

SmartLite iQ LED Curing Light (Project 04-02) (8/04)



Dentsply/Caulk has recently introduced SmartLite iQ, a new light-emitting diode (LED) curing light. The cordless, lightweight, curing light purportedly delivers 600 (10-second) cures from a lithium-ion battery that recharges in only thirty minutes. The electrical system of iQ reportedly contains self-diagnostic programming and fail-safe controls. The fan-free, sealed construction is said to allow for asepsis while keeping internal components contaminant-free. The curing light features a digital display and a built-in radiometer.

Manufacturer:

Dentsply Caulk
38 West Clark Ave
P.O. Box 359
Milford, DE 19963
(800) 532-2855
(302) 422-4511
(800) 788-4110 FAX
www.dentsply.com

Suggested Retail Price:

\$1100.00 SmartLite iQ LED curing light (item number 644010) contains:

- Handpiece
- Charging base assembly
- Light shield
- Light guide

Government Price:

\$803.00 SmartLite iQ LED curing light (item number and contents as listed above)

ADVANTAGES:

- + Degree of cure similar to a typical halogen curing light
- + Small, lightweight, cordless design
- + Easy intraoral access
- + Sealed design facilitates disinfection / barrier protection
- + Excellent collimation of light
- + Irradiance well maintained over distance
- + Digital display with adjustable timer settings
- + Lithium-ion rechargeable battery
- + Long battery life with minimal loss of irradiance
- + Relatively less heat emitted from light guide and LED source
- + Quiet, with no fan
- + Ergonomically-placed timer controls
- + Multiple light guide shapes and sizes available
- + Protective eye shield
- + Autoclavable light guide
- + Built-in radiometer
- + Low-battery warning light
- + Moderately priced

DISADVANTAGES:

- May not polymerize all photoinitiated dental materials
- Periodic battery replacement is necessary
- Recommended duty cycle may be inconvenient

SUMMARY AND CONCLUSIONS:

SmartLite is a well-designed, easy-to-use, lightweight, light-emitting diode (LED) curing light from Dentsply Caulk. The cordless, fanless design provides quiet operation and facilitates disinfection and barrier protection. The curing light was capable of providing over two hundred 40-second exposures with minimal loss of irradiance on a single battery charge. This should provide plenty of working time for even the busiest practice. The emitted light was collimated very well with minimal loss of irradiance over distance and minimal heat production. Depth of cure was similar to popular halogen curing lights. However, like most LED curing lights, it may not polymerize all photoinitiated dental materials due to the limited width of its emission spectrum. All clinical evaluators rated the SmartLite as "Excellent" and would recommend it as a replacement for their current curing light. The **SmartLite IQ** curing light is rated **Recommended** for use by the federal dental services.