

SPECIFICATIONS

NIGHT GLOW LIGHTING SYSTEM

11W, 22W, and 35W LED LIGHTS

1.0 DESCRIPTION

- A. **Light Set** shall consist of line voltage (120 or 220 VAC) 11W, 22W, or 35W 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 11W, 22W or 35W LED engine.
- 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 3 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), and digital timer with battery back-up. The Sequencer (optional) shall be capable of cycling light fixtures on and off, up to 8 fixtures.
- 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.
- 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.

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- J. **Acceptable Manufacturer** for the 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 LED Lights specified for the _____ Project.
- B. **Lighting System** shall be _____(watts) LED Lights with _____ total fixtures.
- C. **Cable Length** shall be _____ feet total of _____ gauge, 3 conductor underwater power cable (see Table 1).
- D. **Light Set** shall be used on the following
- ___ Masters Series 1/2-5HP
 - ___ Masters Series 7.5-10HP
 - ___ Classic LE
 - ___ 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 LED LIGHTS

Maximum recommended length (in ft) 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 located away from main power source requires recalculating voltage drop to ensure proper cable sizing. Please contact AquaMaster® if assistance is required.

3 Conductor				Copper Wire Gauge Size		
Watts Per Fixture	# of Fixtures	Volts	Approx Amps	#14	#12	#10
11	2	120	0.183	5279	8182	13636
11	3	120	0.275	3519	5455	9091
11	4	120	0.367	2639	4091	6818
11	6	120	0.550	1760	2727	4545

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11	8	120	0.733	1320	2045	3409
22	2	120	0.283	3416	5294	8824
22	3	120	0.425	2277	3529	5882
22	4	120	0.567	1708	2647	4412
22	6	120	0.850	1139	1765	2941
22	8	120	1.133	854	1324	2206
22	12	120	1.700	569	882	1471
35	2	120	0.583	1659	2571	4286
35	3	120	0.875	1106	1714	2857
35	4	120	1.167	829	1286	2143
35	6	120	1.750	553	857	1429
35	8	120	2.330	415	643	1071
35	12	120	3.500	276	429	714

TABLE 2: CABLE SIZING CHART FOR LIGHTS WHEN ORDERED WITH A SEQUENCER

3 & 4 Conductor (see notes below)			Copper Wire Gauge Size		
Watts Per Fixture	# of Fixtures	Volts	#14 (ft)	#12 (ft)	#10 (ft)
11	3 or 4	120	10558	16364	27272
11	6 (3 colors)	120	5279	8182	13636
11	8 (4 colors)	120	5279	8182	13636
22	3 or 4	120	6832	10588	17648
22	6 (3 colors)	120	3416	5294	8824
22	8 (4 colors)	120	3416	5294	8824
35	3 or 4	120	3318	5142	8572
35	6 (3 colors)	120	1659	2571	4286
35	8 (4 colors)	120	1659	2571	4286

Lighting Sequencer requires 2 runs of cable:

- 1) Sequencer with 3 colors requires (1) run of 3 conductor cable and (1) run of 4 conductor cable
- 2) Sequencer with 4 colors requires (2) runs of 4 conductor cable

Note: For configurations not listed in this chart, contact the factory.

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