

61-25 ARC Light II (Project 99-38) (9/00)

The ARC Light II is a microprocessor-controlled light that uses plasma-arc energy to rapidly cure light-activated dental materials. The manufacturer claims that the ARC Light II adequately polymerizes resin composites in as little as five seconds and offers conventional, ramped, or step cure modes. Irradiance intensity can be set up to 2000 mW/cm² (in five-percent increments) and time durations can be programmed in one-second increments. The ARC Light II has a built-in radiometer that is said to allow self-calibration to maintain optimum energy output for each programmed setting. This unit has a standard 8-mm curing tip on a 5½-foot, liquid-filled light guide. The ARC Light II is 5.7"H x 10.5" W x 11.2" D and weighs 10 pounds.



Manufacturer:

Air Techniques, Inc.
70 Cantigue Rock Road
P.O. Box 870
Hicksville, NY 11802
(800) 247-8324
(516) 433-7676
(516) 433-7684 FAX
www.airtechniques.com

Suggested Retail Price:

\$4995 ARC Light II System; includes

- ARC Light II
- Hand-actuated liquid light guide with ring magnet
- Curing tip
- Disposable light shield
- Protective glasses
- Keys for power switch

Government Price:

\$3100 ARC Light II (as listed above)

ADVANTAGES:

- + Irradiance output is higher than that of conventional halogen curing units.
- + Irradiance spectrum is compatible with most resin composites.
- + Has three programmable curing modes.
- + Efficient lamp cooling design allows continuous curing modes.
- + Quiet cooling fan runs in proportion to unit use.
- + Instructions are complete and easy to understand.
- + Has built-in radiometer that enables unit to self-calibrate its irradiance output.
- + Light wand is well balanced and easy to control.
- + Has an easy-to-use, magnetically-retained finger switch on handpiece.
- + Safety features prevent incorrect use or inadvertent activation of light unit.
- + Allows quicker placement of orthodontic bands and appliances.

DISADVANTAGES:

- Expensive.
- Manufacturer's recommended curing times do not adequately polymerize resin composite.

SUMMARY AND CONCLUSIONS:

The ARC Light II is a microprocessor-controlled, plasma-arc curing unit that features multiple programmable curing modes. The unit is solidly built with well designed engineering and safety features.

The measured irradiance output was higher than that of conventional halogen lamp curing units, and its irradiance spectrum should be compatible with most resin composites. Clinical evaluators liked this unit's easy-to-operate controls, well-balanced handpiece, and magnetically-retained finger switch. The ARC Light II's irradiance level was sufficient to polymerize resin used to retain orthodontic brackets. Its short curing times saved valuable chair time during orthodontic treatment. It is important to note, however, that the manufacturer's recommended curing times are too short for adequate polymerization of restorative resin composites. Although expensive, the **ARC Light II** (when used as directed) should be acceptable for the luting of orthodontic appliances. However, due to its cost and inability to adequately polymerize resin composites using the manufacturer's recommended curing time, it is rated **Marginal** for the placement of definitive restorations by the federal dental services.