

CE



BlueWave® MX-150 LED Spot-Curing Emitters

User Guide

 **DYNAMAX®**



About Dymax

Light-curable adhesives. Systems for light curing, fluid dispensing, and fluid packaging.

Dymax manufactures industrial adhesives, light-curable adhesives, epoxy resins, cyanoacrylates, and activator-cured adhesives. We also manufacture a complete line of manual fluid dispensing systems, automatic dispensing systems, and light-curing systems. Light-curing systems include LED light sources, spot, flood, and conveyor systems designed for compatibility and high performance with Dymax adhesives. Dymax adhesives and light-curing systems optimize the speed of automated assembly, allow for 100% in-line inspection, and increase throughput. System designs enable stand-alone configuration or integration into your existing assembly line.

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 the Dymax standard Conditions of Sale. Dymax recommends that any intended application be evaluated and tested by the user to ensure that desired performance criteria are satisfied. Dymax is willing to assist users in their performance testing and evaluation. Data sheets are available for valve controllers or pressure pots upon request.

Contents

| | |
|--|-----------|
| Introduction | 4 |
| Where to Get Help..... | 4 |
| Safety | 4 |
| Product Overview | 5 |
| Description of BlueWave MX-150 Emitters | 5 |
| Unpacking | 6 |
| Parts Included | 6 |
| Installation | 6 |
| Important Information..... | 6 |
| Mounting/Connections..... | 7 |
| Troubleshooting & Maintenance | 8 |
| Product Cleaning and Care..... | 9 |
| Spare Parts | 9 |
| Compatible Devices | 10 |
| Specifications | 11 |
| Declaration of Conformity | 12 |
| Warranty | 14 |
| Index | Err |

or! Bookmark not defined.

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. If you are new to high-intensity LED light sources and do not understand the instructions, contact Dymax Application Engineering for answers to your questions before using the equipment.

Where to Get Help

Dymax Customer Support and Application Engineering teams are available by phone in the United States, Monday through Friday, from 8:00 a.m. to 5:30 p.m. Eastern Standard Time. You can also email Dymax at info@dymax.com. Contact information for additional Dymax locations can be found on the back cover of this user guide. For more information about this product, visit dymax.com.

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.*

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



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. Contact Dymax so that new parts can be shipped to you immediately.



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. If parts are missing from your order, contact your local Dymax representative or Dymax Customer Support to resolve the problem.

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.

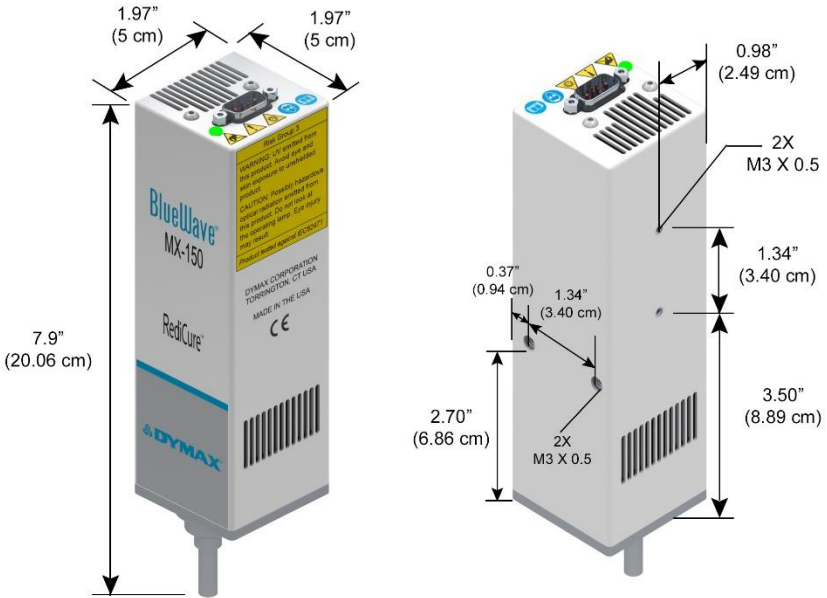
Important Information

- 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.

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



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. |

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 |

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. | ** For data sheets related to these products, please refer to the manufacturer. (35285 – MCR Safety, TK112; 35286 – MCR Safety, 98150; 35186 – Oberon, 171AFR)

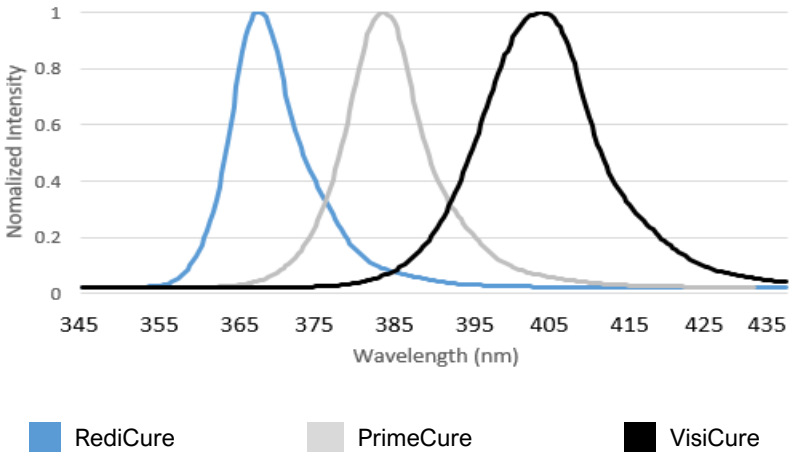
Specifications



| 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



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: | Applicable Harmonized Standards: |
| Electromagnetic Compatibility Directive(2014/30/EU) | EN55011:2016/A1:2017/A11:2020 |
| | EN 61000-3-2:2014 Class A |
| | EN 61000-3-3:2013 |
| | EN 61326-1:2013 |
| Low Voltage Directive(2014/35/EU) | EN 61010-1:2010 AMD1:2019 |
| RoHS Directive 2011/65/EU (2015/863) | EN IEC 63000:2018 |

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

 3/24/2025 Torrington, CT
Name Date Location

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


CE


www.dymax.com

North America: +1 860.482.1010 | Europe: +49 611.962.7900 | Asia: +65.67522887

© 2021-2022 Dymax Corporation. All rights reserved. All statements in this guide, except where noted, are the property of, or used under license by Dymax Corporation, U.S.A.
Warranty Void Where Repaired and Using Aftermarket Components: Dymax does not warrant the fitness of the product for its intended application. Any user who substitutes the product, its configuration and/or a critical item is held to be in breach of Dymax's standard Conditions of Sale. Dymax warrants that any repaired equipment is evaluated and tested by the user to ensure that device performance criteria are met. Dymax warrants its repair centers in their performance testing and evaluation by offering equipment that meet pre-bearing requirements stated in each listing and enclosure. Data sheets are available for open categories or please call your nearest

Figure 5.
Declaration of Conformity - UKCA



UK Declaration of Conformity

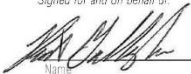
Manufacturer:
 Dymax Corporation
 318 Industrial Lane
 Torrington CT 06790, USA

Product description: BlueWave® MX-150™ LED Spot-Curing System
 Model name(s): BlueWave® MX-150 LED Emitter

This product complies with the following relevant UK Legislation:


| | |
|---|---|
| Applicable UK Legislation: | Applicable Harmonized Standards: |
| Electromagnetic Compatibility Regulations 2016 | EN56011:2016/A1:2017/A11:2020 |
| | EN 61000-3-2:2014 Class A |
| | EN 61000-3-3:2013 |
| | EN 61326-1:2013 |
| Electrical Equipment Safety Regulations 2016 | EN 61010-1:2010, AMD1:2019 |
| The Restriction of the Use of Certain Hazardous Substances in Electrical And Electronic Equipment Regulations 2012 | EN IEC 63000:2013 |
| Other Regulatory Compliance | 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

**UK
 CA**

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

 North America +1 860.462.1010 | Europe: +49 611 962.7900 | Asia +65 67322887
 © 2021-2022 Dymax Corporation. All rights reserved.
 Please note that error depending on curing system application can change.

www.dymax.com

Warranty

From date of purchase, Dymax Corporation offers a one-year warranty against defects in material and workmanship on all system components with proof of purchase and purchase date. Unauthorized repair, modification, or improper use of equipment may void your warranty benefits. The use of aftermarket replacement parts not supplied or approved by Dymax Corporation, will void any effective warranties and may result in damage to the equipment.

IMPORTANT NOTE: DYMAX CORPORATION RESERVES THE RIGHT TO INVALIDATE ANY WARRANTIES, EXPRESSED OR IMPLIED, DUE TO ANY REPAIRS PERFORMED OR ATTEMPTED ON DYMAX EQUIPMENT WITHOUT WRITTEN AUTHORIZATION FROM DYMAX. THOSE CORRECTIVE ACTIONS LISTED ABOVE ARE LIMITED TO THIS AUTHORIZATION.

Index

Cleaning, 9
Compatible Devices, 10
Components, 5
Connections, 7
Declaration of Conformity, 12
Help, 4
Installation, 6
Maintenance, 8
Mounting, 7
Parts List, 6
Product Overview, 5
Safety, 4
Spare Parts, 9
Specifications, 11
Spectral Output, 11
Support, 4
Troubleshooting, 8
Unpacking, 6
Warranty, 14

Americas: +1.860.482.1010 | Europe: +49 611.962.7900 | Asia: +65.67522887



www.dymax.com

© 2019-2025 Dymax Corporation. All rights reserved. All trademarks in this guide, except where noted, are the property of, or used under license by Dymax Corporation, U.S.A.

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. 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.

MAN097 7/3/2025