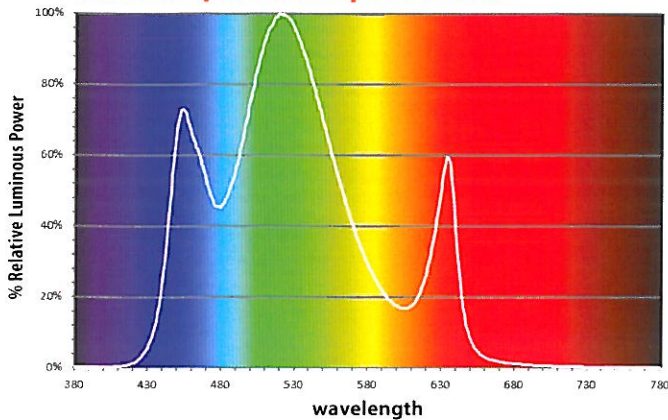
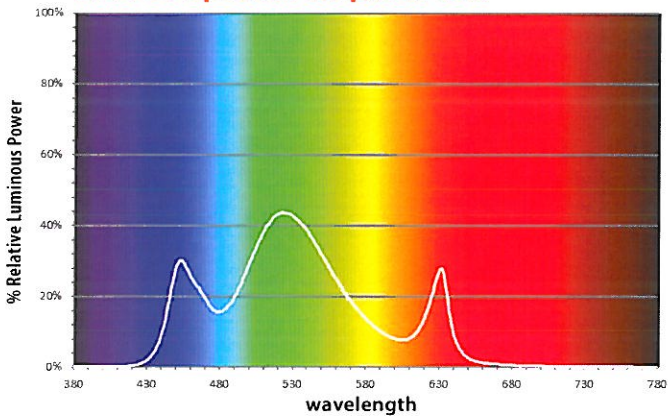


MLA-GY Spectral Output at 100%



MLA-GY Spectral Output at 40%



Hard Wire Format

Junction Box Format

The AquaShift® MLA-GY is an advanced LED lamp providing white light with enhanced blue and green wavelength. The lamp is fully programmable and can simulate sunrise and sunset. The lamp has an adjustable spectrum with Dim-to-Blue® technology for specific aquaculture applications. A correct lighting system is a powerful tool that can enhance production and reduce stress on your fish. With a ONCE LED lighting system, you can select the best light intensity and color as well as photoperiod for your fish.

Built Specifically for Aquaculture Conditions

AquaShift® lighting systems withstand the high humidity and harsh conditions of modern aquaculture applications. The AquaShift® MLA-GY is designed to be wet location compatible, National Electrical Code compliant for Agricultural Facilities (Article 547), and ETL listed. The 50,000 hour lifetime is backed by a 5 year (24/7 operation) replacement warranty.

- LED white light with blue/green wavelength enhancement
- Programmable sunrise/sunset to reduce stress on fish
- Adjustable spectrum with Dim-to-Blue® technology
- Equivalent light output to a 100 W incandescent
- Built for Aquaculture Environments
 - watertight to withstand high humidity
 - wet location rated
- Offers significant energy savings
- Supports sustainability practices
- Patented spectral output†
- 5 Year (24/7 operation) Warranty

Designed Specifically for Aquaculture Applications with Sunrise/Sunset Capability and Wide Color Spectrum

Specifications

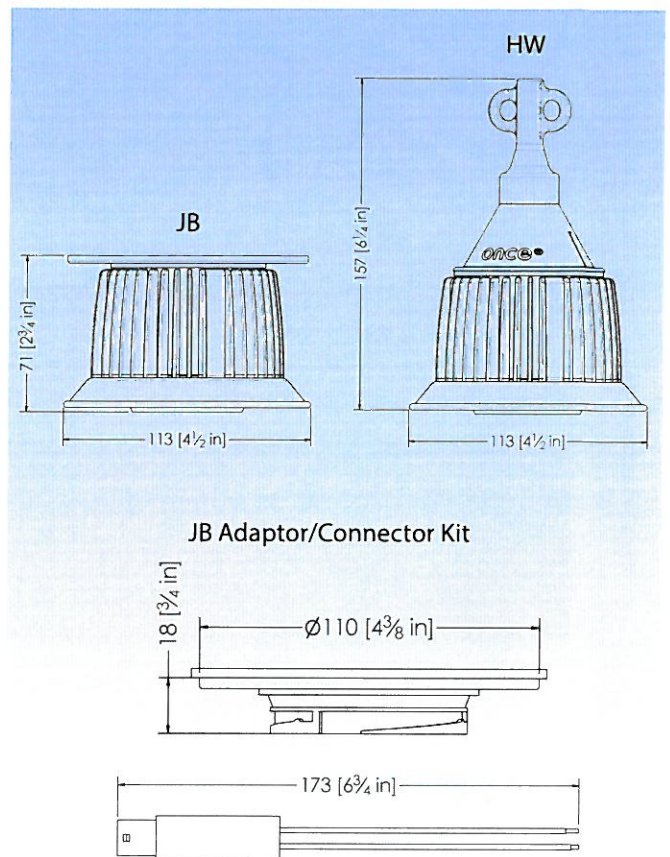
Light Output Equivalence	Up to 100 W incandescent
Luminous Flux (nominal)	650 lm human photopic (adjust for specific animal's response)
Input Voltage	230 VAC
Frequency	50/60 Hz
Nominal Power	12 W (at full intensity)
Spectral Output	Red and green enhanced white
Power Factor	> 0.98
Total Harmonic Distortion	< 20%
Beam Angle	180°
Operating Temperature	-20°C to 40°C
Dimmable Range	100% to 5%, dims to blue-green hue
Dimmer Type	Phase Modulation or Amplitude Control**
Environmental Ratings	Suitable for Wet Locations Suitable for Indoor Corrosive Environments Tested to CAN / CSA C22.2 NO. 94.2-07, CLAUSE 8.7 ROHS Compliant
Safety	ETL Listed Conforms to UL Std. 1598 Certified to CAN / CSA C22.2 NO. 250.0-08
Electrical Code Compliant	NEC Article 547 Agricultural Buildings
Rated Life	50,000 hours
Limited Warranty	5 Years (24/7 operation)

**For optimum dimming performance use AgriShift® Dimmer/Controller

Ordering Information

Description	230V
Junction Box Mount (JB) Consists of a Base Unit, 4" Marine-grade junction box, (4) screws and JB Adaptor/Connector Kit	MLA-GY-JB-180-012-230
Hard-Wired (HW) Consists of a Base Unit, 4" Marine-grade junction box, gasket, junction box cover, HW adaptor with 78" cord, 1/2" liquid-tight strain relief and (4) screws (assembly required)	MLA-GY-HW-180-012-230

Mechanical Dimensions (mm)



Other ONCE Lighting System Components for Aquaculture

AGRISHIFT® LED DIMMER/CONTROLLER (Master Unit)

The AgriShift® LED Master Dimmer provides programmable dimming and sunrise/sunset scheduling as well as many other options for controlling AgriShift® LED lamps and fixtures.

- 20 lighting periods, 12 cycles, 20 stimuli
- 3 Modes - programmed, manual or remote
- Sunrise/sunset transition and seasonal photoperiod



AGRISHIFT® LED DIMMER (Slave Unit)

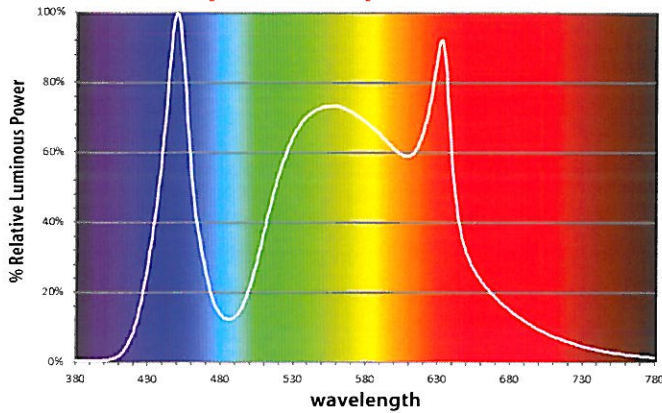
The AgriShift® LED Slave Dimmer interfaces with standard facility controllers with a 0-10VDC input voltage to control both intensity and spectral output of ONCE AgriShift® LED lighting.

- 2 Modes - manual or remote
- 2 Channels, 1200 W each @ 120V
- Maximum output 10A per channel

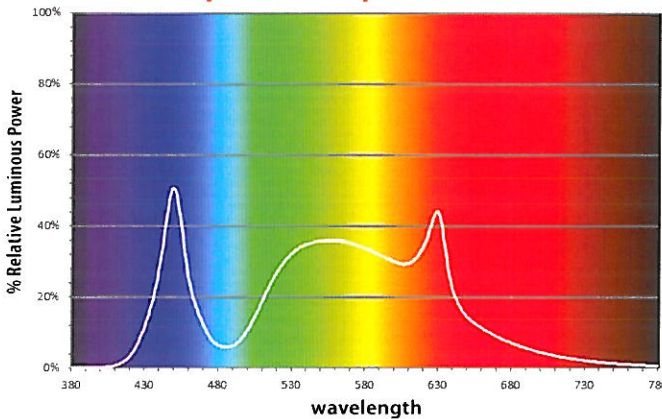


All units are fused for both internal and external protection; however, it is highly recommended that Class II surge suppression be installed on your electric circuit. This is in addition to a whole house lighting arrestor that is mounted before your electrical panel. Read the Installation Manual for specific requirements.

MLA-BL Spectral Output at 100%



MLA-BL Spectral Output at 50%



The AquaShift[®] MLA-BL is an advanced LED lamp providing white light with enhanced blue wavelength. The lamp is fully programmable and can simulate sunrise and sunset. The lamp has an adjustable spectrum with Dim-to-Blue[®] technology for specific aquaculture applications. A correct lighting system is a powerful tool that can enhance production and reduce stress on your fish. With a ONCE LED lighting system, you can select the best light intensity and color as well as photoperiod for your fish.

Built Specifically for Aquaculture Conditions

AquaShift[®] lighting systems withstand the high humidity and harsh conditions of modern aquaculture applications. The AquaShift[®] MLA-BL is designed to be wet location compatible, National Electrical Code compliant for Agricultural Facilities (Article 547), and ETL listed. The 50,000 hour lifetime is backed by a 5 year (24/7 operation) replacement warranty.

- LED white light with blue wavelength enhancement
- Programmable sunrise/sunset to reduce stress on fish
- Adjustable spectrum with Dim-to-Blue[®] technology
- Equivalent light output to a 100 W incandescent
- Built for Aquaculture Environments
 - watertight to withstand high humidity
 - wet location rated
- Offers significant energy savings
- Supports sustainability practices
- Patented spectral output*
- 5 Year (24/7 operation) Warranty

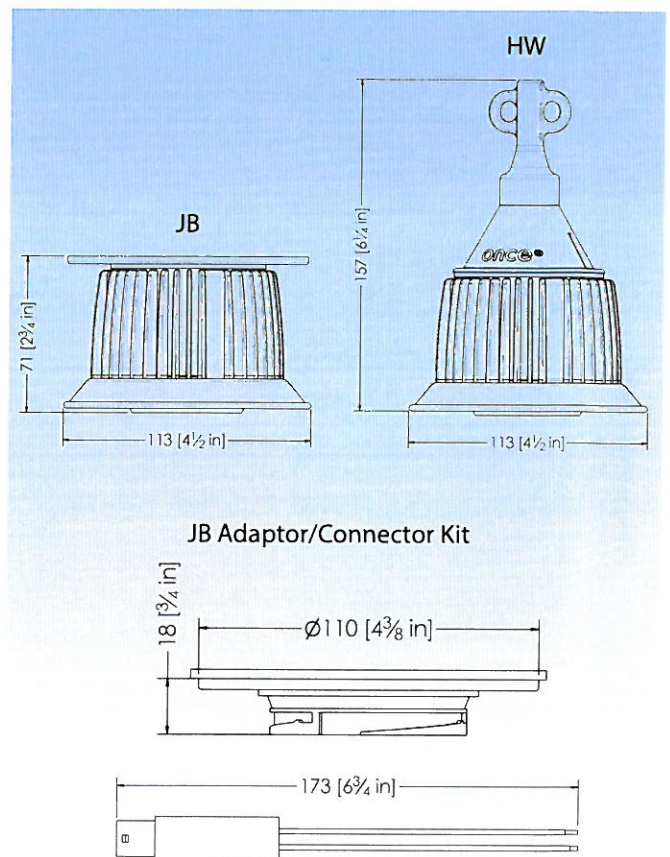
Designed Specifically for Aquaculture Applications with Sunrise/Sunset Capability and Wide Color Spectrum

Specifications

Light Output Equivalence	Up to 100 W incandescent
Luminous Flux (nominal)	650 lm human photopic (adjust for specific animal's response)
Input Voltage	120 VAC
Frequency	50/60 Hz
Nominal Power	12 W (at full intensity)
Spectral Output	Red and blue enhanced white
Power Factor	> 0.98
Total Harmonic Distortion	< 20%
Beam Angle	180°
Operating Temperature	-20°C to 40°C
Dimmable Range	100% to 5%, dims to blue hue
Dimmer Type	Phase Modulation or Amplitude Control**
Environmental Ratings	Suitable for Wet Locations Suitable for Indoor Corrosive Environments Tested to CAN / CSA C22.2 NO. 94.2-07, CLAUSE 8.7 ROHS Compliant
Safety	ETL Listed Conforms to UL Std. 1598 Certified to CAN / CSA C22.2 NO. 250.0-08
Electrical Code Compliant	NEC Article 547 Agricultural Buildings
Rated Life	50,000 hours
Limited Warranty	5 Years (24/7 operation)

**For optimum dimming performance use AgriShift® Dimmer/Controller

Mechanical Dimensions (mm)



Ordering Information

Description	120V
Junction Box Mount (JB) Consists of a Base Unit, 4" Marine-grade junction box, (4) screws and JB Adaptor/Connector Kit	MLA-BL-JB-180-012-120
Hard-Wired (HW) Consists of a Base Unit, 4" Marine-grade junction box, gasket, junction box cover, HW adaptor with 78" cord, 1/2" liquid-tight strain relief and (4) screws (assembly required)	MLA-BL-HW-180-012-120

Other ONCE Lighting System Components for Aquaculture

AGRISHIFT® LED DIMMER/CONTROLLER (Master Unit)

The AgriShift® LED Master Dimmer provides programmable dimming and sunrise/sunset scheduling as well as many other options for controlling AgriShift® LED lamps and fixtures.

- 20 lighting periods, 12 cycles, 20 stimuli
- 3 Modes - programmed, manual or remote
- Sunrise/sunset transition and seasonal photoperiod



AGRISHIFT® LED DIMMER (Slave Unit)

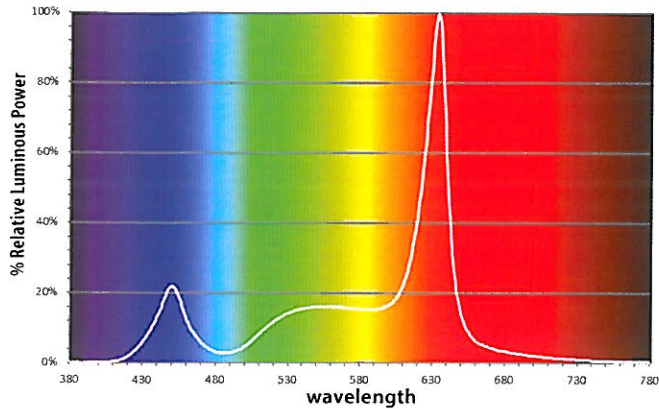
The AgriShift® LED Slave Dimmer interfaces with standard facility controllers with a 0-10VDC input voltage to control both intensity and spectral output of ONCE AgriShift® LED lighting.

- 2 Modes - manual or remote
- 2 Channels, 1200 W each @ 120V
- Maximum output 10A per channel

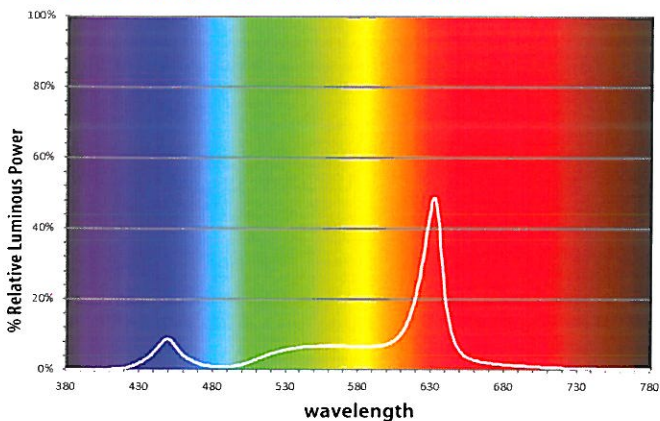


All units are fused for both internal and external protection; however, it is highly recommended that Class II surge suppression be installed on your electric circuit. This is in addition to a whole house lightning arrester that is mounted before your electrical panel. Read the Installation Manual for specific requirements.

MLA-RE Spectral Output at 100%



MLA-RE Spectral Output at 50%



The AquaShift® MLA-RE is an advanced LED lamp providing white light with enhanced red wavelength. The lamp is fully programmable and can simulate sunrise and sunset. The MLA-RE has an adjustable spectrum with Dim-to-Red® technology for specific aquaculture applications. A correct lighting system is a powerful tool that can enhance production and reduce stress on fish. With a ONCE LED lighting system, you can select the best light intensity and color as well as photoperiod to optimize fish performance.

Built Specifically for Aquaculture Conditions

AquaShift® lighting systems withstand the high humidity and harsh conditions of modern aquaculture applications. The AquaShift® MLA-RE is designed to be wet location compatible, National Electrical Code compliant for Agricultural Facilities (Article 547), and ETL listed. The 50,000 hour lifetime is backed by a 5 year (24/7 operation) replacement warranty.

- LED white light with red wavelength enhancement
- Programmable sunrise/sunset to reduce stress on fish
- Adjustable spectrum with Dim-to-Red® technology
- Equivalent light output to a 100 W incandescent
- Built for Aquaculture Environments
 - watertight to withstand high humidity
 - wet location rated
- Offers significant energy savings
- Patented spectral output†
- 5 Year (24/7 operation) Warranty

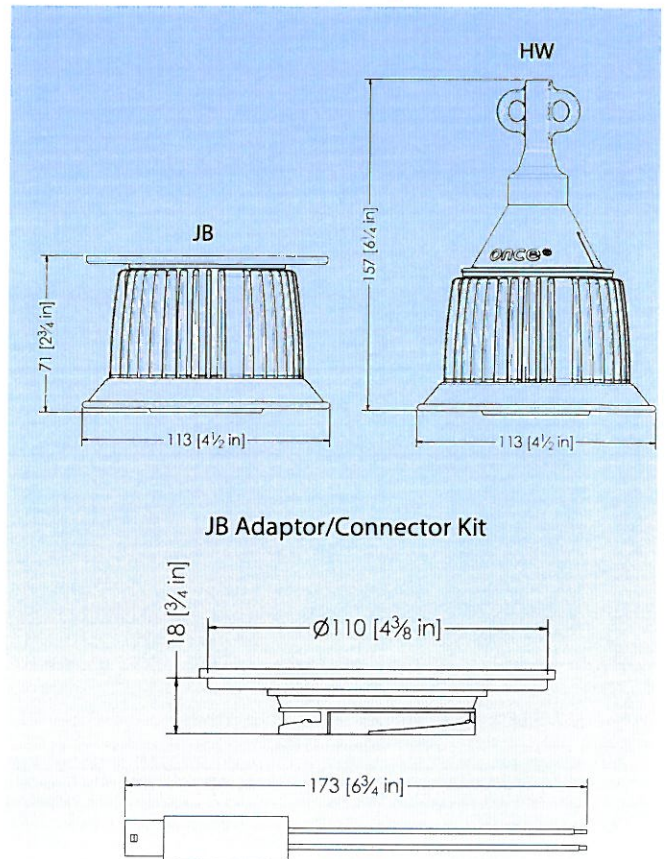
Designed Specifically for Aquaculture Applications with Sunrise/Sunset Capability and Wide Color Spectrum

Specifications

Light Output Equivalence	Up to 100 W incandescent
Luminous Flux (nominal)	600 lm human photopic (adjust for specific animal's response)
Input Voltage	120 VAC or 230 VAC options (not dual voltage)
Frequency	50/60 Hz
Nominal Power	12W (at full intensity)
Spectral Output	Red enhanced white
Power Factor	> 0.98
Total Harmonic Distortion	< 20%
Beam Angle	180°
Operating Temperature	-20°C to 40°C
Dimmable Range	100% to 5%, dims to red hue
Dimmer Type	Phase Modulation or Amplitude Control**
Environmental Ratings	Suitable for Wet Locations Suitable for Indoor Corrosive Environments Tested to CAN /CSA C22.2 NO. 94.2-07, CLAUSE 8.7 ROHS Compliant
Safety	ETL Listed Conforms to UL Std. 1598 Certified to CAN / CSA C22.2 NO. 250.0-08
Electrical Code Compliant	NEC Article 547 Agricultural Buildings
Rated Life	50,000 hours
Limited Warranty	5 Years (24/7 operation)

**For optimum dimming performance use AgriShift® Dimmer/Controller

Mechanical Dimensions (mm)



Ordering Information

Description	120V	230V
Junction Box Mount (JB) <i>Consists of a Base Unit, 4" Marine-grade junction box, (4) screws and JB Adaptor/Connector Kit</i>	MLA-RE-JB-180-012-120	MLA-RE-JB-180-012-230
Hard Wire (HW) <i>Consists of a Base Unit, 4" Marine-grade junction box, gasket, junction box cover, HW adaptor with 78" cord, 1/2" liquid-tight strain relief and (4) screws (assembly required)</i>	MLA-RE-HW-180-012-120	MLA-RE-HW-180-012-230

Other ONCE Lighting System Components for Aquaculture

AGRISHIFT® LED DIMMER/CONTROLLER (Master Unit)

The AgriShift® LED Master Dimmer provides programmable dimming and sunrise/sunset scheduling as well as many other options for controlling AgriShift® LED lamps and fixtures.

- 20 lighting periods, 12 cycles, 20 stimuli
- 3 Modes - programmed, manual or remote
- Sunrise/sunset transition and seasonal photoperiod



AGRISHIFT® LED DIMMER (Slave Unit)

The AgriShift® LED Slave Dimmer interfaces with standard facility controllers with a 0-10VDC input voltage to control both intensity and spectral output of ONCE AgriShift® LED lighting.

- 2 Modes - manual or remote
- 2 Channels, 1200 W each @120V
- Maximum output 10A per channel



All units are fused for both internal and external protection; however, it is highly recommended that Class II surge suppression be installed on your electric circuit. This is in addition to a whole house lighting arrestor that is mounted before your electrical panel. Read the Installation Manual for specific requirements.

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- *Advanced LED System*
- *Optimized for Fish Performance*
- *Full spectrum light*
- *15 W LED equivalent to 100 W incandescent*
- *Simulate sunrise/sunset*
- *Decreases electrical costs*
- *Supports sustainability practices*
- *Built for Aquaculture Environments*
 - *watertight to withstand high humidity*
 - *wet location rated*
- *5 Year (24/7) Warranty*

Full Spectrum LED Lighting System for Aquaculture

The AquaShift™ MLA is a highly efficient LED light fixture designed specifically for indoor aquaculture environments with a wide color spectrum and the ability to simulate sunrise and sunset. LED lighting provides significant energy savings creating higher levels of sustainability. The modular construction adapts to a wide variety of building configurations while making installation easy.

Built Specifically for Aquaculture Conditions

Our lighting systems withstand the high humidity, corrosive atmospheric conditions of modern aquaculture facilities. All materials and components are designed to be wet location compatible, National Electrical Code compliant for Agricultural Facilities (Article 547), and ETL listed. The long life of our lamps is backed by a 5 year replacement warranty with 24/7 usage.

LED Lighting Systems Specifically for your Fish

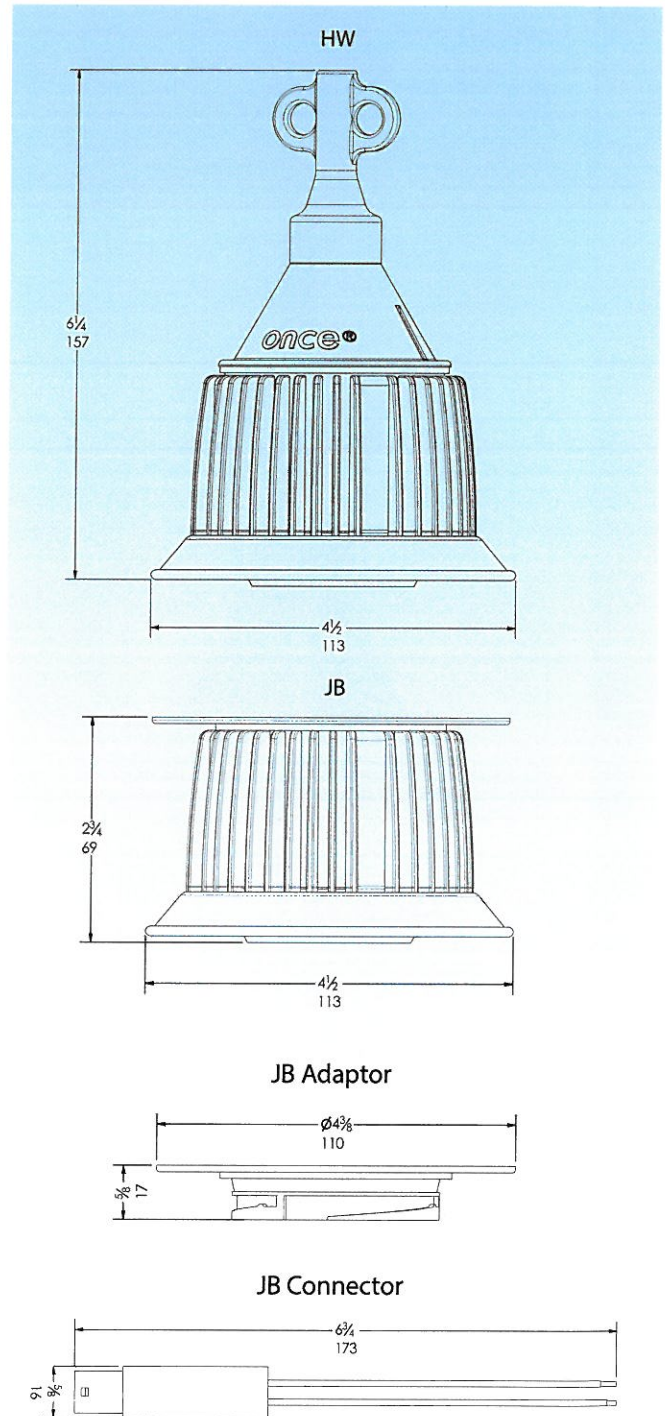
It is well known that fish and other aquatic organisms are highly responsive to light in their environment. Light is a key environmental factor which significantly affects every aspect of the animal's survival, growth and reproductive development. With the Agrishift MLA system, aquaculturists now have access to a commercial lighting system that provides changes in light intensity, light spectrum and programmable photoperiod in a single lighting fixture. Throughout every life stage, you can now manage and manipulate the three elements of light (intensity, spectrum and photoperiod) to optimize your fish performance.

Designed specifically for indoor aquaculture environments with wide color spectrum and sunrise/sunset function.

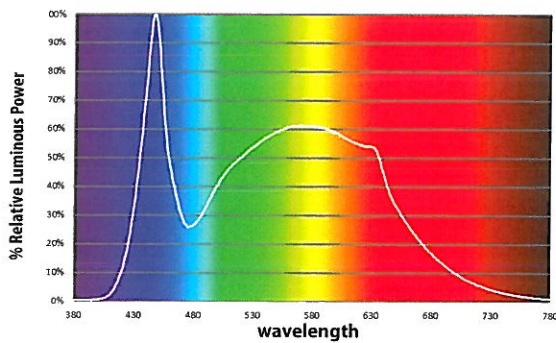
Specifications

Luminous Flux (nominal)	950 lm
Input Voltage	120 VAC
Frequency	60 Hz
Nominal Power	15W
Spectral Output	Animal Specific
Power Factor	> .98
Total Harmonic Distortion	< 20%
Beam Angle	180°
Operating Temperature	-25°C to 40°C
Dimmability Range	100% to 5% Dims to Red
Dimmer Type	Phase Modulation or Amplitude Control
Ratings	Wet Location
Safety	ETL Listed. Conforms to ANSI/UL Std. 1598 Certifies to CAN/CSA Std. C22.2 No. 250.0-08
Electrical Code-Compliant	NEC547, CAN/CSA Std C 22.2
Rated Life	50,000 Hours
Limited Warranty	5 Years (24/7 operation)

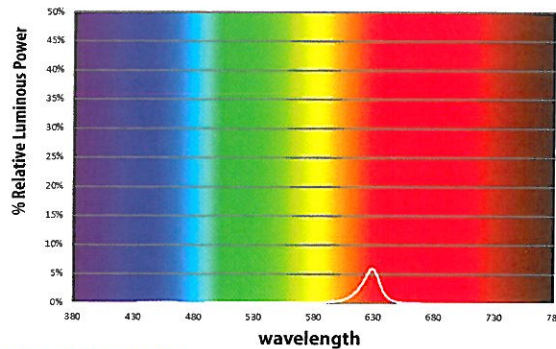
Mechanical Dimensions (mm)



MLA Spectral Output at 100%



MLA Spectral Output when Dimmed



Ordering Information

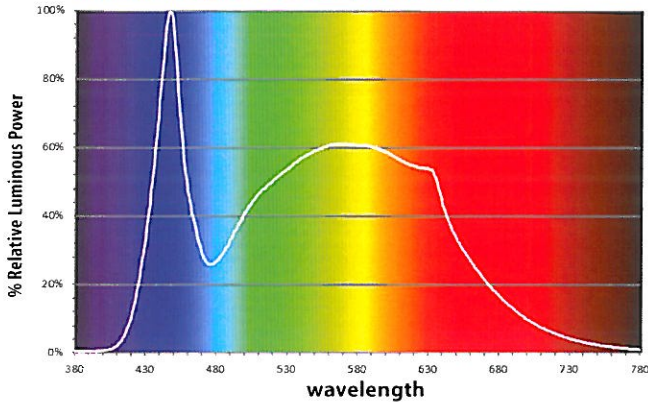
Model Numbers	120V
Junction Box Mount (JB) Includes a base unit, a JB adaptor, a JB connector and a 4 in. marine junction box.	MLA-FSWR-JB-180-014-120
Hard Wire (HW) Includes a base unit, a HW adaptor with 78 inch cord, and a 4 in. marine junction box.	MLA-FSWR-HW-180-014-120



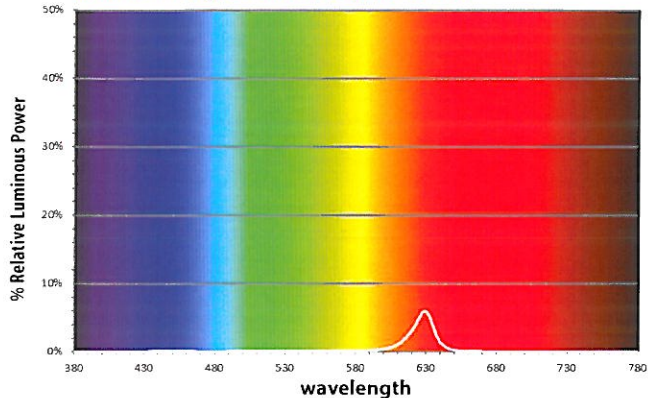
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MLA-WH Spectral Output at 100%



MLA-WH Spectral Output at 5%



The AquaShift® MLA-WH is an advanced LED lamp providing a full-spectrum white light that can simulate sunrise and sunset light intensities. This is the AquaShift® general application aquaculture lamp, suitable for most fish species and life stages. When dimmed to 5% intensity, the lamp output is fully red. Aquaculture operations use this low level red light for emergency or constant night lighting.

LED lamps save energy but more importantly, a properly-designed LED lighting system can enhance fish production, reduce environmental stress and support good husbandry. A ONCE LED lighting system offers a powerful tool to aquaculturists by providing the best light intensity and color, as well as photoperiod, to optimize fish performance.

Built Specifically for Aquaculture Conditions

AquaShift® lighting systems withstand the high humidity and harsh conditions of modern aquaculture applications. The AquaShift® MLA-WH is designed to be wet location compatible, National Electrical Code compliant for Agricultural Facilities (Article 547), and ETL listed. The 50,000 hour lifetime is backed by a 5 year (24/7 operation) replacement warranty.

- Fully dimmable LED white light
- Programmable sunrise/sunset to reduce stress on fish
- Dim-to-Red® technology can provide emergency night lighting
- Equivalent light output to a 125 W incandescent
- Built for Aquaculture Environments
 - watertight to withstand high humidity
 - wet location rated
- Offers significant energy savings
- Supports sustainability practices
- Patented spectral output†
- 5 Year (24/7 operation) Warranty

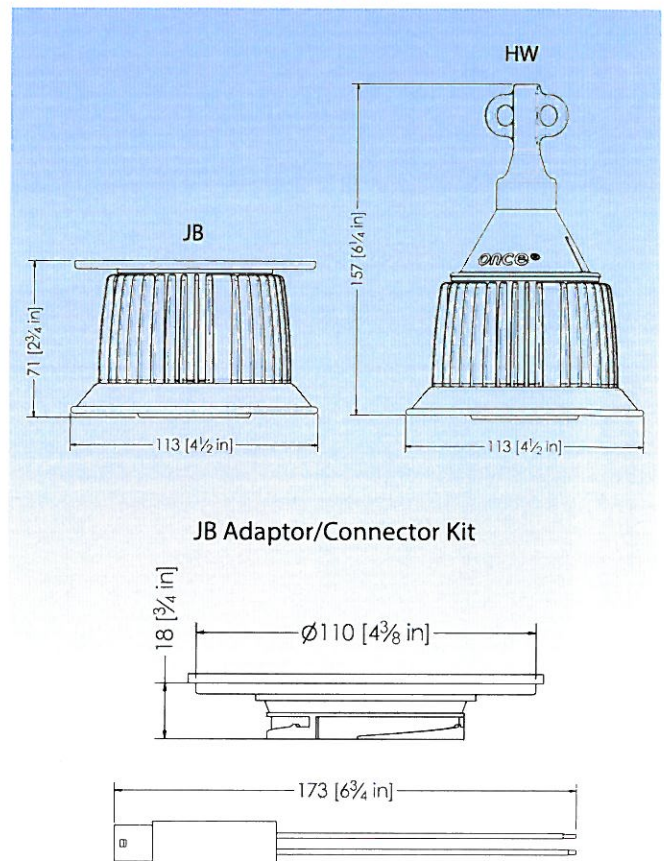
Designed Specifically for Aquaculture Applications with Sunrise/Sunset Capability and Wide Color Spectrum

Specifications

Light Output Equivalence	Up to 125 W incandescent
Luminous Flux (nominal)	950 lm human photopic (adjust for specific animal's response)
Input Voltage	120 VAC
Frequency	50/60 Hz
Nominal Power	15 W (at full intensity)
Spectral Output	Full spectrum white
Power Factor	> 0.98
Total Harmonic Distortion	< 20%
Beam Angle	180°
Operating Temperature	-20°C to 40°C
Dimmable Range	100% to 5%, dims to red hue
Dimmer Type	Phase Modulation or Amplitude Control**
Environmental Ratings	Suitable for Wet Locations Suitable for Indoor Corrosive Environments Tested to CAN / CSA C22.2 NO. 94.2-07, CLAUSE 8.7 ROHS Compliant
Safety	ETL Listed Conforms to UL Std. 1598 Certified to CAN / CSA C22.2 NO. 250.0-08
Electrical Code Compliant	NEC Article 547 Agricultural Buildings
Rated Life	50,000 hours
Limited Warranty	5 Years (24/7 operation)

**For optimum dimming performance use AgriShift® Dimmer/Controller

Mechanical Dimensions (mm)



Ordering Information

Description	120V
Junction Box Mount (JB) <i>Consists of a Base Unit, 4" Marine-grade junction box, (4) screws and JB Adaptor/Connector Kit</i>	MLA-WH-JB-180-014-120
Hard Wire (HW) <i>Consists of a Base Unit, 4" Marine-grade junction box, gasket, junction box cover, HW adaptor with 78" cord, 1/2" liquid-tight strain relief and (4) screws (assembly required)</i>	MLA-WH-HW-180-014-120

Other ONCE Lighting System Components for Aquaculture

AGRISHIFT® LED DIMMER/CONTROLLER (Master Unit)

The AgriShift® LED Master Dimmer provides programmable dimming and sunrise/sunset scheduling as well as many other options for controlling AgriShift® LED lamps and fixtures.

- 20 lighting periods, 12 cycles, 20 stimuli
- 3 Modes - programmed, manual or remote
- Sunrise/sunset transition and seasonal photoperiod



AGRISHIFT® LED DIMMER (Slave Unit)

The AgriShift® LED Slave Dimmer interfaces with standard facility controllers with a 0-10VDC input voltage to control both intensity and spectral output of ONCE AgriShift® LED lighting.

- 2 Modes - manual or remote
- 2 Channels, 1200 W each @120V
- Maximum output 10A per channel



All units are fused for both internal and external protection; however, it is highly recommended that Class II surge suppression be installed on your electric circuit. This is in addition to a whole house lightning arrestor that is mounted before your electrical panel. Read the Installation Manual for specific requirements.

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