

USER GUIDE

**Manufacturer:**

Dymax

Product Name:

Dymax BlueWave® MX-150 LED Curing Spot Lamp 2-Channel Controller

Manufacturer Part Number:

43185

▶ Click here for more details on the Dymax BlueWave® MX-150 LED Curing Spot Lamp 2-Channel Controller



BlueWave® MX-150 LED Spot-Curing Emitters

User Guide



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

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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.
- Do not touch the emitter aperture glass. This can result in poor performance and broken glass due to heating. Inspect before each use and clean with isopropyl alcohol if contaminated.

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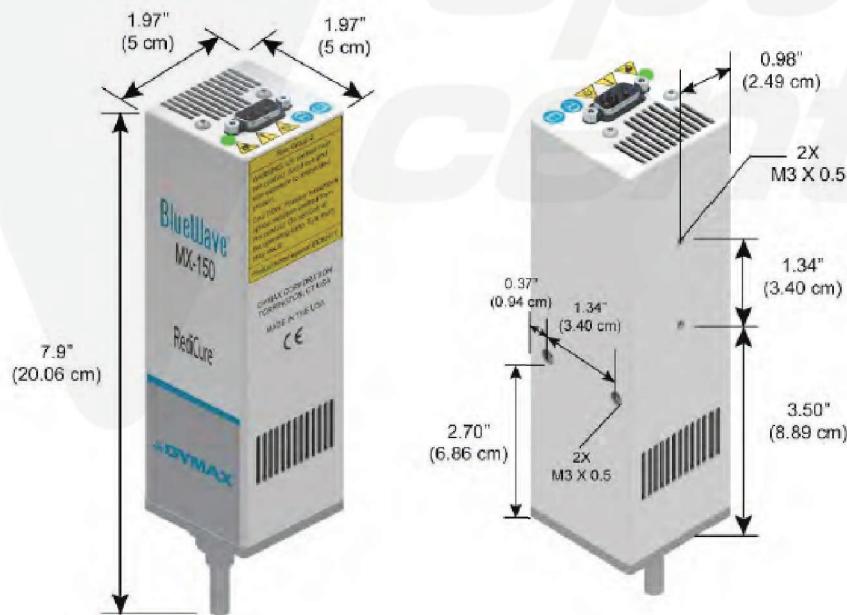
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- If emitter aperture glass is permanently contaminated it must be replaced for safe operation.

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.
BlueWave MX-150 LED suddenly stops producing light	LED head is not connected to the correct port/channel	Verify that the head is connected to the desired port/channel.
	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.
BlueWave MX-150 LED provides only low-intensity light	Interlock is open	Verify interlock jumpers are in place. Verify PLC command structure for PLC mode.
	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 product with a damp cloth. Do not soak. Isopropanol Alcohol or household cleaners may be used for cleaning the product.
- Always inspect the quartz window for cleanliness before use. Foreign material can cause permanent damage to the window. Clean with Isopropanol Alcohol to remove smudges or foreign material. Damaged or permanently etched windows should be replaced.
- Do not use compressed air to removed particle debris inside the emitter as it may damage the high-speed cooling fan.

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Compatible Devices

Item	Part Number
Controllers	
BlueWave® MX Series 2-Channel Controller/Power Supply - US	43185
Emitters	
BlueWave MX-150, VisiCure® (405 nm)	42338
BlueWave MX-150, PrimeCure® (385 nm)	42337
BlueWave MX-150, RediCure® (365 nm)	42336
Personal Protection Equipment	
Protective Goggles — Green	35286
Protective Goggles — Gray (standard model included with unit)	35285

* Intended for machine installations only.

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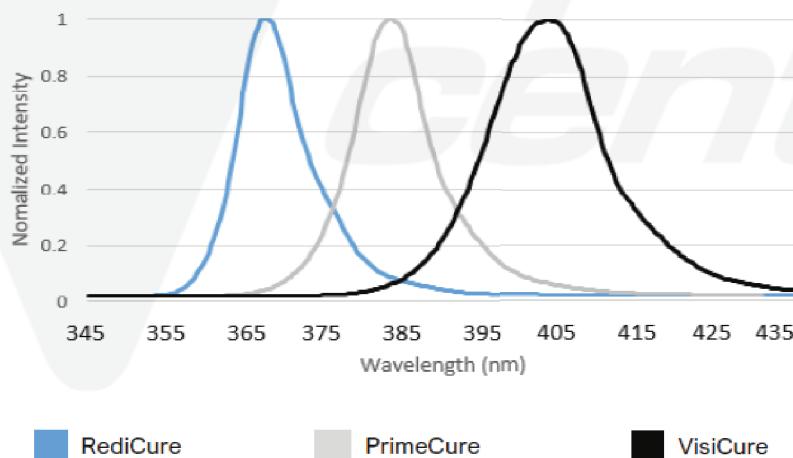
Specifications



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

DYMAX

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 Harmonized Legislation:
Applicable EU Directives:
Electromagnetic Compatibility Directive(2014/30/EU)
Low Voltage Directive(2006/95/EC)
RoHS Directive 2011/65 EU (2015/803)
Other Regulatory Compliance

Applicable Harmonized Standards:
EN65011:2016/A1:2017/A11:2020
EN 61000-3-2:2014 Class A
EN 61000-3-3:2013
EN 61326-1:2013
EN 61010-1:2010, IEC61201:2010
EN IEC 63000:2018
Photo-biological Safety
IEC 62471 (2008)

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

6/5/2023 Torrington, CT

Name: Toby Trudeau Date: 6/5/2023 Location: Torrington, CT

Authorized Signatory:
Toby Trudeau
Engineering Manager, Equipment
Dymax Corporation
Torrington CT, USA

CE

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Figure 5.

Declaration of Conformity - UKCA

DYMAX

UK Declaration of Conformity

Manufacturer:
Dymax Corporation
315 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
EN62011:2016+A1:2017/A11:2020
EN 61000-3-2:2014 Class A
EN 61000-3-3:2013
EN 61326-1:2013
EN 61010-1:2010; IEC61010-1:2010+A1:2010

Electrical Equipment Safety Regulations 2016
EN IEC 63000:2018

The Restriction of the Use of Certain Hazardous Substances in Electrical And Electronic Equipment Regulations 2012
EN IEC 62321-1:2012

Other Regulatory Compliance

Photo-biological Safety
IEC 62471 (2008)

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

T. Trudeau 6/5/2023 Torrington, CT
Name Date Location

Authorized Signatory:
Toby Trudeau
Engineering Manager, Equipment
Dymax Corporation
Torrington CT, USA

UKCA

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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.

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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.

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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