# Dymax BlueWave® MX-150™ LED UV Spot Curing Lamp, High-Intensity Curing System

## Description

The Dymax **BlueWave MX-150** LED UV spot curing lamp system provides manufacturers with the curing flexibility they need, in a smaller, more efficient design. The unit comprises two main parts: a controller with an easy-to-use touchscreen interface, and a high-intensity LED emitter which is uniquely designed to offer higher, more consistent curing intensity than traditional spot-curing systems. Curing energy is created using an LED chip in the emitter, providing consistent curing by avoiding potential intensity loss caused by the use of long or bent lightguides.

With this design, this LED UV spot curing lamp system can be truly tailored to users' curing needs – allowing them to choose from three different wavelength LED emitters (365, 385, or 405 nm) so optimal cures are achieved. Users also have endless set up flexibility; for automated curing processes, the emitter can be easily mounted to robotic arms or further from the controller without fear of intensity variations. When used as a bench-top curing system, the unit can be paired with a stand and shielding or a lightguide can be connected to the system for specialised applications.

### Heat Control

For applications with heat-sensitive components, interruptions in the exposure duration can slow the materials' temperature climb during the cure process. This isn't a concern with the BlueWave MX-150, because the curing profile can be optimized to reduce the risk of substrate damage.

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**Admin and Production Modes**

The admin mode fully unlocks the device and allows for setting curing time and intensity cycles. Each individual curing cycle can be entered and saved as a program and recalled when needed. The production mode is designed for simple operation by manufacturing personnel. Settings and access to admin mode can be password protected using the full QWERTY keyboard.

## Features & Benefits

| Features | Benefits |
|---|---|
| High Intensity of up to 40 W/cm$^2$ | · Quickly cures a variety of materials |
| LED heads available in 365nm (RediCure), 385nm (PrimeCure), or 405nm (VisiCure) wavelengths | · Compatible with a variety of UV and visible light-curable materials<br>· Wavelength flexibility allows co-optimisation of adhesive and curing system for best cure |

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| Features | Benefits |
|---|---|
| LED chip located in the emitter, not the controller | · Consistent intensity<br>· Mounted emitter saves the cost of lightguides<br>· Eliminates potential intensity loss from long or bent lightguides<br>· Easily mounted to robotic arms with no intensity variation<br>· Emitter can be mounted closer to application, while the controller remains close to the operator |
| Admin and Production Modes | · Production Mode for simple on/off operation<br>· Curing programs can be saved and easily recalled<br>· Units can be password protected so only the production Mode can be accessed by workers |
| Touch screen with full keyboard | · Improved user interface<br>· Curing programs can be easily entered, stored, and recalled when needed |
| Compatible with 3- and 5-mm lightguides with Wolf Connector | · Utilises standard/readily available lightguides |

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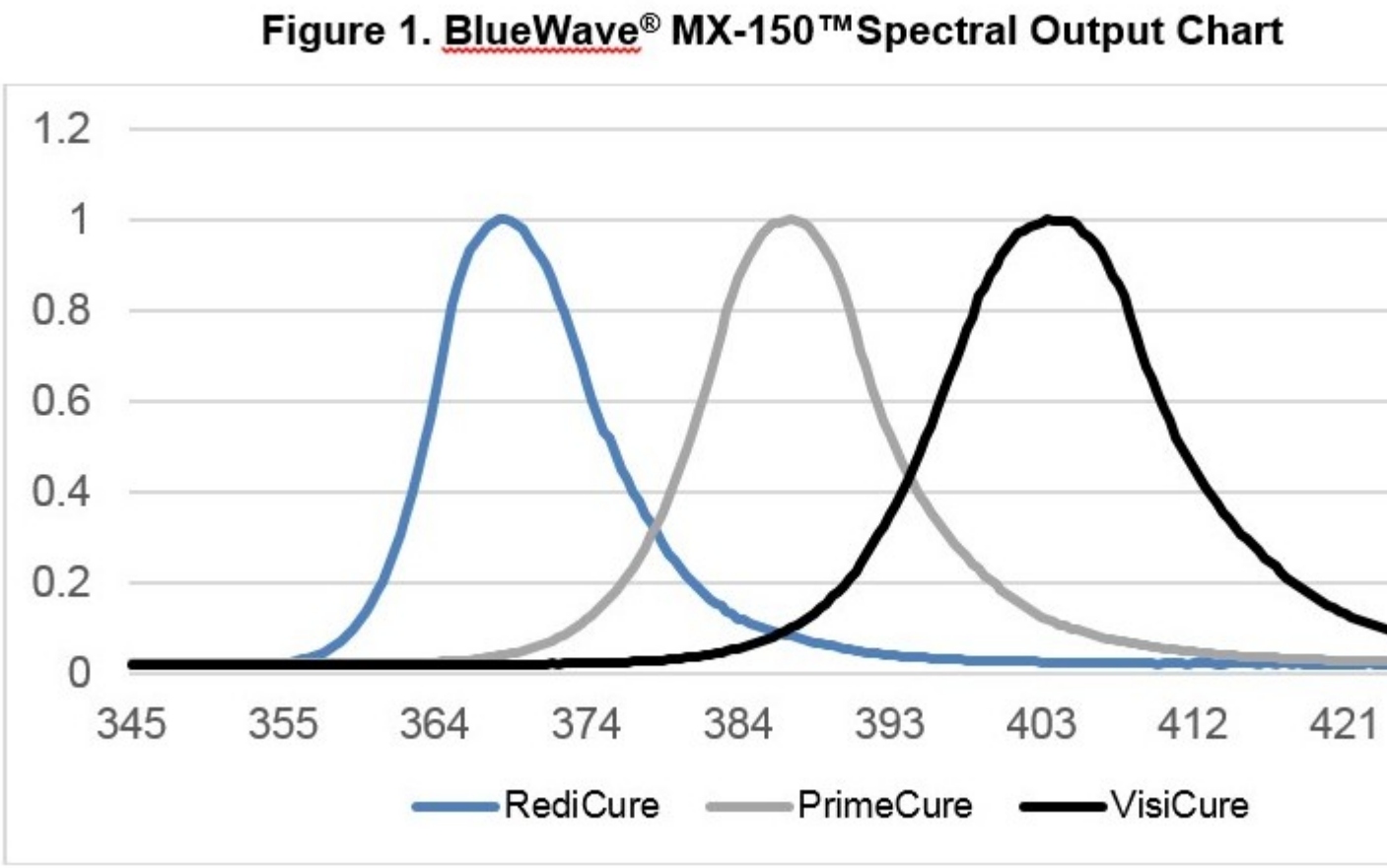
| Features | Benefits |
|---|---|
| Instant on-off | · No warm-up period<br>· More energy efficient |
| Efficient LED temperature management and system monitoring | · Maximised continuous operation without overheating<br>· Comfortable hand-held operating temperature<br>· Temperature monitoring assures maximum LED life<br>· Checks presence of lightguide or other delivery optic |
| PLC interface | · Easily incorporated into automated systems |

## Specifications

# Dymax BlueWave® MX-150™ LED UV Spot Curing Lamp, High-Intensity Curing System




Dymax BlueWave MX 150 LED UV spot curing lamp spectral output chart

# Dymax BlueWave® MX-150™ LED UV Spot Curing Lamp, High-Intensity Curing System

| Specification | | | |
|---|---|---|---|
| MX-150 Emitter | RediCure™ | PrimeCure™ | VisiCure™ |
| Output Frequency | 365nm | 385nm | 405nm |
| Intensity Output* | 24 W/cm$^2$ | 38 W/cm$^2$ | 36 W/cm$^2$ |
| Power Supply Input | 100-240V 2.5A, 50-60Hz | | |
| LED Timer | 0 to 999 seconds | | |
| LED Activation | Foot pedal, LCD touch screen, or PLC | | |
| Cooling | Air Cooled | | |
| Dimensions (H x W X D) | Controller: 14.6 cm x 9.5 cm x 15.9 cm<br>Emitter: 20.06 cm x 5 cm x 5 cm | | |
| Weight | Controller: 1.18 kg<br>Emitter: 0.64 kg | | |
| Unit Warranty | 1 year from purchase date | | |
| Operating Environment | 10-40°C | | |

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| Specification |
| --- |
| *Measured using a Dymax ACCU-CAL™ 50-LED Radiometer at a distance of 0 mm |

The Bluewave MX-150 can be configured with a 4-pole lightguide instead of the standard transmitter. All listed lightguides come with D-Style Connectors and require the DYM42932 Lightguide Conversion Kit.

| Part number | Description | Details |
| --- | --- | --- |
| DYM42932 | Bluewave® MX-150 4-Pole Lightguide Conversion Kit | Upgrade performed at Dymax. Bluewave® MX-150 emitter must be returned to Dymax for upgrade. |

### Compatible Lightguides

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When outfitted with a 4-pole lightguide, the Bluewave® MX-150 can offer the following intensities.

| Part number | Description | Intensity W/cm$^2$ |
|---|---|---|
| DYM38478 | 4 x 1000 mm Liquid | 11.0 |
| DYM38851 | 4 x 1500 mm Liquid | 11.0 |
| DYM38676 | 4 x 1500 mm Liquid. Extended Range | 11.0 |
| DYM39791 | 4 x 1000 mm Fiber Optic | 8.0 |

## Multi-Channel Controller

The Dymax BlueWave® MX-Series Multi-Channel Controller, when combined with up to four MX-Series LED UV curing emitters, provides manufacturers with curing flexibility in a smaller, more efficient design with an easy to use touchscreen interface.

The Multi-Channel Controller is compatible with all of the BlueWave MX-Series emitters. The emitters are available in three cure pattern formats: Spot (MX-150), Mini-Flood (MX-250) and Line (MX-275), and different wavelengths including 365, 385, or 405 nm. Emitters of different cure patterns and/or

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wavelengths can be mixed and matched with a single Multi-Channel Controller. This flexibility helps to achieve optimal cures across a variety of bond-line geometries and fluid product offerings.

Users also have greater set up flexibility; for automated curing processes, the emitter can be mounted to robotic arms or further from the controller without fear of intensity variations. When used as a benchtop curing system, the unit can be paired with a stand and shielding for large area curing. It can also be used with multiple pathway lightguides for specialised applications when paired with MX spot emitters.

MX-Series Multi-Channel Controllers are available in two model variants: a two-channel that is capable of independently controlling up to two emitters and a four channel for up to four emitters.

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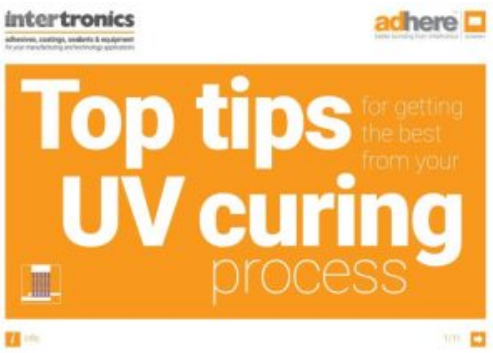
### Multi-Channel Controller Features and Benefits

- Reduces equipment footprint and cost by reducing the number of controllers required
- Compatible with all MX-Series LED UV curing emitters; users can easily switch between spot, flood and line curing configurations
- All Bluewave® MX-series emitters available in 365, 385 and 405nm versions
- Simple on/off operation with no warm-up period
- Application specific curing profiles/programs can be easily entered, stored, and recalled when needed
- Units can be password protected so only production mode can be accessed by workers
- LED temperature management and system monitoring for maximised continuous operation without overheating
- Easily incorporated into automated systems with remote I/O interface

## Other Information

# Dymax BlueWave® MX-150™ LED UV Spot Curing Lamp, High-Intensity Curing System

| | |
|---|---|
|  | Top Tips for getting the best from your UV curing process<br>Read through our easy-to-follow guide on UV curing to maximise your processes productivity. |

Find out more about the technology behind the MX-150 by reading our technical bulletins and white papers:

- **Sustainability Benefits of LED UV Curing**
- **UV Curing and Tack-Free Cures**
- **Achieving Better Process Controls with Light Cure Technology**
- Advances in Light Curing Adhesives and Coatings Lead to Process and Quality Benefits in Electronics Manufacturing

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## Ordering Information

A complete BlueWave MX-150 system features a controller/power supply, interconnect cable and LED emitter. Emitters are available in 365, 385, and 405 nm wavelengths. Lightguides and other accessories noted below can be added for specific applications. Components are sold separately.

Units are warrantied against defects in material and workmanship for one year from date of purchase.

## Emitters

| Part number | Description |
|---|---|
| DYM42336 | Dymax BlueWave MX-150 RediCure™ LED Spot Emitter* (365 nm) |
| DYM42337 | Dymax BlueWave MX-150 PrimeCure™ LED Spot Emitter* (385 nm) |
| DYM42338 | Dymax BlueWave MX-150 VisiCure™ LED Spot Emitter* (405 nm) |
| DYM36987 | Lightguide Simulator, 5-mm Diameter |

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| Part number | Description |
|---|---|
| DYM41148 | Adjustable Taper Shoulder Focusing Lens (5 mm) |
| *5mm lightguide simulator comes with every emitter. | |

## Controllers

| Part number | Description |
|---|---|
| DYM43184 | MX-Series Multichannel Controller for 2 Emitters – interconnect cables to connect controller to emitters and foot pedals sold separately |
| DYM43181 | MX-Series Multichannel Controller for 4 Emitters – interconnect cables to connect controller to emitters and foot pedals sold separately |
| *Interconnect cables* | |
| DYM42287 | 2-Meter Interconnect Cable Assembly |
| DYM42889 | 5-Meter Interconnect Cable Assembly |

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| Part number | Description |
|---|---|
| *Foot pedals* | |
| DYM43106 | Foot Pedal |

## Accessories

| Part number | Description |
|---|---|
| DYM42390 | Mounting Stand for Emitter |
| DYM41268 | BlueWave® LED Mounting Stand with Acrylic Back Shield |
| DYM41395 | Three-Sided Acrylic Light Shield – 22 cm W x 22 cm D x 21 cm H. Works with DYM42390 and DYM41268 Mounting Stands. UV blocking. |
| DYM42426 | Emitter Holder Assembly Bracket |
| DYM43070 | MX Emitter Stand – Includes LED Stand DYM 41268 and DYM 43019 Kit for up to 4 Emitters |

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| Part number | Description |
| --- | --- |
| DYM43019 | MX Emitter Stand Kit – Attaches to Stand DYM 41268 and Holds up to 4 Emitters |
| DYM35285 | Protective Goggles – UV blocking, grey tint, fit over prescription spectacles |

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## Let’s start by talking about your application

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orders@intertronics.co.uk

- Name*
- Company*
- Phone*
- Email*
- Post code*

**If you're in the UK, knowing your postcode would help us get in touch even more quickly. If you're outside the UK, please indicate your country.**

- Tell us about your application

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