

## SHEDDING SOME LIGHT ON MEDICAL DEVICE ASSEMBLY

Light curing technology has revolutionized the medical device manufacturing process over the past 10 years. This technology is the fastest growing assembly method for medical device manufacturers globally. Technological advances in light cure chemistry and cure systems are widening the scope of this popular manufacturing technique.

### What is Light Cure?

Light cure adhesives are one-part solvent-free liquids that upon exposure to light of the correct intensity and spectral output, cure into a thermoset polymer that offers excellent adhesion.

### Why Light Cure?

Light curing offers a host of benefits to manufacturers including:

- Instant Cure – adhesives can be fully cured in 5-20 seconds which enables high production rates
- Ease of automation
- Cure on Demand- allows for accurate alignment while eliminating the requirement to meter mix 2 part formulations
- Bond Strength – light cure acrylics cure as thermoset plastics which enables them to bond to a wide variety of substrates while having enhanced thermal, chemical, and environmental resistance.
- Economical – Saves time and cost by reducing work-in-process
- Versatility – light cure adhesives deliver high strength, hermetically sealed bonds which have the ability to gap fill while adhering a wide variety of similar and/or dissimilar substrates (including a variety of medical plastics, stainless steel, glass & rubber)
- Environmentally Friendly – solvent free chemistry and low energy requirements for curing systems
- Biocompatibility – USP Class VI materials are solvent-free and nontoxic once cured

### Where is Light Cure Used?

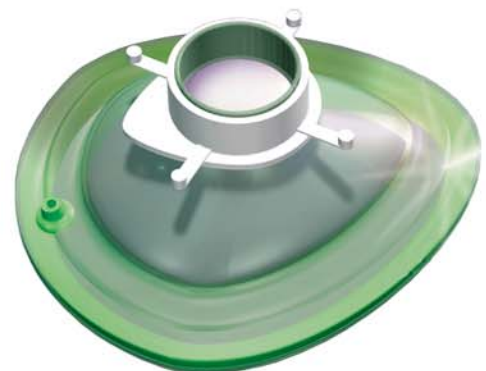
- Syringes
- Cannula / Hub Bonding
- Surgical Instruments
- Tube Sets
- IV Delivery Systems
- Anesthesia Masks
- Inhalers
- Catheters



- Angioplasty Accessories
- Endoscopes
- Guidewires
- Hearing Aids
- Blood Oxygenators
- Sensing Devices
- Medical Filters
- Connectors



- Bonding
  - variety of medical plastics
  - stainless steel
  - glass
  - rubber
  - similar or dissimilar substrates
- Sealing
- Coating
- Repair
- Tacking



# Why EXFO Precision Assembly Experts?



EXFO UV Curing & Precision Assembly Experts have been the worlds leading manufacturer of spot curing systems since 1982. With over 20 years experience in light cure technology we design and develop our precision assembly solutions with the customer and application in mind.

In 1994, we recognized the requirement of medical device manufacturers and the FDA (US Food & Drug Administration) to have a repeatable process control in their UV manufacturing processes. To meet this demand, EXFO was the first and only company in the world to introduce and patent closed loop feedback control to the UV curing market. This has become the benchmark in the medical device manufacturing market.

EXFO has developed a variety of hardware, software, optics and radiometric solutions that ensure that your process will succeed.

The EXFO range of products offer:

- Closed Loop Feedback Control
- Precision Intensity Adjustment
- Long Lamp Life with Intelli-Lamp™ that monitors and display real time lamp hours
- Spectral Filter Options
- Shutter and Exposure verification alarms to ensure quality control
- User-Friendly
- CE Mark for worldwide implementation



Our products are backed with the most extensive global customer service and applications support network available in the market. We are networked with the leading suppliers of chemistry, complementary manufacturing equipment and automation so that we can assist to ensure that your entire process will be successful.

EXFO can assist you with the following challenges:

- Materials selection
- Cure consistency
- Surface tackiness
- Adhesive and process characterization
- Light delivery to ensure uniform cure on challenging bond lines



## EXFO PRECISION ASSEMBLY EXPERTS

*Enabling precision assembly processes in manufacturing environments worldwide*

Please contact the EXFO UV Curing & Precision Assembly Experts team to learn more about how we can assist with your current assembly processes.



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