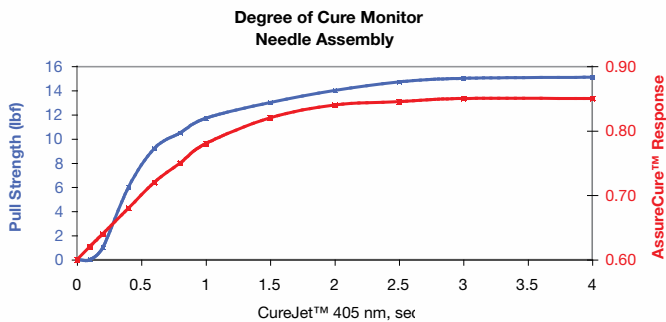


DETECTION SYSTEM
Optically measures the adhesive's response which changes during the polymerization process. One to four points possible.



SOFTWARE
Analyzes data and provides a quantifiable output directly related to the progress of the curing reaction. Output signal to user-supplied PC or PLC can be configured to yield a go/no-go status or a numerical value directly related to the level of cure achieved.

Verification of System Accuracy:



The data from the AssureCure™ system has been compared directly to proven off-line methods to confirm when an adhesive has cured, including physical and analytical testing. The comparative results show exceptional correlation between the AssureCure™ output and pull strength testing, as well as with infrared analysis of the adhesive.

COMPARISON TO EXISTING DETECTION METHODS

Compared with alternative cure detection methods, the AssureCure™ system provides the only reliable in-line, non-destructive method to confirm that the adhesive is cured.



Comparison to Other Cure Detection Methods:					
	Adhesive Detection Mechanism	Adhesive Presence	Non-Destructive Testing	In-Line Process	Confirmation of Cure
Fluorescence		✓	✓	✓	✗
Color Changing Adhesives		✓	✓	✓	✗
Physical/ Destructive Testing		✓	✗	✗	✗
Analytical Testing		✓	✗	✗	✓
AssureCure™		✓	✓	✓	✓

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