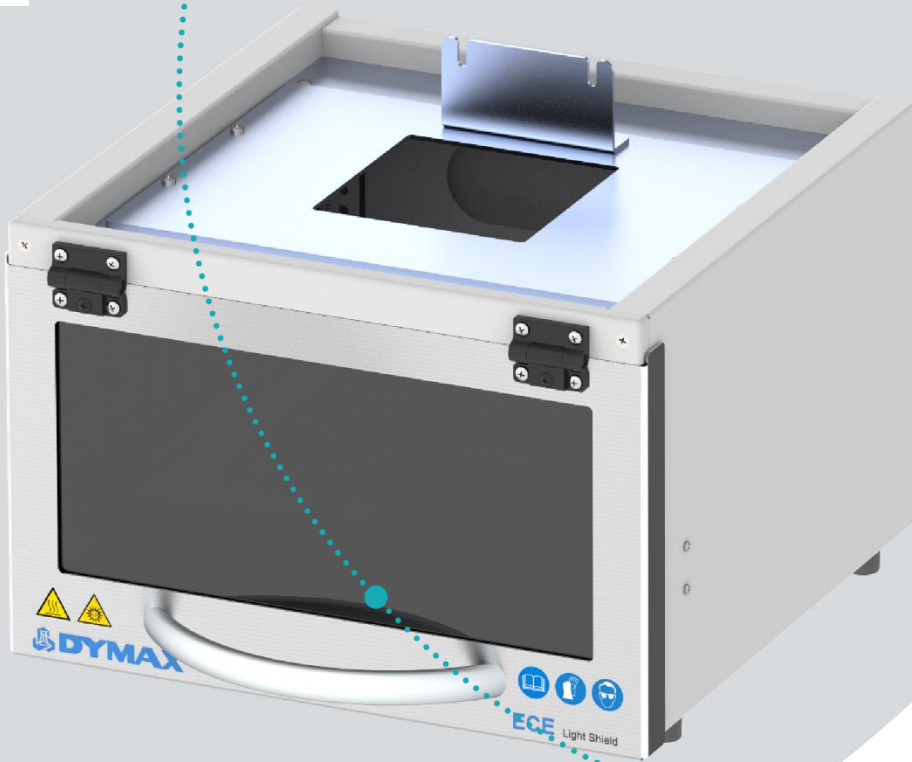


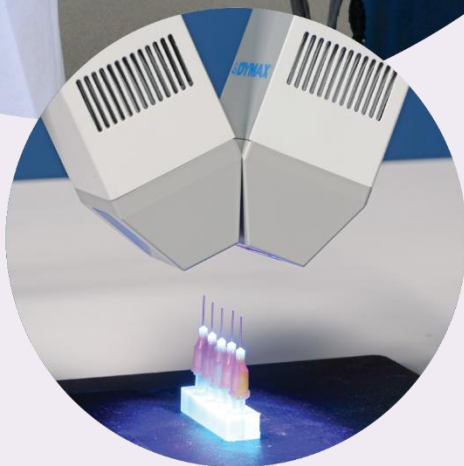
CE



# AX Light Shield Kit

User Guide

 **DYMAX**<sup>®</sup>



## About Dymax

**UV/Visible light-curable adhesives. Systems for light curing, fluid dispensing, and fluid packaging.**

Dymax manufactures industrial, light-curable, epoxy, and activator-cured adhesives. We also manufacture a complete line of manual fluid dispensing systems, automatic fluid 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 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.

# Contents

- Introduction ..... 3**
  - Where to Get Help..... 3
  
- Safety ..... 3**
  - Specific Safety Considerations..... 3
  - Safety Symbol Index ..... 3
  
- Product Overview..... 4**
  - Description of AX Light Shield Kit ..... 4
  - System Components..... 4
  - ..... 5
  - Special Features & Benefits..... 5
  
- Assembly and Setup ..... 6**
  - Unpacking and Inspecting Your Shipment ..... 6
  - System Interconnection..... 6
  
- Operation ..... 10**
  
- Cleaning & Maintenance..... 10**
  - General ..... 10
  - Light Shield ..... 10
  - BlueWave AX-550 LED Curing System ..... 10
  
- Troubleshooting ..... 11**
  
- Spare Parts and Accessories ..... 11**
  
- Specifications ..... 12**
  
- Warranty ..... 13**
  
- Index..... 14**

# Introduction

This guide describes how to set up, use, and maintain a Dymax AX Light Shield safely and efficiently.

## Intended Audience

Dymax prepared this user guide for experienced process engineers, technicians, and manufacturing personnel. If you are new to UV light curing 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](mailto:info@dymax.com). Contact information for additional Dymax locations can be found on the back cover of this user guide.

Additional resources are available to ensure a trouble-free experience with our products:

- Detailed product information on [www.dymax.com](http://www.dymax.com)
- Dymax adhesive product data sheets on our website
- Safety data sheets (SDS) provided with shipments of Dymax materials

## Safety



**WARNING!** *If you use this light shield without first reading and understanding the information in this user guide, injury can result from exposure to high-intensity light. To reduce the risk of injury, read and ensure you understand the information in this user guide before assembling and operating a Dymax BlueWave® AX-550 LED curing system with light shield.*

## Specific Safety Considerations

The light shield is designed to maximize operator safety and minimize exposure to light-curing energy. To use the shield safely, it must be set up and operated in accordance with the instructions in this user guide. Please also read and understand the safety considerations unique to LED flood light-curing systems.

## Safety Symbol Index

The following symbols are displayed on the Dymax light shield. Please see below for their meanings.



Refer to Manual



Gloves Required



Eye Protection Required



Warning!



Caution! Hot Surface



Warning! UV Light Hazard

# Product Overview

## Description of AX Light Shield Kit

The AX light shield is designed to prevent worker exposure to high-intensity light when used in conjunction with the BlueWave AX-550 LED curing system. Together these components create a unique bench-top LED light-curing system that can be used to cure photosensitive adhesives, coatings, and inks applied to various size and shape parts.

The AX Light Shield Kit (PN 60419) features an ECE light shield and an adapter plate that allows the BlueWave AX-550 LED curing system to be easily mounted onto the light shield.

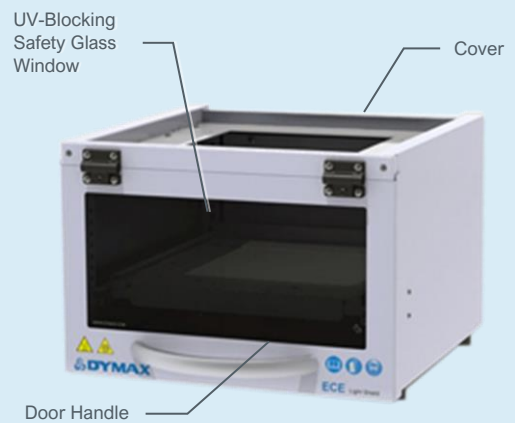
*NOTE: Users considering special or customized configurations should contact Dymax Application Engineering for recommendations and/or guidance to prevent equipment malfunction. Dymax cannot foresee every possible use of these light sources and reserves the right to invalidate warranties, expressed or implied, due to non-recommended installation or use of this equipment.*

## System Components

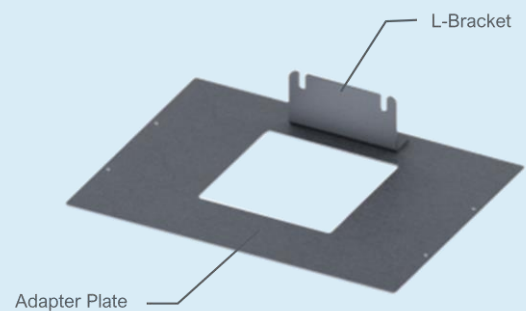
**ECE Light Shield (Figure 1)** - The light shield is the base of the flood system and is constructed so the operator can safely observe objects during the curing process. Its front-loading door swings up and down on dual supporting hinges and has an interlock switch that prevents the LED flood array from activating when the light shield door is open. Inside the unit is a fireproof tray that slides along adjustable height rails and can be easily removed and replaced.

**Adapter Plate Assembly (Figure 2)** - The adapter plate is the interface between the BlueWave AX-550 LED curing system and the ECE light shield enabling a safe, secure bond between the two components.

**Figure 1.**  
Main Components of the AX Light Shield Kit



**Figure 2.**  
Adapter Plate Assembly



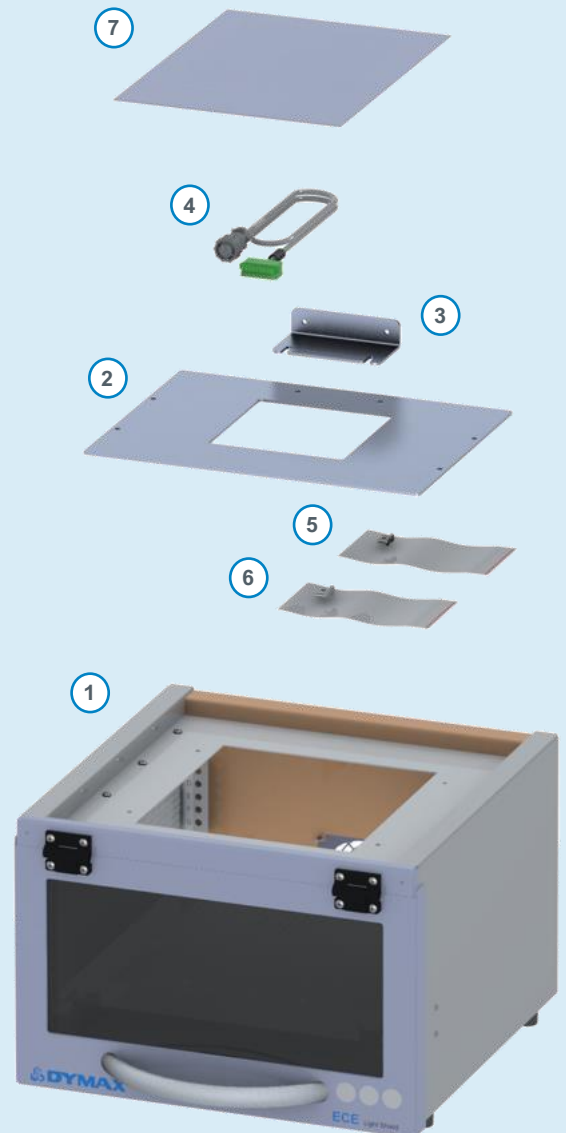
## Parts Included in the AX Light Shield Kit (PN 60419)

- 1 Light Shield with Tray, PN 40807
- 2 Interface Adapter Plate, PN 43632
- 3 L-Bracket, PN 60401
- 4 Interlock Cable, PN 60471
- 5 Screws, M4 x 8 mm, PN 41688
- 6 Screws, M5 x 8, PN 39166
- 7 Dymax AX Light Shield User Guide, PN 60482

## Special Features & Benefits

Feature	Benefit
Accommodates parts for curing up to 7.5" [19.05 cm] high	Can be used for a variety of part configurations.
Work surface may be adjusted from 1.5"- 5.5" [3.81 cm - 13.97 cm] from the cover of the enclosure.	The light shield tray can be used with light-curing applications for a variety of size products.
Door interlock	Extra safety precaution preventing the LED unit from being activated when the light shield door is open.

**Figure 3.**  
AX Light Shield Kit Parts List (PN 60419)



# Assembly and Setup

## Unpacking and Inspecting Your Shipment

When your AX light shield arrives, inspect the 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.

Check that the parts included in your order match those listed below. If parts are missing, contact your local Dymax representative or Dymax Customer Support to resolve the problem.

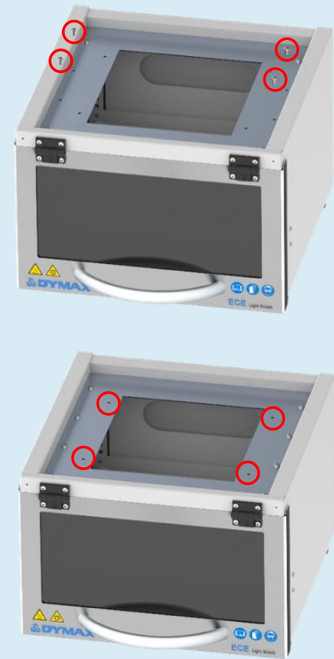
## System Interconnection

Place the light shield on the designated workbench. Remove all packaging used for securing the unit during shipping and save it in the event you need to repackage the unit for return.

## Suggested Sequence of BlueWave AX-550 LED Curing System Connection

1. Remove the (4) M4 x 8 Screws from the middle of the outer perimeter of the Top Plate. (Figure 4) Place the Adapter Plate onto the Top Plate with the two L-Bracket Mounting Holes toward the rear, PEMs facing downward, and align the 4 mounting holes along the edge.
2. Secure the Adapter Plate to the Top Plate by reinstalling the (4) M4 x 8 Screws removed in the previous step. (Figure 5)

**Figure 3.**  
Remove Screws

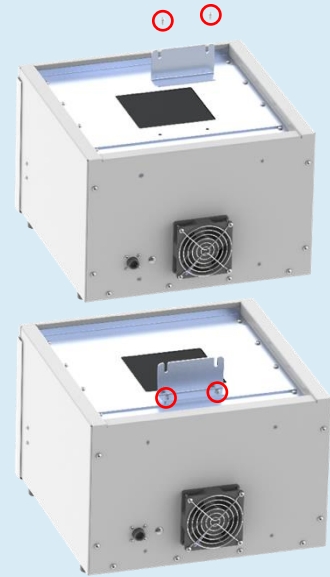


**Figure 4.**  
Mounting the Adapter Plate



3. Place the L-Bracket onto the Adapter Plate, flat side facing toward the front of the Light Shield and align the mounting holes. (Figure 6)
4. Place the BlueWave AX-550 LED Curing System onto the Adapter Plate, aligning the rear mounting holes with the slots in the L-Bracket. Insert the (2) M5 x 8 Screws through the L-Bracket Slots into the BlueWave AX-550 Emitter Mounting Holes and tighten. (Figure 7)

**Figure 5.**  
Installing the L-Bracket



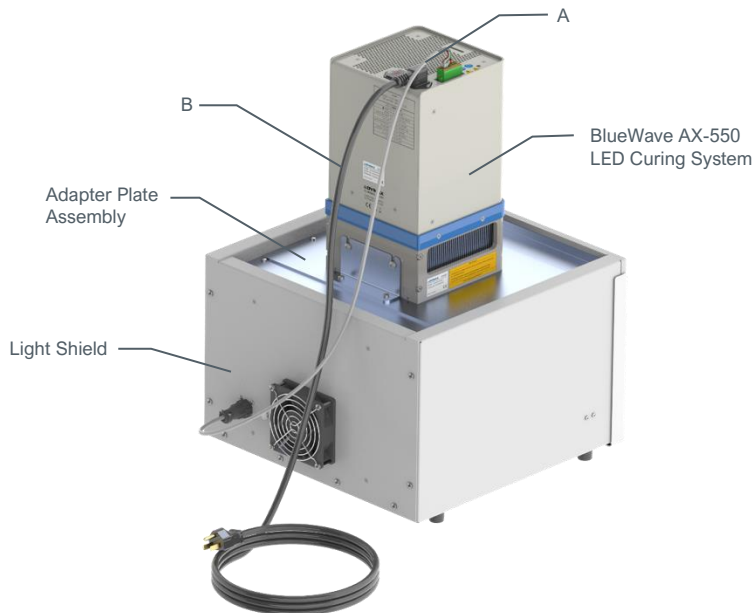
**Figure 6.**  
Mounting the BlueWave AX-550 LED Curing System





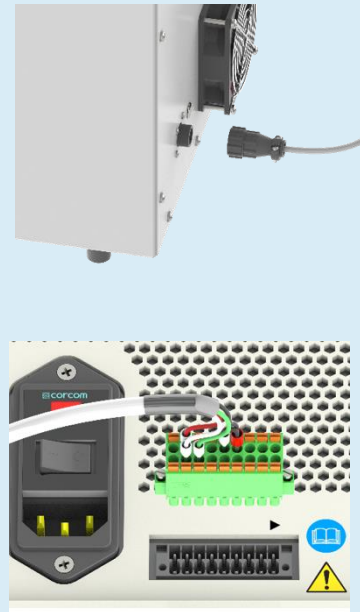
5. Connect all components with appropriate cables. (Figure 8)

**Figure 7.**  
BlueWave AX-550 LED Curing System Interconnect Diagram

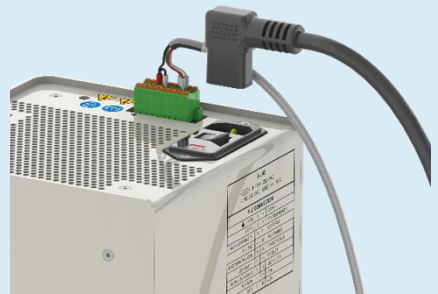


- A. Interlock Cable** - Connects the rear of the light shield to the 18-pin I/O interface on top of the BlueWave AX-550 controller, enabling interlock functionality and power to the light shield fan. (Figure 9)
- B. AC Power Cord** - Connects to the power input on top of the BlueWave AX-550 controller. (Figure 10)

**Figure 8.**  
Connecting the Interlock Cable



**Figure 9.**  
Connecting the AC Power Cable



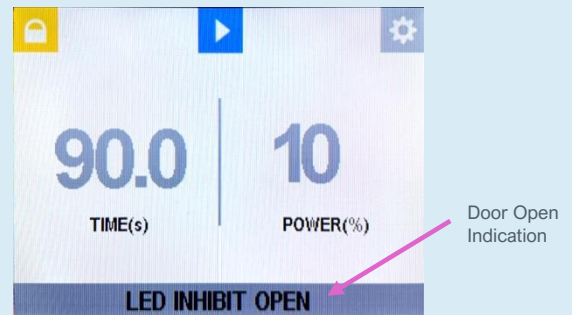
6. Plug the AC power cord into an AC power outlet.
7. When all connections are properly made, toggle the power switch on the top of the BlueWave AX-550 controller. The system is now ready for use. Verify that the fan on the back of the light shield is operating.
8. Set the curing parameters according to application requirements. Instructions for setting these parameters and complete unit operation can be found in the BlueWave AX-550 LED Curing System's User Guide.
9. Open the light shield door, and verify "LED INHIBIT OPEN" is displayed across the bottom of the LCD screen (Figure 11). This indicates that the light shield is connected and functioning properly.

**NOTE:** Curing cycles cannot be started while "LED INHIBIT OPEN" is displayed on the screen, preventing accidental light exposure.

10. Estimate the height of the curing part in respect to its base, or to the base of the part holder (if the object to be cured is not free standing), and then adjust the position of the tray to a proper distance from the curing part. Use a ruler for setting accuracy. You can set working distances for each type of LED array assembly differently to optimize your throughput with respect to adhesive properties and irradiant energy required to achieve the best curing quality in the shortest time. Dymax Application Engineering is ready to assist you if needed.
11. The system is ready for operation.

**Figure 10.**

"LED INHIBIT OPEN" Indicates the Light Shield is Connected and Functioning Properly



**NOTE:** If your unit doesn't display the "LED INHIBIT OPEN" message on the screen when the Light Shield door is opened, remove all power and do not operate the unit. Contact Dymax for assistance

## Operation

For a detailed description of the BlueWave AX-550 LED curing system operation, maintenance, and troubleshooting, see the BlueWave AX-550 LED Curing System User Guide. Below is a general, suggested sequence of activities that can be altered to better match your working conditions, process requirements, and work habits.

1. To begin production curing, place the item to be cured inside the Light Shield. Close the Door and a click sound should be heard.
2. Initiate the cure cycle by pressing the Foot Switch or Rotary Push Button on the front panel of the BlueWave AX-550 Controller. If using the Rotary Push Button, make sure to first highlight the Stop/Run Screen Icon (Figure 12)
3. Once the cure cycle is completed, open the Light Shield and unload the cured parts.
4. If the Light Shield's Door is opened at any time, the "LED INHIBIT OPEN" message will be shown on the screen and the curing cycle cannot be started. If the Door is opened during a cycle, the cycle will be terminated immediately and the "LED INHIBIT OPEN" message will appear on the screen.

**NOTE:** Once a cycle has been terminated due to door opening, the door must be shut and cycle restarted; it does not automatically restart upon shutting the door.

## Cleaning & Maintenance

### General

For detailed technical assistance, please call the Dymax Application Engineering.

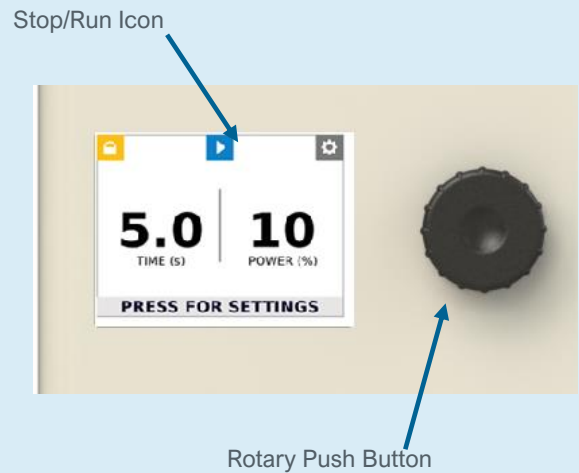
### Light Shield

The light shield is designed to be maintenance free. Periodic cleaning will ensure long, trouble-free operation.

### BlueWave AX-550 LED Curing System

See the BlueWave AX-550 LED Curing System User Guide for maintenance recommendations.

**Figure 11.**  
Stop/Run Screen Icon Selection



## Troubleshooting

Problem	Possible Cause	Corrective Action
The LED array will not turn on and the “LED INHIBIT OPEN” message is displayed	The light shield's door not fully closed	Close the door until it clicks
	Interlock cable is not fully plugged in on both ends	Firmly secure the interlock cable on both ends. Verify the connector screws are engaged and fastened
The LED array will not turn on and the “LED INHIBIT OPEN” message is not displayed	Reference the Dymax BlueWave AX-550 User Guide for further information.	
The LED array will not turn on and the error screen is visible		

**NOTE:** If your unit displays an error message on the LCD screen, refer to the troubleshooting section of the BlueWave AX-550 LED Curing System User Guide for more information.

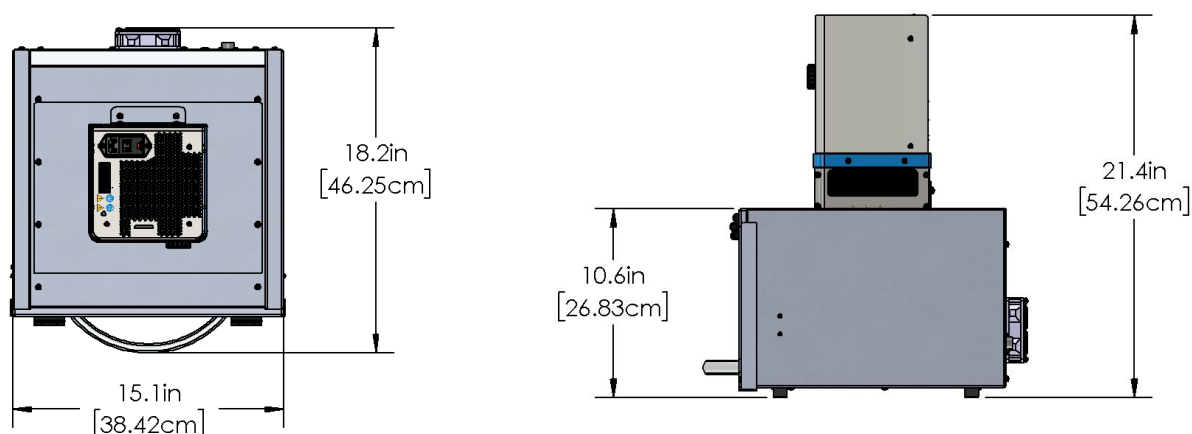
## Spare Parts and Accessories

Item	Part Number
Cables	
Interlock Cable	60471
Radiometer	
ACCU-CAL™ 160-LED	41585
Misc. Replacement Parts	
Work Surface Tray Assembly	40806

## Specifications

Property	Specification
<b>Part Numbers</b>	<p>60419 AX Light Shield Kit (Includes Light Shield &amp; Interface Kit)</p> <p>43251 Compatible BlueWave AX-550 Controller</p> <p>43249 Compatible BlueWave AX-550 PrimeCure® Emitter – 385 nm</p> <p>43250 Compatible BlueWave AX-550 VisiCure® Emitter – 405 nm</p> <p>43248 Compatible BlueWave AX-550 RediCure® Emitter – 365 nm</p>
<b>Work Area</b>	10" x 10" [25.4 cm x 25.4 cm]
<b>Work Surface Load Capacity</b>	Up to 5 lbs. [2.27 kg]
<b>Overall Dimensions (Light Shield Only) (W x D x H)</b>	15.1" x 18.2" x 10.6" [38.42 cm x 46.25 cm x 26.83 cm]
<b>Overall Dimensions (with LED Flood Array) (W x D x H)</b>	15.1" x 18.2" x 21.4" [38.42 cm x 46.25 cm x 54.36 cm] Need 2" [5.08 cm] clearance for cable on the top of BlueWave® Controller
<b>Weight (Light Shield Only)</b>	12.75 lbs. [5.78 kg]
<b>Weight (Adapter Plate w/L-Bracket Only)</b>	1.05 lbs. [0.476 kg]
<b>Unit Warranty</b>	1 year from purchase date

**Figure 12.**  
Light Shield with BlueWave AX-550 LED Curing System Dimensions



## 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

Assembly, 6  
Cleaning, 10  
Contact Information, 3  
Help, 3  
Maintenance, 10  
Operation, 10  
Parts, 5  
Product Overview, 4  
Safety, 3  
Safety Symbol Index, 3  
Specific Safety Considerations, 3  
Setup, 6  
Support, 3  
System Components, 4  
System Interconnect, 6  
Unpacking, 6  
Warranty, 13



[www.dymax.com](http://www.dymax.com)

**Americas**

USA | +1.860.482.1010 | [info@dymax.com](mailto:info@dymax.com)

**Europe**

Germany | +49 611.962.7900 | [info\\_de@dymax.com](mailto:info_de@dymax.com)  
Ireland | +353 21.237.3016 | [info\\_ie@dymax.com](mailto:info_ie@dymax.com)

**Asia**

Singapore | +65.67522887 | [info\\_ap@dymax.com](mailto:info_ap@dymax.com)  
Shanghai | +86.21.37285759 | [dymaxasia@dymax.com](mailto:dymaxasia@dymax.com)  
Shenzhen | +86.755.83485759 | [dymaxasia@dymax.com](mailto:dymaxasia@dymax.com)  
Hong Kong | +852.2460.7038 | [dymaxasia@dymax.com](mailto:dymaxasia@dymax.com)  
Korea | +82.31.608.3434 | [info\\_kr@dymax.com](mailto:info_kr@dymax.com)

© 2020 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.

MAN108DA 5/11/2020