

### **Bluephase® LED Curing Light (Project 05-01) (6/05)**

Ivoclar Vivadent has recently introduced Bluephase®, a new light-emitting diode (LED) curing light. LED lights generate light in wavelengths that more efficiently mirror the absorption wavelengths of the most common photoinitiator, camphorquinone. The cordless, lightweight curing light purportedly delivers 60 minutes of cure from a lithium-ion rechargeable battery. A back-up electrical cord ensures no down time. The handpiece presents a digital display of 10-, 20-, 30-, 40-, or 120-second cure times. Three different curing modes are available (i.e., high power, low power, ramped). The charging base features a built-in radiometer.



#### **Manufacturer:**

Ivoclar Vivadent  
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(716) 691-2285 FAX

[www.ivoclarvivadent.us.com](http://www.ivoclarvivadent.us.com)

#### **Suggested Retail Price:**

\$1350.00 Bluephase® LED curing light (item number 562249) contains:

- handpiece
- charging base assembly
- power cord
- 3 light shielding cones
- light guide

#### **Government Price:**

\$725.00 Bluephase® 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
- + Competitively priced
- + Continuous curing time with fanned design
- + Long LED life compared with halogen bulbs
- + Long battery life with minimal loss of irradiance on a single charge
- + Easy intraoral access
- + Digital display with adjustable timer, program settings and battery-level indicator
- + Ergonomically-placed timer controls
- + Lithium-ion rechargeable battery
- + Back-up power available with power cord
- + Relatively less heat emitted from light guide at low power setting
- + Minimal fan noise
- + Protective eye shield
- + Autoclavable light guide
- + Low-battery warning
- + Interchangeable light guide in multiple sizes

**DISADVANTAGES:**

- Evaluators found "on/off" function inconvenient
- May not polymerize all photoinitiated dental materials
- Built-in radiometer may not indicate actual irradiance
- Only moderate collimation of light over distance from provided light guide
- Fan may deactivate prematurely after returning handpiece to charging base
- Periodic battery replacement may be necessary

**SUMMARY AND CONCLUSIONS:**

Bluephase® is a competitively-priced, well-designed, relatively quiet, lightweight, light-emitting diode (LED) curing light from Ivoclar Vivadent. The fanned curing light was capable of providing over two hundred continuous 20-second exposures with minimal loss of irradiance on a single battery charge. 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. The evaluators disliked having to press the activation button several times to activate the light. Most clinical evaluators rated the Bluephase® as "Good" or "Excellent" overall. The **Bluephase®** is rated **Excellent** for use in US Air Force dental facilities.