DYMAX®

BlueWave® AX-550 PRODUCT BULLETIN

BlueWave® AX-550 LED Curing System

All-in-One, High-Intensity System for Quiet, Efficient LED Curing

The BlueWave® AX-550 is an LED-curing system that combines a controller, emitter, and power supply into a compact, all-in-one design. Eliminating the need for a large, traditional–style controller, this unit has a greatly reduced footprint and is easily integrated into Dymax conveyor systems. The emitters are detachable, and the system is field-upgradable by customers so they can switch to another wavelength or upgrade to a more powerful emitter as improved LED die become available.

The system also features an easy-to-navigate user interface with push-button controls. Units can be password protected to limit access to only authorized users and protect process parameters.

System Features & Benefits

Field Upgradable Emitters

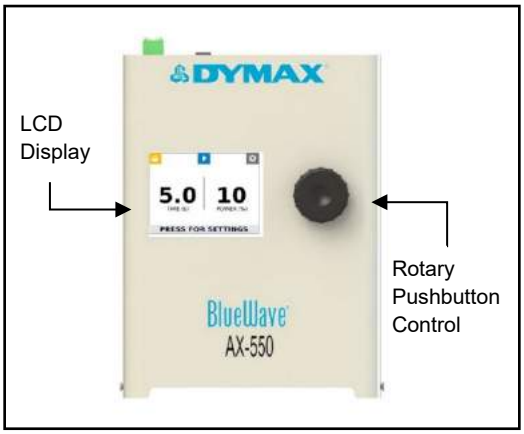
- Enable quick change out of emitters for optimization of application-specific frequency emissions without the need to purchase additional controllers or return or upgrade the entire unit
- Existing units can be quickly upgraded as new emitter frequency and higher power level models become available
- Provide flexibility to meet changing application requirements

Standard SD Card Access Port

- User firmware upgrades can be completed without the need to return the units
- Allows for quick upgrade to latest performance parameters and firmware

Improved User Interface with Rotary Push-Button Control

- Simple, easy-to-navigate controls
- Provides system status and troubleshooting
- Intuitive, menu-driven programming and operation



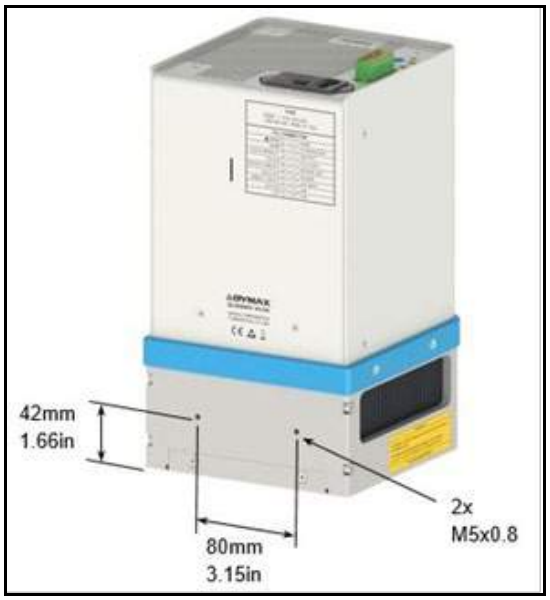
Easily Incorporated into Automated Systems

Machine Mountable

- Direct-to-frame pre-drilled holes for stability and easy mounting and integration into automated systems

PLC Activation and Control

- Similar to BlueWave® MX Series for user continuity
- Allows for control and monitoring of power levels, exposure times/routines, and system health and safety lockout via PLC interface

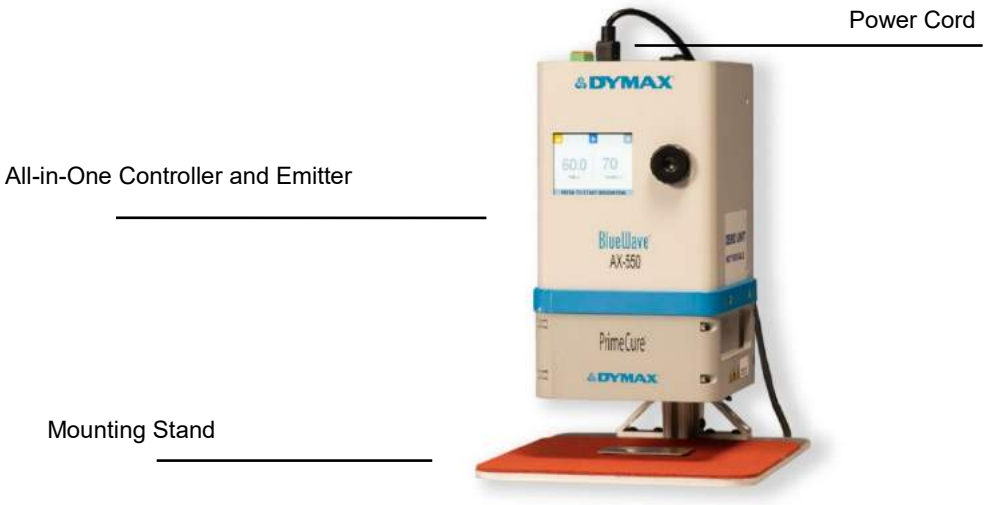


LED Light-Curing Technology

Dymax LED curing systems generate curing energy using high-intensity LEDs in lieu of conventional arc lamp technology. The relatively narrow frequency band of energy emitted by LEDs results in cooler curing environments and substrate temperatures compared to traditional UV-style lamp systems, making them ideal for curing thermally sensitive materials. Dymax LED-curing systems offer many energy and cost-saving benefits, such as no warm-up period, lower energy consumption, no bulbs to change, and more consistent frequency and intensity output for better process control.

Ordering Information

A complete BlueWave® AX-550 system features a combined controller and emitter. The system is available in 385 and 405 nm wavelengths with 365nm wavelength available mid-2019. Accessories noted later in this bulletin can be added for specific applications. The units are warrantied against defects in material and workmanship for one year from the date of purchase.



PART NUMBERS	
System Components	
BlueWave® AX-550 RediCure®/365 nm System (Available Mid-2019)	**43316** North American Power Cord **43317** Asian Power Cord (Type G) **43315** No Power Cord
BlueWave® AX-550 PrimeCure®/385 nm System	**43319** North American Power Cord **43320** Asian Power Cord (Type G) **43318** No Power Cord
BlueWave® AX-550 VisiCure®/405 nm System	**43322** North American Power Cord **43323** Asian Power Cord (Type G) **43321** No Power Cord
Stands & Shielding	
	**43410** AX-550 Stand with Acrylic Back-Shield. Includes Mounting Carriage PN 60036
	**60036** Mounting Carriage to Mount the BlueWave® AX-550 on Stand 41268
	**41395** 3-Sided Acrylic Shield

ACCU-CAL™ 50-LED Radiometers

40505 ACCU-CAL™ 50-LED Radiometer Kit for LED Spots, Floods, Lines and the BlueWave® QX4®

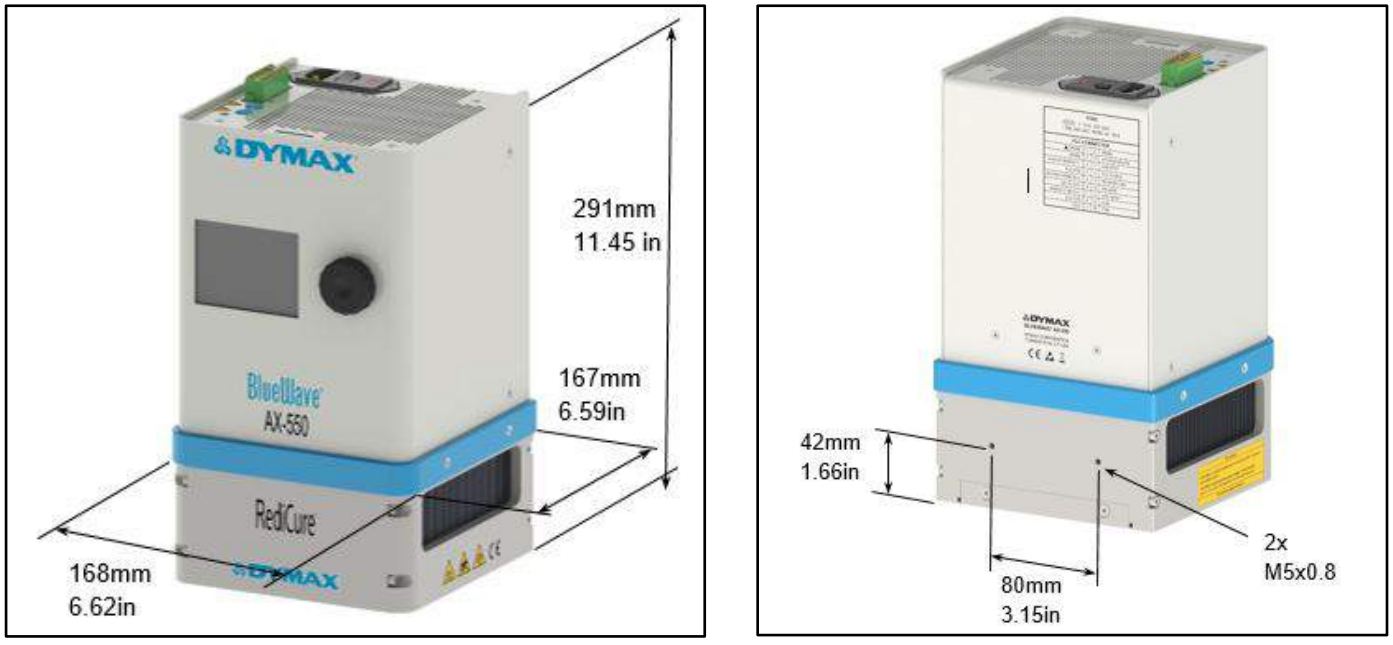
The intensity of the BlueWave® AX-550 can be measured with a standard ACCU-CAL™ 50-LED radiometer using flood-lamp intensity mode for initial process and operational setup.

System Specifications

Property	Specification		
BlueWave® AX-550	RediCure®	PrimeCure®	VisiCure®
Output Frequency	365 nm (Available Mid-2019)	385 nm	405 nm
Intensity Output* **At 25-mm Working Distance**	425 mW/cm^2	800 mW/cm^2	700 mW/cm^2
Cooling	Air cooled		
Dimensions (H x W X D)	6.61" x 11.45" x 6.88" [16.8 cm x 29.1 cm x 17.5 cm]		
Weight	14.1 lbs. [6.4 kg]		
Unit Warranty	1 year from purchase date		
Operating Environment	10 to 40°C (50°F to 104°F) 0-30% relative humidity, non-condensing 2000-meter max. altitude		
Shipping and Storage Conditions	Temperature: -20°C to +50°C Humidity 10-80% RH, Non-condensing Ship via standard ground, ocean or air freight.		

* Measured using a Dymax ACCU-CAL™ 50-LED Radiometer in Flood Lamp Intensity Mode.

Figure 1. BlueWave® AX-550 Emitter Dimensional Drawing



Emitter Performance

Figure 2. BlueWave® AX-550 Emitter Spectral Output Chart

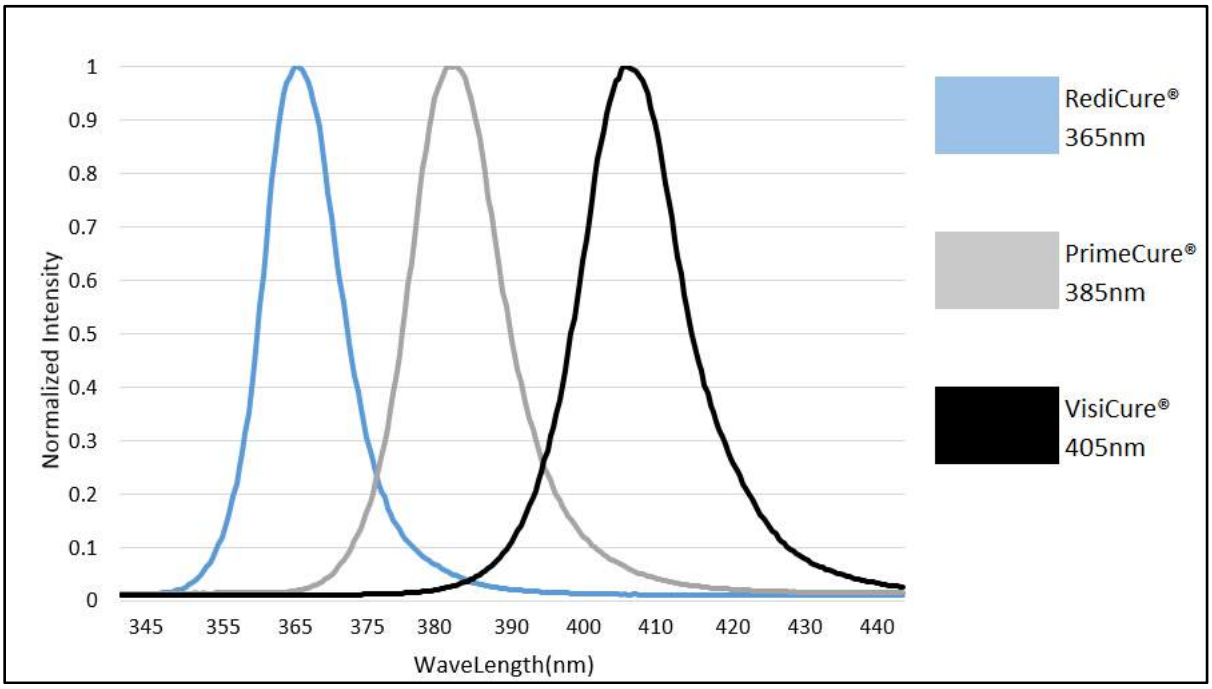
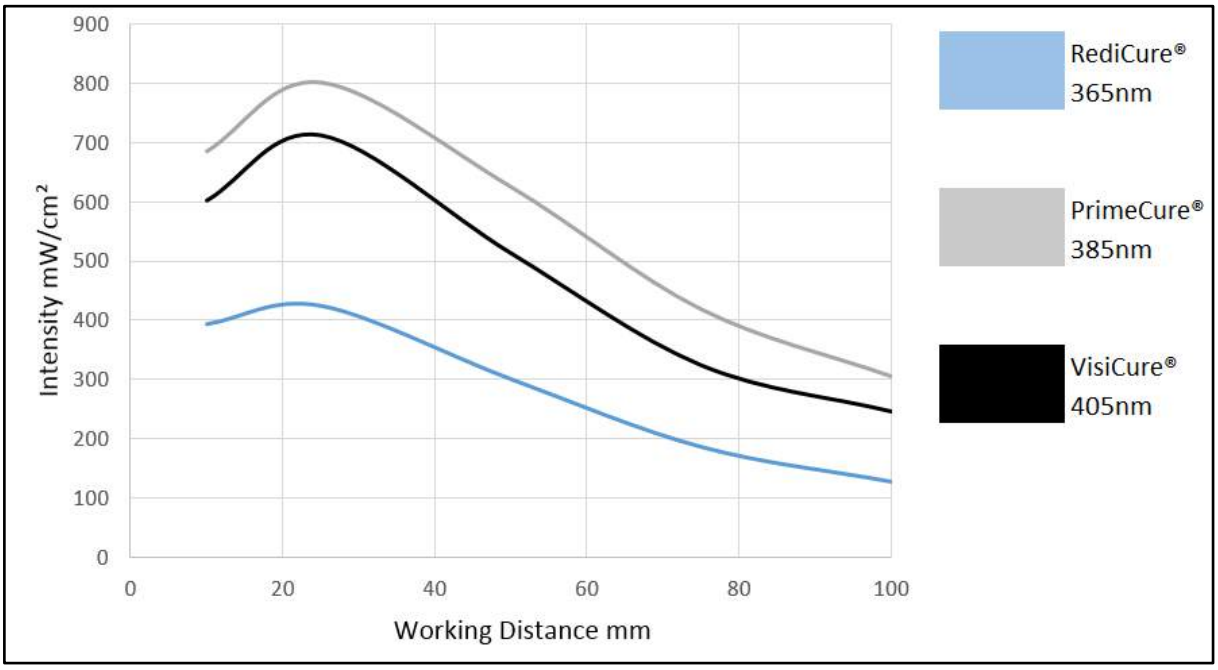
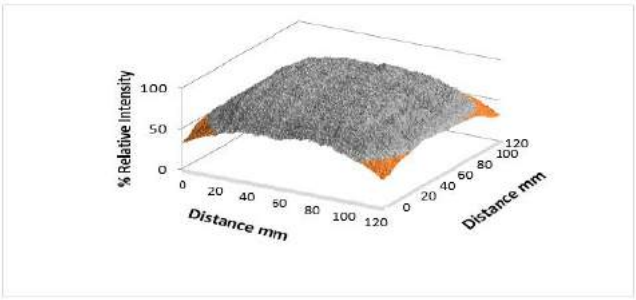
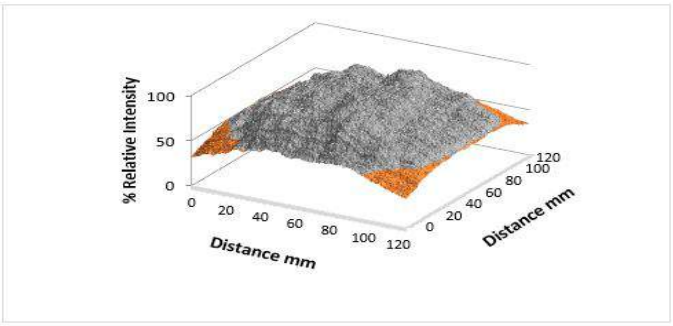
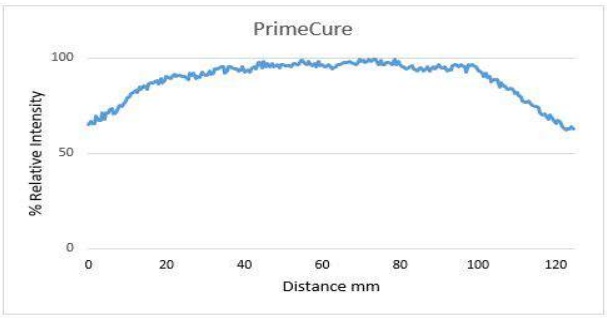
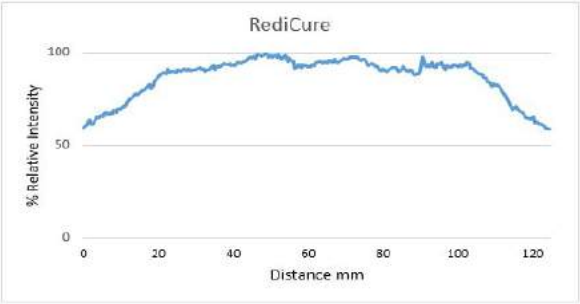
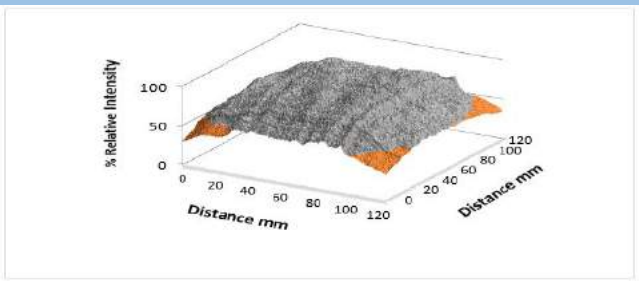
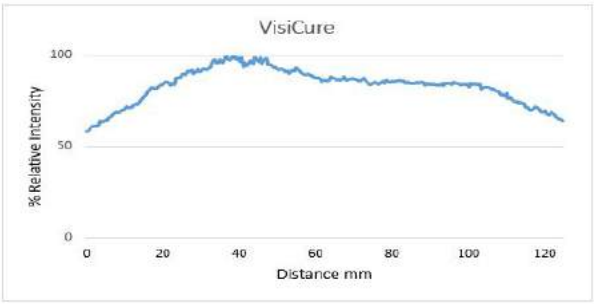


Figure 3. BlueWave® AX-550 Emitter Relative Intensity vs. Distance



NOTE: The BlueWave® AX-550 is optimized for uniformity and intensity at 25-mm working distance.

**Table 1. Uniformity/Intensity 365 nm, 385 nm 405 nm,
100% Intensity, 25-mm Working Distance**

RediCure®, 365 nm (Available Mid-2019)	PrimeCure®, 385 nm
	
	
	VisiCure®, 405 nm
	
	

* Curing area data taken using Fuji UV Light Distribution Mapping System. Output intensity normalized using a Dymax ACCU-CAL™ 50-LED Radiometer.

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