



# BlueWave<sup>®</sup> LED DX-1000

## Flexible LED UV Light-Curing System

The Dymax BlueWave<sup>®</sup> LED DX-1000 is a flexible LED light-curing system that utilizes liquid-filled or fiber-optic quartz lightguides to deliver up to 15 W/cm<sup>2</sup> of curing energy in a spot-cure configuration. The flexibility of the DX-1000 also allows it to be configured to deliver up to 1 W/cm<sup>2</sup> of energy over a 1" x 1.5" (2.5 cm x 3.8 cm) area for applications that require larger exposure area.

The *BlueWave LED DX-1000* provides all the benefits of Dymax's advanced LED light-curing technology in a flexible system design that can adapt to meet changing business and application needs.



**BlueWave LED DX-1000 Spot Lamp Package**

Package includes controller, irradiator head, 5-mm lightguide, lightguide stand, lightguide adapter, footswitch, interface cable, lightguide mounting stand, and bench-top base



**BlueWave LED DX-1000 Flood Lamp Package**

Package includes controller, irradiator head, collimating optic #1, bench-top stand with silicone pad, magnetic shielding, footswitch, and interface cable



**BlueWave LED DX-1000 Lab Developer Package**  
Includes All Parts Necessary for Both Spot and Flood Modes

Includes controller, irradiator head, 2 interface cables, lightguide adapter, collimating optic #1, bench-top stand with silicone pad, bench-top base, 5-mm lightguide, footswitch, and magnetic shielding



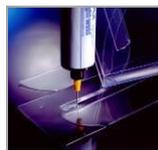
**BlueWave LED DX-1000 Base System for Custom Mounting and System Integration (Mount Supplied by Customer)**

Package includes irradiator head with collimating optic #1, controller, footswitch, and magnetic shielding

| FEATURES  | BENEFITS  |
|---|---|
| Single or multi-pole lightguide and dual-lens optical accessory   | <ul style="list-style-type: none"> <li>Flexible, configurable light delivery options</li> <li>High-intensity spot cure</li> <li>Small-area [1"x1.5" (2.5 cm x 3.8 cm)] cure capability to ~3" (7.6 cm) distance</li> </ul>  |
| High-intensity LED with efficient cooling                         | <ul style="list-style-type: none"> <li>Consistent LED frequency and intensity output for better process control</li> <li>Longer life than mercury-arc lamps and other LED curing systems</li> <li>Lower consumables and on-hand "spare" inventory costs (light source &amp; lightguides)</li> </ul> |
| LED with 385 nm narrow-spectrum output                            | <ul style="list-style-type: none"> <li>Cooler cure environment for thermally sensitive substrates</li> <li>Replaces hazardous mercury-arc lamp with environmentally friendly LED</li> </ul>   |
| Lower energy consumption than conventional UV lamps (<100 Watts)  | <ul style="list-style-type: none"> <li>Reduced electrical consumption by up to 80%</li> </ul>   |
| Instant On/Off with 100% duty-cycle capability                    | <ul style="list-style-type: none"> <li>Highest throughput (exposure cycles "at the speed of light")</li> <li>Significantly reduced maintenance downtime as compared to conventional lamp replacement</li> </ul>   |
| Shutter-free design   | <ul style="list-style-type: none"> <li>Reliable operation with lower maintenance costs (no moving parts)</li> </ul>   |
| Adjustable intensity (0 - 100% in 1% steps)                       | <ul style="list-style-type: none"> <li>Superior accuracy (versus "closed loop feedback") for optimum process control</li> </ul>   |
| Co-optimized to cure a variety of Dymax LED adhesive formulations | <ul style="list-style-type: none"> <li>Compatible with a variety of Dymax light-curable formulations (see table below)</li> </ul>   |
| Self-contained, lightweight irradiator head with cable interface  | <ul style="list-style-type: none"> <li>Flexibility to mount the irradiator head remotely from controller for automated process equipment integration, or to free up valuable workstation surface space (up to 10 ft [3 M] from controller to irradiator)</li> </ul>                                 |

## Adhesives Compatible with the BlueWave® LED DX-1000

With the combination of expertise in LED light-curing equipment technology design and adhesive formulation development, there is an ever-growing list of formulations optimized to cure with the *BlueWave LED DX-1000* at lightning speeds for a multitude of applications in any industry segment.

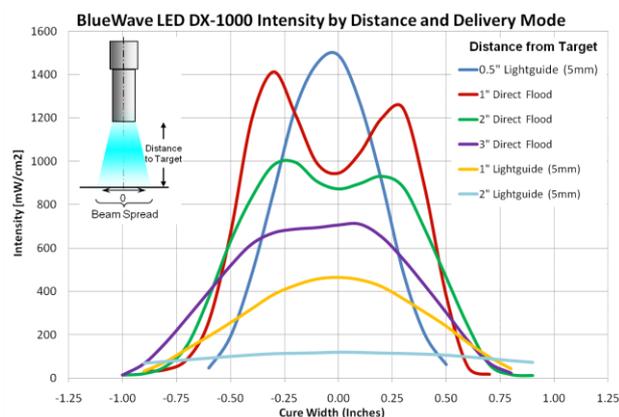
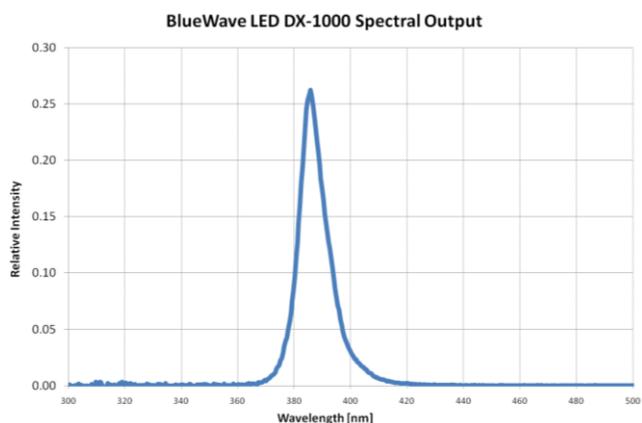


| Dymax Product                             | Interfacial Cure Time, Glass to | Dymax Product                       | Interfacial Cure Time, Glass to Glass* |
|---|---------------------------------|-------------------------------------|--|
| <b>Electronics Adhesives and Coatings</b> |                                 | <b>SPEEDMASK® Masking Resins</b>    |  |
| 9001-E-V3.0                               | 1.0 sec                         | 726-SC                              | 0.2 sec                                |
| 9001-E-V3.5                               | ≤2.0 sec                        | <b>Structural Bonding Adhesives</b> |  |
| 9-20557                                   | 3.0 sec                         | 6-621                               | ≤1.0 sec                               |
| 9-20557-LV                                | ≤4.0 sec                        | 6-625-SV01-REV-A                    | ≤3.0 sec                               |
| 9422-SC                                   | 0.2 sec                         | <b>MD® Medical Device Adhesives</b> |  |
| 9422-T-SC                                 | 0.2 sec                         | 210-CTH                             | 0.2 sec                                |
| 9481-E                                    | 4.0 sec                         | 211-CTH                             | 0.2 sec                                |
| 984-LVUF                                  | 0.2 sec                         | 1120-M-UR                           | 0.2 sec                                |
| 9-911-REV-A                               | 1.0 sec                         | 1128-A-M                            | ≤3.0 sec                               |
| <b>Glass Bonding Adhesives</b>            |                                 | 1161-M                              | 0.2 sec                                |
| 429                                       | ≤5.0 sec                        | 1163-M                              | 0.2 sec                                |
| <b>Plastic Bonding Adhesives</b>          |                                 | 1165-M                              | 0.2 sec                                |
| 3030                                      | 0.2 sec                         | 1168-M                              | 0.2 sec                                |
| 3031                                      | 0.2 sec                         | 1180-M                              | 0.2 sec                                |
| 3069-GEL                                  | 0.2 sec                         | 1187-M                              | 0.2 sec                                |
| 3094                                      | 0.2 sec                         | 1201-M-SC                           | 0.2 sec                                |
| 3130-UR                                   | 0.2 sec                         |                                     |  |
| 3227-UR                                   | 0.2 sec                         |                                     |  |

\* Interfacial cure time is based on glass-to-glass bonding with the *BlueWave LED DX-1000* (flood or spot mode) or the *BlueWave LED Prime UVA*; minimum intensity of 675 mW/cm<sup>2</sup>.

# System Specifications

| SPECIFICATIONS                        |   |              |              |               |              |
|---------------------------------------|---|--------------|--------------|---------------|--------------|
| Part Number                           | Package   | Flood Mode   | Spot Mode    | Lab Developer | Base System  |
|                                       | No Power Cord   | <b>40750</b> | <b>40980</b> | <b>41000</b>  | <b>40560</b> |
|                                       | Asian Version (Type G Power Cord)   | <b>40580</b> | <b>40590</b> | <b>41010</b>  | -            |
| Output (measured by ACCU-CAL™ 50-LED) | 1.0 [W/cm <sup>2</sup> ] at 1.0" in direct emission (flood mode)<br>15.0 [W/cm <sup>2</sup> ] at 0.5" with 5 mm x 1 M liquid lightguide (spot mode) |              |              |               |              |
| Power Requirements                    | 100-240V, 47-63 Hz (auto ranging); 100 Watts maximum  |              |              |               |              |
| LED Timer                             | 0.1 to 999.9 seconds  |              |              |               |              |
| LED Activation                        | Foot switch, front panel, or PLC  |              |              |               |              |
| Cooling                               | Forced air / fan (controller and irradiator head)   |              |              |               |              |
| Hour Meter                            | Digital LCD; total unit lifetime (non-resettable) and total LED exposure time   |              |              |               |              |
| Controller Dimensions / Weight        | 6.5" x 9.0" x 2.25" [16.5 cm x 22.9 cm x 5.7 cm] (W x D x H) / 2.4 lbs [1.1 kg]   |              |              |               |              |
| Irradiator Head Dimensions / Weight   | 4.0" x 5.0" x 4.5" [10.2 cm x 12.7 cm x 11.4 cm] (W x D x H) / 2.9 lbs [1.3 kg]   |              |              |               |              |
| Interface Cable Length                | Choice of 18" [45 cm], 3 ft [0.91 M], 6 ft [1.82 M], or 10 ft [3.04 M] lengths  |              |              |               |              |
| Unit Warranty                         | Operation warranted for 3 years from purchase   |              |              |               |              |
| Recommended Accessories               | <b>40519</b> ACCU-CAL™ 50-LED Radiometer  |              |              |               |              |



## Accessories



Bench-Top Stand with Silicone Pad  
**PN 40725**



Benchtop Base and Lightguide Adapter Kit  
**PN 40755**



2 Lens Collimating Optic #1  
**PN 40581**



Lightguide Adapter  
**PN 40743**

# DYMAXEDGE<sup>SM</sup>

LISTEN. ENVISION. DELIVER.

In addition to our light-curing equipment, Dymax also offers high-performance adhesives designed to rapidly bond glass, metal, and plastic substrates upon exposure to UV/Visible light and a variety of dispensing equipment. Our products are perfectly matched to work seamlessly with each other, providing design engineers with tools to dramatically improve manufacturing efficiency and reduce costs. Dymax is committed to providing the best chemistry, curing equipment, and dispensing systems that offer customers complete manufacturing solutions for their challenging applications.



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**Please note that most dispensing and curing system applications are unique.** Dymax does not warrant the fitness of the product for the intended application. Any warranty applicable to the product, its application and use is strictly limited to that contained in Dymax's standard Conditions of Sale. Dymax recommends that any intended application be evaluated and tested by the user to insure that desired performance criteria are satisfied. Dymax is willing to assist users in their performance testing and evaluation by offering equipment trial rental and leasing programs to assist in such testing and evaluations. Data sheets are available for valve controllers or pressure pots upon request.

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