



# General Specifications

## *Rheos*

P/N: 30-00400

(Rev\_20200203)



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# Introduction

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Read this entire document before installing the fixture. This document contains the General Specifications of the Aquarii Rheos LED Fixture.

<i>NOTE</i>	This document DOES NOT contain procedural information. For <b>Installation</b> and <b>Mounting Procedures</b> ; see the accompanying documentation included in the shipping container.
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The fixture is designed for general and specific lighting use applications in environments such as houses of worship, museums, auditoriums, atriums, theaters, cafeteriums, etc.

## Safety Information

Read and understand the Safety Information to ensure personal and product safety.

All electrical connections must be installed in accordance with the National Electrical Code (NEC) and specific local codes. Contact the local codes office for applicable codes, permits, and required inspections prior to installation.

The sites Power Supply Voltage must meet the requirements of the Rheos (see **Electrical Characteristics**) to ensure proper function, personal, and product safety.

The fixture must be oriented correctly to ensure proper function. There are multiple mounting options (see **Mounting Information**) that can be installed. Be sure to confirm the correct fixture and mounting option have been ordered for the specific site parameters and requirements.

Connecting the fixture to a power source with a voltage/AC level that is outside its parameters is prohibited, will damage the product, and void any product warranties.

<i>WARNING</i>	Do not connect the Rheos to an electrical system that does not provide grounding equipment. Failure to do so can cause an electrical current to flow through the fixture with the potential of causing serious personal injury and permanent damage to the Rheos. Absence of proper grounding circuitry will void any product warranties.
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The fixture must be properly mounted according to the applicable mounting procedure. Do not hang the Rheos with supply wires or wire connectors.

<b>WARNING</b>	Attempting to hang the Rheos with supply wires or wire connectors will result in the fixture to fall with the potential of serious personal injury, electrical shock, and/or fire.
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A fixture with a Flat Recessed Mount is supplied with a repair/assistance cable. Do not change the cable length, or secure with fasteners (Ex. “Dog Clips”) that are not designed for the required use.

Be sure to use caution during the installation process if the wiring systems are exposed. The wires **MUST NOT** come into contact with any surfaces that have sharp edges to ensure personal and product safety.

Personal Protective Equipment (PPE) must be worn at all times during installation/ maintenance procedures. The fixture has a high light intensity output. Exposure at close range can cause severe eye damage.

## **Physical Characteristics**

The Physical Characteristics are detailed below.

The *Physical Dimensions* are:

<i>DIAMETER</i>	<i>HEIGHT</i>	<i>UNIT WEIGHT</i>
9.75 in.	14.57 in.	10 lbs
247,6 mm	370 mm	4.5 kg

<b>NOTE</b>	The total <i>UNIT WEIGHT</i> does not include the weight of an installed mounting condition.
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The *Standard Characteristics* are:

- High performance LED Engine, Driver, and Power Supplies
- Passive Cooling, no internal fans
- All aluminum construction
- Standard black and off-white housing colors available in matte, semi-gloss (black only), or glossy finish

The *Installation Height* parameters are:

<i>MINIMUM</i>	<i>MAXIMUM</i>
25 ft	60 ft ±
7,6 m	15,2 m ±

The *Environmental Operating Conditions (Temperature/Humidity)* are:

	<i>MINIMUM</i>	<i>MAXIMUM</i>
<i>TEMPERATURE</i>	32°F (0°C)	105°F (+40°C)
<i>HUMIDITY</i>	5%	95%

If the fixture needs to be stored, ensure it remains inside the original shipping container and in a clean/dry controlled environment to prevent exposure to dirt, water, sunlight, and condensation.

The *Storage Temperature* parameters are:

<i>MINIMUM</i>	<i>MAXIMUM</i>
32°F (0°C)	105°F (+40°C)

The Rheos has an Ingress Protection (IP) Rating of IP20, meaning it can withstand physical contact with objects over 12.5 mm and is suitable for use in dry and “damp” non-condensing locations.

<i>NOTE</i>	Aquarii recommends the fixture is installed indoors to avoid any possibility of physical and environmental hazards that could damage the fixture.
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## **Electrical Characteristics**

The fixture is equipped with an EPP-300-24 Power Supply that supports a wattage value of 140W.

See the following tables for the Input, Protection, and Environmental Characteristics of the EPP-300-24 Board.

<i>INPUT</i>	
VOLTAGE	90 - 264VAC (127 - 370VDC)
FREQUENCY	47 - 63Hz
POWER FACTOR (PF)	PF>0.93/230VAC (0.98/115VAC AT FULL LOAD)
EFFICIENCY	92.5%
AC CURRENT	3.5A/115VAC or 1.8A/230VAC
INRUSH CURRENT	COLD START: 40A/115VAC or 80A/230VAC

<i>PROTECTION</i>	
OVERLOAD	105 - 135% rated output power
	Protection type: Hiccup mode, recovers automatically after fault condition is removed.
OVER VOLTAGE	26 - 30V
	Protection Type: Shut down o/p voltage, restart to recover.
OVER TEMPERATURE	110°C ± 5°C (TSW1) detect on heatsink of power transistor
	115 ± 5°C (12V, 15V), 85 ± 5°C (24V, 27V, 48V) (TSW2) detect on heatsink of output diode
	Protection Type: (TSW1) Shut down o/p voltage, recovers automatically after temperature goes down
	Protection Type: (TSW2) Shut down o/p voltage, re-power on to recover.

<i>ENVIRONMENTAL</i>	
WORKING TEMP	-30°C - +70°C
WORKING HUMIDITY	20-90% RH non-condensing
STORAGE TEMP/HUMIDITY	-40 - 85°C, 10-95% RH
TEMP COEFFICIENT	± 0.03%/°C (0-50°C)
VIBRATION	10-500Hz, 2G 10 min./1 cycle, 60 min. each along X,Y,Z axes

## Optical Characteristics

The Rheos has a 2700K Color Temperature. Custom options are also available.

<i>NOTE</i>	The standard Color Rendering Index (CRI) for a fixture with a 2700K color temperature is 90 CRI.
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The Beam Angles are:

- 18°
- 25°
- 34°

See the table below for an example of a Rheos *Standard Optical Configuration*.

<i>STANDARD OPTICAL CONFIGURATION</i>	
COLOR TEMPERATURE	2700K
CRI VALUE	90 CRI
WATTAGE INPUT	140W
BEAM ANGLE	18°
LUMEN OUTPUT	9,000

Refer to the Aquarii Website at [www.aquariitech.com](http://www.aquariitech.com) for third-party generated and verified *IES Files* for various *Optical Configurations*.

## Model Number

Each Rheos is assigned a Model Number. The Model Number is a code for the fixtures specific performance criteria/requirements, as well as for proper ordering.

The different Model Number configurations are shown in the tables below:

<i>WATT</i>	<i>COLOR TEMPERATURE</i>	<i>BEAM ANGLE</i>	<i>CONTROL</i>	<i>HOUSING COLOR</i>
140	R (RGBW)	18 (18°) 25 (25°) 34 (34°)	D (DMX/RDM)	B (Black) W (Off-White) C (Custom) A (Brushed Aluminum) G (Graphic)

COLOR FINISH	MOUNTING	POWER CONNECTOR	DMX TERMINAL	OPTIONAL
M-Matte S-Semi Gloss G-Gloss	1-C-Clamp 2-Wall Bracket 3-Yoke 5-Slope/Rigid Adaptor Pendant 6-Air Craft Cable Pendant 7-Flat Recessed 8-Slope Recessed	B-Bare Ends; 5 ft (1.5 m) 515-NEMA 5-15; 125V/15A L515-NEMA L5- 15; 125V/15A AP-Alternate Plug Style N-None	X-(XLR-5 Pin) R-(RJ-45) I-(Insulation Displacement Connector) ST-Screw Terminal	S1-Surge Protector (120V) S2-Surge Protector; (220V) S3-Alternate Surge Protector N-None
DMX/RDM Controls choice can be connected with DMX or DMX/RDM controls. DMX/RDM comes standard with screw terminal Recessed/Slope Kits must be installed in accessible ceilings				

*Model Number Example:* RH-140-R-25-D-B-M-5(12")-515-X-S1

<b>NOTE</b>	When ordering either a Slope Adaptor Rigid Pendant or an Air Craft Cable Pendant Mount, be sure to specify the required length of the cable.
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The *Model Number Example* stated above is a Rheos with a wattage limit of 140W, RGBW Color, 25° Beam Angle, DMX/RDM Controls, Black Housing with a Matte finish, 12 in. Slope Adaptor Rigid Pendant Mount, NEMA 5-15 (125V/15A) Power Connector, a XLR-5 Pin DMX Terminal, and a 120V Surge Protector.

## **Optional Characteristics**

The Optional Characteristics that are available are:

- Custom RAL Color Housing/Graphics
- Brushed aluminum housing
- 120V, 220V, or Alternate Surge Protectors
- Standard Screw Terminal
- DMX Connectors: XLR-5 PIN, RJ45, and IDC



## **Mounting Information**

Each *Mounting Option* has a corresponding *Mounting Number* as shown in the table below:

<i>MOUNTING NUMBER</i>	<i>MOUNTING OPTION</i>
1	C-Clamp
2	Wall Bracket
3	Yoke
5	Slope/Rigid Adaptor Pendant
6	Air Craft Cable Pendant
7	Flat Recessed
8	Slope Recessed

## **Wiring Information**

Below is a list of the different Wiring Options available for the Rheos.

- DMX/RDM
- Dimmable units: match incandescent dimming with smooth fading to and from 0%.

## **Customer Service**

For questions regarding the installation, operation, maintenance, and/or troubleshooting procedures, contact an Aquarii Customer Service Representative by one of the following methods:

- *Phone:* (315) 672-8807 Monday - Friday 8:00am - 5:00pm Eastern Standard Time
- *Email:* [service@aquariitech.com](mailto:service@aquariitech.com)
- *Mail:*

AQUARII, INC  
 ATTN: Customer Service Department  
 17 Genesee Street  
 Camillus, New York, U.S.A. 13031

## ***Product Return Policy***

Before returning a fixture, please call or email an Aquarii Customer Service Representative to receive a RMA Number.

Ensure the RMA Number is next to the address label on the shipping container and packing slip.

Each Rheos must be returned as *freight prepaid* unless instructed otherwise by Aquarii Customer Service.

A fixture returned without an RMA will delay, and can void any return credit.

All returns must be shipped to the following address:

AQUARII, INC  
3195 Vickery Road  
Syracuse, New York, U.S.A. 13212