

USER GUIDE



Manufacturer:

Dymax

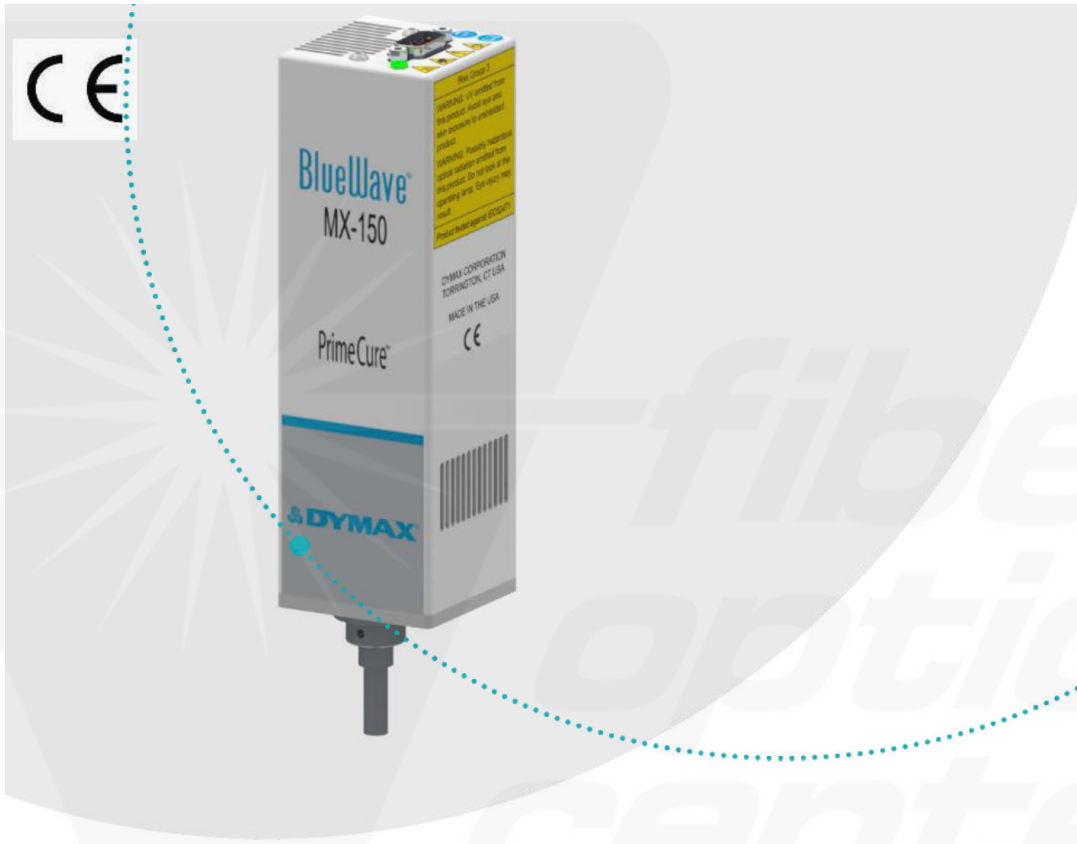
Product Name:

Dymax BlueWave® MX-150 LED Spot-Curing Emitter - 405nm

Manufacturer Part Number:

42338

▶ [Click here for more details on the Dymax BlueWave® MX-150 LED Spot-Curing Emitter - 405nm](#)



BlueWave® MX-150 LED Spot-Curing Emitters

User Guide

Contact the professionals at Fiber Optic Center for a quote or to get more details.

focenter.com • 508-992-6464 | (800) 473-4237 • sales@focenter.com

23 Centre Street • New Bedford, MA 02740 USA

Product data subject to change without notice. FOC last update 6/12/26.

Introduction

This guide describes how to set up, use, and maintain BlueWave® MX-150 emitters safely and efficiently.

Intended Audience

This user guide is meant for experienced process engineers, technicians, and manufacturing personnel.

Safety



WARNING! Under NO circumstances should the interconnect cable from the controller to the LED emitter be connected or disconnected while power to the unit is on. This procedure is usually called “hot swapping” and should not be performed as it could cause damage to the controller or the emitter. Always power down the equipment before disconnecting or connecting any of these devices.



WARNING! If you use this UV LED light source without first reading and understanding the information in the UV Light Safety Guide, SAF001, injury can result from exposure to high-intensity light. To reduce the risk of injury, please read and ensure you understand the information in that guide before assembling and operating the Dymax UV LED light source.



Specific Safety statements for this device:

This device falls under IEC 62471 Risk Group 3 for UVA and Blue Light Emissions:

WARNING. UV emitted from this product. Avoid eye and skin exposure to unshielded products.

WARNING. Possibly hazardous optical radiation emitted from this product. Do not look at operating lamp. Eye injury may result.

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Product Overview

Description of BlueWave MX-150 Emitters

- When paired with a MX-series controller, BlueWave MX-150 emitters function as a high-intensity spot-curing system. The system can be set up in many configurations and can be used with a lightguide if needed.
- The BlueWave MX-150 emitter is air cooled using an axial fan.
- The BlueWave MX-150 emitter can be mounted using one of two hole-patterns in the housing body.

Figure 1.
BlueWave MX-150 Emitter



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Unpacking

Upon arrival, inspect all boxes for damage and notify the shipper of box damage immediately. Open each box and check for equipment damage. If parts are damaged, notify the shipper and submit a claim for the damaged parts.



WARNING! *Until the BlueWave® MX-150 emitter is attached to a controller via the interconnect cable it is susceptible to ESD damage, handle according to ESD standards using a ground strap and do not touch exposed connector pins.*

The parts below are included in every package/order.

Parts Included

LED Emitter

- BlueWave MX-150 LED Emitter Assembly
- 5-mm Lightguide Simulator
- User Guide

Installation

The BlueWave MX-150 emitter is part of a MX-series curing system and requires connection to a controller via an interconnect cable for proper operation.

Important Information

- Do not connect any components while power is applied.
- Mount the BlueWave MX-150 emitter to a rigid support, such as the emitter stand PN 42390, prior to connecting the interconnect cable to prevent handling damage.
- Always keep the LED area covered by a lightguide, rod lens, or lightguide simulator. Assure that FOD cannot flow into the LED area.

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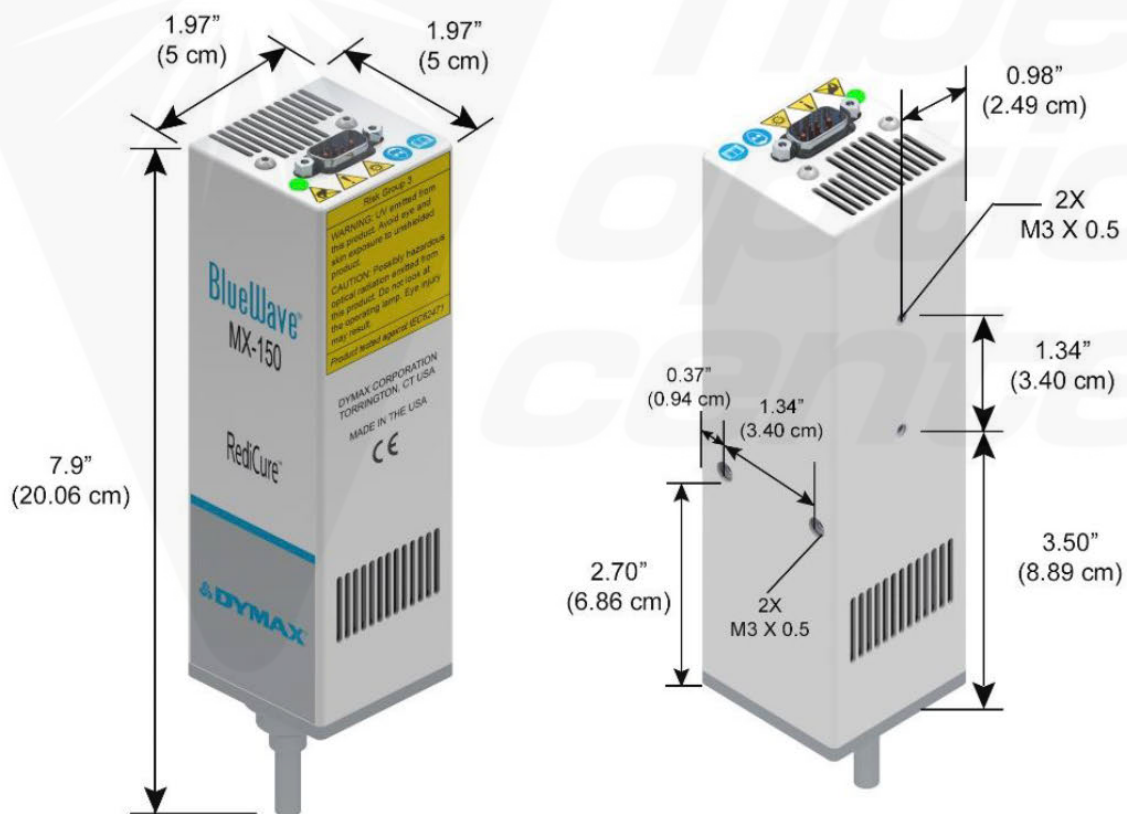
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Mounting/Connections

- Each emitter has two sets of M3 x 0.5 mm holes (Figure 1) that align with Dymax stands and holders.
- When connecting the emitter to the controller, ensure proper strain relief to prevent pinching or kinking of the interconnect cable.
- The cooling air intake on top of unit must be free flowing, do not cover.
- Exhausting air on sides must be given at least 1 mm (0.04") of clear space to obstructions for safe use.

Figure 2.
Bluewave MX-150 Emitter Dimensions



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Troubleshooting & Maintenance

| Problem | Possible Cause | Corrective Action |
|---|---|--|
| BlueWave MX-150 LED does not produce light | LED intensity adjustment set to 0% or too low | Increase LED intensity setting. |
| | LED cycle time is set to 0 seconds | 0 Seconds sets manual mode and requires a trigger. |
| | Interlock is open | Verify interlock jumpers are in place. Verify PLC command structure for PLC mode. |
| | Interface cable connections loose or damaged | Check connections and condition of interface cable. |
| | Trigger setting not matched to input | Trigger setting on admin screen should match the desired input trigger channel. |
| | LED head is not connected to the correct port/channel | Verify that the head is connected to the desired port/channel. |
| BlueWave MX-150 LED suddenly stops producing light | Lightguide not inserted | Ensure the lightguide simulator or any lightguides installed with the unit are fully seated into the Wolf connector. |
| | Over-temperature shutdown was triggered | Verify alarms. |
| | Footswitch defective | Activate unit using the front control panel. Replace the footswitch if the unit operates from the front control panel. |
| | Interlock is open | Verify interlock jumpers are in place. Verify PLC command structure for PLC mode. |
| BlueWave MX-150 LED provides only low-intensity light | LED intensity adjustment set to minimum | Increase LED intensity setting on admin settings or I/O input for PLC mode. |
| | Contaminated/dirty lens optics | Clean the surface of the lens. |

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Product Cleaning and Care

- Product cleaning is limited to wiping the outside of the product with a damp cloth. Do not soak. Isopropanol Alcohol or household cleaners may be used for cleaning the product.
- Keep the LED array free from dust and debris (FOD). Contamination can lead to loss of performance or failure. Protect the LED array by always keeping a light guide, rod lens, or light guide simulator installed.
- Do not insert tools or cleaning devices into the LED opening, and do not attempt to clean the LED array. Disruption from touching, and exposure to cleaning materials can damage the array.
- Do not use compressed air to remove particle debris inside the emitter as it may damage the LED array or the high-speed cooling fan.

Spare Parts

| Item | Part Number |
|---------------------------|-------------|
| 5-mm Lightguide Simulator | 36987 |

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Compatible Devices

| Item | Part Number |
|---|-----------------------|
| Controllers | |
| BlueWave® MX Series 2-Channel Controller/Power Supply - US | 43185 |
| BlueWave® MX Series 4-Channel Controller/Power Supply - US | 43182 |
| Emitters | |
| BlueWave MX-150, VisiCure® (405 nm) | 42338 |
| BlueWave MX-150, PrimeCure® (385 nm) | 42337 |
| BlueWave MX-150, RediCure® (365 nm) | 42336 |
| BlueWave MX Series System Components | |
| Interconnect Cable Assembly - 12 Inches | 43453 |
| Interconnect Cable Assembly - 2 meter | 42287 |
| Interconnect Cable Assembly - 5 meter | 42889 |
| Extended Interconnect Cable - 10 meter* | 43010 |
| Extended Interconnect Cable - 20 meter* | 43011 |
| 5-mm Lightguide Simulator | 36987 |
| 5-mm x 1,000-mm Liquid Lightguide | 35102 |
| 3-mm x 1,000-mm Bifurcated Guide (5-mm Rod) | 37043 |
| Adjustable Focusing Lens | 41148 |
| Radiometer | |
| ACCU-CAL™ 50-LED Radiometer | 40505 |
| Stands | |
| Array Stand | 43070 |
| Single Emitter Mounting Stand | 42390 |
| Dual Emitter Mounting Bracket for MX Controller | 60868 |
| Personal Protection Equipment | |
| Three-Sided Acrylic Shield | 41395 |
| Protective Goggles — Green** | 35286 |
| Protective Goggles — Gray (standard model included with unit)** | 35285 |
| Face Shield** | 35186 |

* Intended for machine installations only.

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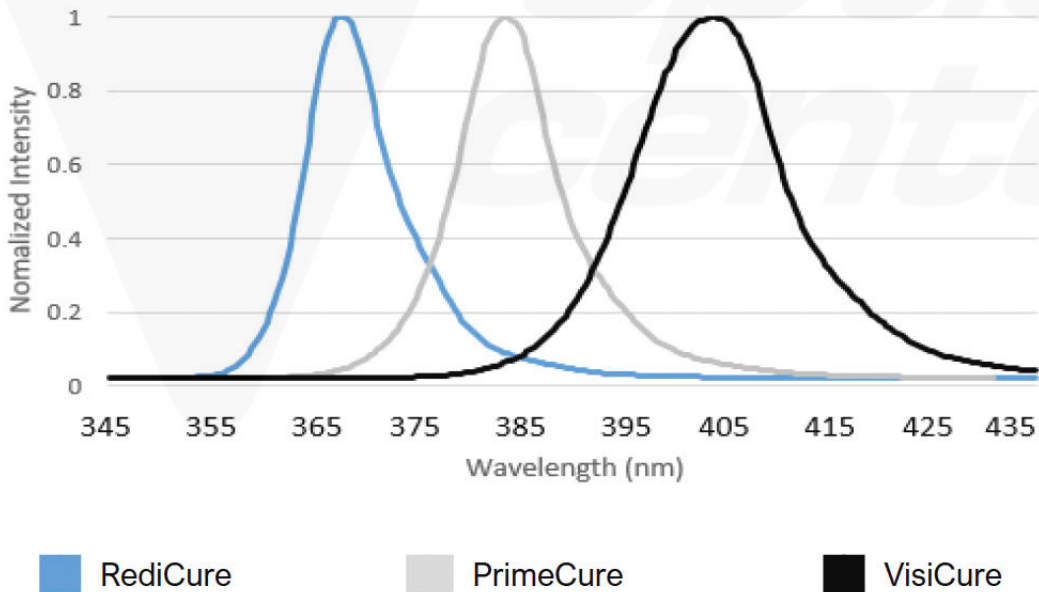
Specifications



| Property | Specification | | |
|--------------------------------|---|----------------------|----------------------|
| Emitter | RediCure | PrimeCure | VisiCure |
| Output Frequency | 365 nm | 385 nm | 405 nm |
| Typical Intensity Output* | 24 W/cm ² | 38 W/cm ² | 36 W/cm ² |
| Emitter Dimensions (W x D x H) | 1.97" x 1.97" x 7.9" [5 cm x 5 cm x 20.06 cm] | | |
| Weight | 1.4 lbs. [0.64 kg] | | |
| Unit Warranty | 1 year from purchase date | | |
| Operating Environment | 10 to 40°C (50°F to 104°F), 0-80% relative humidity, non-condensing | | |

* Measured using an ACCU-CAL™ 50-LED radiometer with a 5-mm lightguide at a distance of 0 mm.

Figure 3.
BlueWave MX Series Spectral Output



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Declaration of Conformity

Figure 4.
Declaration of Conformity - CE



EU Declaration of Conformity

Manufacturer:
Dymax Corporation
318 Industrial Lane
Torrington CT 06790, USA

Product description:
Model name(s):

BlueWave ® MX-150 LED Spot-Curing System
BlueWave ® MX-150 LED Emitter

This product complies with the following relevant Union Harmonization Legislation:

Applicable EU Directives:
Electromagnetic Compatibility Directive(2014/30/EU)

Low Voltage Directive(2014/35/EU)

RoHS Directive 2011/65/EU (2015/863)

Applicable Harmonized Standards:
EN55011:2016/A1:2017/A11:2020
EN 61000-3-2:2014 Class A
EN 61000-3-3:2013
EN 61326-1:2013
EN 61010-1:2010 AMD1:2019

EN IEC 63000:2018

Declaration:
This declaration of conformity is issued under the sole responsibility of the manufacturer.
Signed for and on behalf of:

 3/26/2025 Torrington, CT
Name Date Location

CE

Authorized Signatory:
Robert Gallagher
Engineering Manager, Equipment
Dymax Corporation
Torrington CT., USA

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Figure 5.
Declaration of Conformity - UKCA

DYMAX®

UK Declaration of Conformity

Manufacturer:
Dymax Corporation
318 Industrial Lane
Torrington CT 06790, USA

Product description:
Model name(s):

BlueWave® MX-150™ LED Spot-Curing System
BlueWave® MX-150 LED Emitter

This product complies with the following relevant UK Legislation:

Applicable UK Legislation:
Electromagnetic Compatibility Regulations 2016

Electrical Equipment Safety Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical
And Electronic Equipment Regulations 2012

Other Regulatory Compliance

Applicable Harmonized Standards:
EN55011:2016/A1:2017/A11:2020
EN 61000-3-2:2014 Class A
EN 61000-3-3:2013
EN 61326-1:2013
EN 61010-1:2010, AMD1:2019

EN IEC 63000:2018

Photo-biological Safety
IEC 62471 (2006)

Declaration:
This declaration of conformity is issued under the sole responsibility of the manufacturer.
Signed for and on behalf of:

 6/26/2025 Torrington, CT USA

Name Date Location

Authorized Signatory:
Robert Gallagher
Engineering Manager, Equipment
Dymax Corporation
Torrington CT., USA

UKCA

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Please note that most 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 standard Conditions of Sale published on our website. Dymax recommends that any intended application be evaluated and tested by the user to ensure that desired performance criteria are satisfied.



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