

SPECIFICATIONS
NIGHT GLOW LIGHTING SYSTEM
20W & 40W RGBW LED LIGHTS

1.0 DESCRIPTION

- A. **Light Set** shall consist of line voltage (120 VAC) 20W or 40W RGBW LED lighting system with either 2, 3, 4, 6, 8 or 12 lights.
- B. **Lights** shall consist of a power supply/driver module with a 20W RGBW LED engine (5W red, 5W green, 5W blue, 5W white) or a 40W RGBW LED engine (10W red, 10W green, 10W blue, 10W white).
- C. **Light Fixture** shall be of Series 300 Stainless Steel construction. They shall have a permanent series 300 stainless steel electrical hub welded on the bottom of the housing to allow electrical cable entry and be mounted with series 300 stainless steel brackets and fasteners.
- D. **Light Fixture Assembly** shall consist of a lens made of tempered glass with a clear non-diffusing surface with a minimum of 5/32nd thickness and sealed with “V” shaped lens gasket made of silicon. Clamp ring shall be of series 300 stainless steel. Fasteners and mounting hardware shall be of series 300 stainless steel.
- E. **Underwater Pin and Socket Connector** shall consist of a Series 900, IP68 pin and socket connector. It shall be of a 5 pin configuration rated 32 Amps at 600 VAC. The pin and socket ends shall each be attached to a UL Listed underwater power cable rated at 600 Volts. They both shall be permanently secured to their UL Listed power cables by an integrated neoprene grommet and compression nut assembly. These assemblies shall be epoxy filled to prevent entry of water or any other foreign matter. The pin end assembly shall be permanently attached to the light fixture with a nonmetallic connector and potted using a flexible approved potting compound. The socket end assembly shall be permanently attached to the power cable. Both the pin end and socket end assemblies come with protector caps.
- F. **Underwater Power Cable** shall be UL Listed and specifically designed for underwater use. The conductors are flexible, stranded copper wire sized for the amp draw and length of run. The conductors shall be resistant to oil, water and cracking. Power cable shall be fitted with a cable strain relief device, located within five feet of the first light fixture. This will ensure that no potential damage can occur to any cable connections, due to tension on the cable.
- G. **Light Controls** shall consist of a GFCI (Ground Fault Circuit Interrupter), overcurrent protection (fuse), digital timer with battery back-up and RGBW controller with power supply. The RGBW controller is pre-programmed with assorted color, shows and holiday themed selectable programs. The controller can also adjust program speed and brightness. The standard controller shall consist of a programmable controller with push button interface. An optional programmable WiFi controller is available with an Android or iOS app included. An Android tablet preloaded with the app and connected to the controller is also available as a WiFi option.
- H. **Safety Testing** shall be tested and approved as a complete assembly. This approval must meet Underwriters Laboratories Inc. requirements in compliance with UL Category 676: Underwater Luminaires.

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- I. **Warranty** on all AQUAMASTER® LIGHTING SYSTEMS are covered under warranty at 100% replacement cost should it fail due to defects in materials or workmanship for a period of 3 years.
- J. **Acceptable Manufacturer** for the RGBW LED Lighting System shall be AQUAMASTER® FOUNTAINS AND AERATORS, 16024 CTH X, Kiel, WI 53042, (800) 693-3144, www.aquamasterfountains.com
- K. **Installation** shall be done in accordance with the installation instructions and in compliance with all local and National Electrical Code requirements. Any alterations to or substitution for items in this system, unless allowed by the installation instructions, will void the Underwriters Laboratories Listing and will void the product Warranty. Read the instructions thoroughly before starting the installation and follow them carefully throughout.

2.0 DETAILED INFORMATION

- A. This specification is intended to provide prospective bidders the necessary information pertaining to the RGBW LED Lights specified for the _____ Project.
- B. **Lighting System** shall be _____ (watts) RGBW LED Lights with _____ total fixtures.
- C. **Lighting Controller** shall be
 - ___ Standard Programmable Controller
 - ___ WiFi Enabled Controller
 - ___ WiFi Enabled Controller with Android Tablet
- D. **Cable Length** shall be _____ feet total of _____ gauge, 5 conductor underwater power cable (see Table 1).
- E. **Light Set** shall be used on the following
 - ___ Masters Series 1/2-5HP
 - ___ Masters Series 7.5-10HP
 - ___ Celestial Fountains
 - ___ Fixed Base Water Feature Fountains
 - ___ Volcano II Floating Aerator
 - ___ Other fountain, please specify _____
 - ___ Other Water Feature, please specify _____

TABLE 1: CABLE SIZING CHART FOR RGBW LED LIGHTS

Maximum recommended length (in feet) from light set to control panel. AquaMaster® recommends consulting a Licensed Electrician to properly size any underground cable from the main power source to our control panel. Cable runs to the panel

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located away from main power source requires recalculating voltage drop to insure proper cable sizing. Please contact AquaMaster® if assistance is required.

5 Conductor				Copper Wire Gauge Size		
Watts Per Fixture	# of Fixtures	Volts	Approx Amps	#14	#12	#10
20	2	120	0.333	2903	4500	7500
20	3	120	0.500	1935	3000	5000
20	4	120	0.667	1452	2250	3750
20	6	120	1.000	968	1500	2500
20	8	120	1.333	726	1125	1875
40	2	120	0.667	1451	2249	3748
40	3	120	1.000	968	1500	2500
40	4	120	1.333	726	1125	1875
40	6	120	2.000	484	750	1250
40	8	120	2.667	363	563	938
40	12	120	4.000	242	375	625