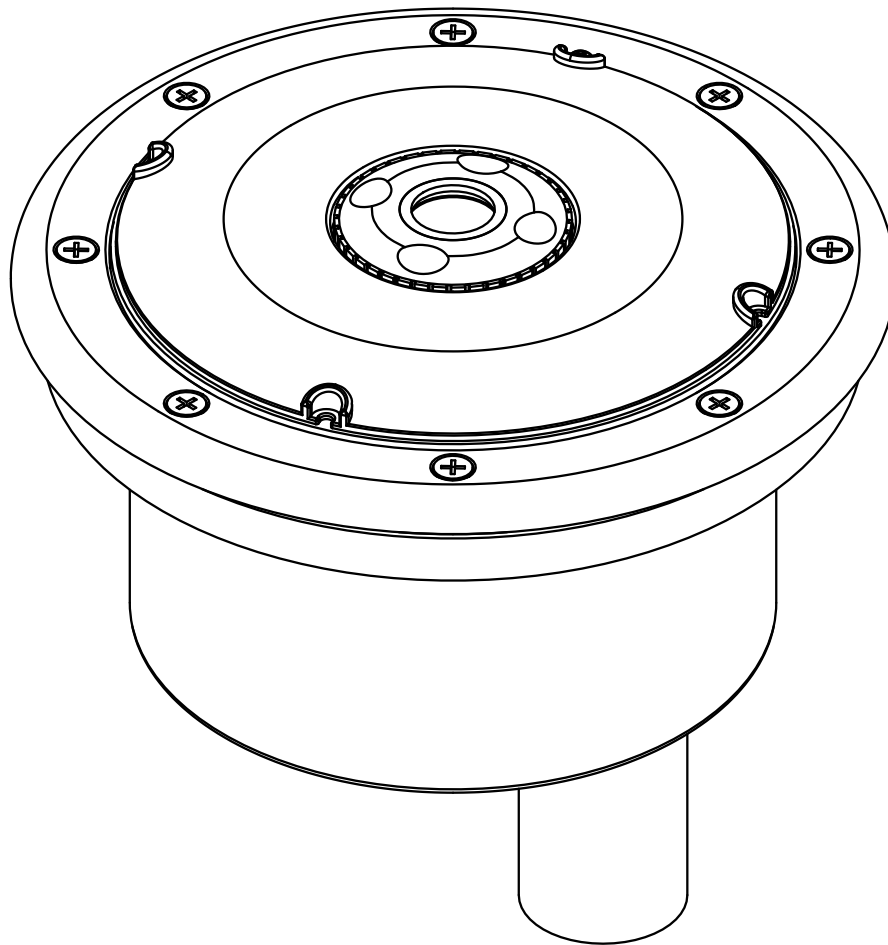




# BRILLIANT WONDERS LED BUBBLERS

## INSTALLATION INSTRUCTIONS & PRODUCT MANUAL

CMP 25503 SERIES



Brilliant  
Wonders®  
LED BUBBLERS



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# A. PRODUCT OVERVIEW

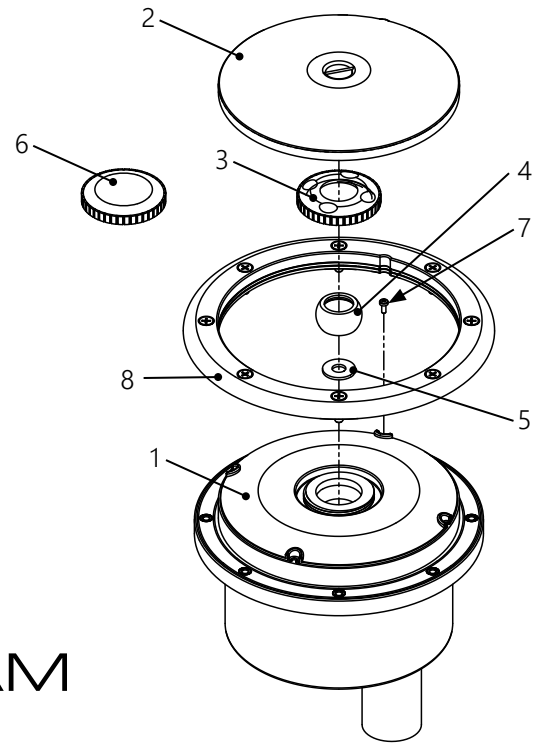
## A.1 SPECIFICATIONS

Power input: 12.0 – 12.5 VAC  
Max Current: 1.6 Amps  
Maximum Load Power: 20 Watts

Color Source: RGB  
LED Life Expectancy: Over 50,000 Hours

## A.2 PACKING LIST

1. Bubbler Unit  
Lighting Units available in 25, 50, 75, 100, and 150 ft options
2. Housing Debris Cover - Winter Cap
3. Eyeball Cap
4. Eyeball Water Diverter
5. Eyeball Reducer Flange
6. Light Use Only Cap
7. LED Module Retaining Screw - M4
8. Vinyl Pool Ring Assembly (OPTIONAL - SOLD SEPARATELY)  
*One (1) Vinyl Pool Ring*  
*One (2) Vinyl Pool Gasket*  
*Eight (8) Vinyl Pool Flange Screws*



## B. SYSTEM BLOCK DIAGRAM

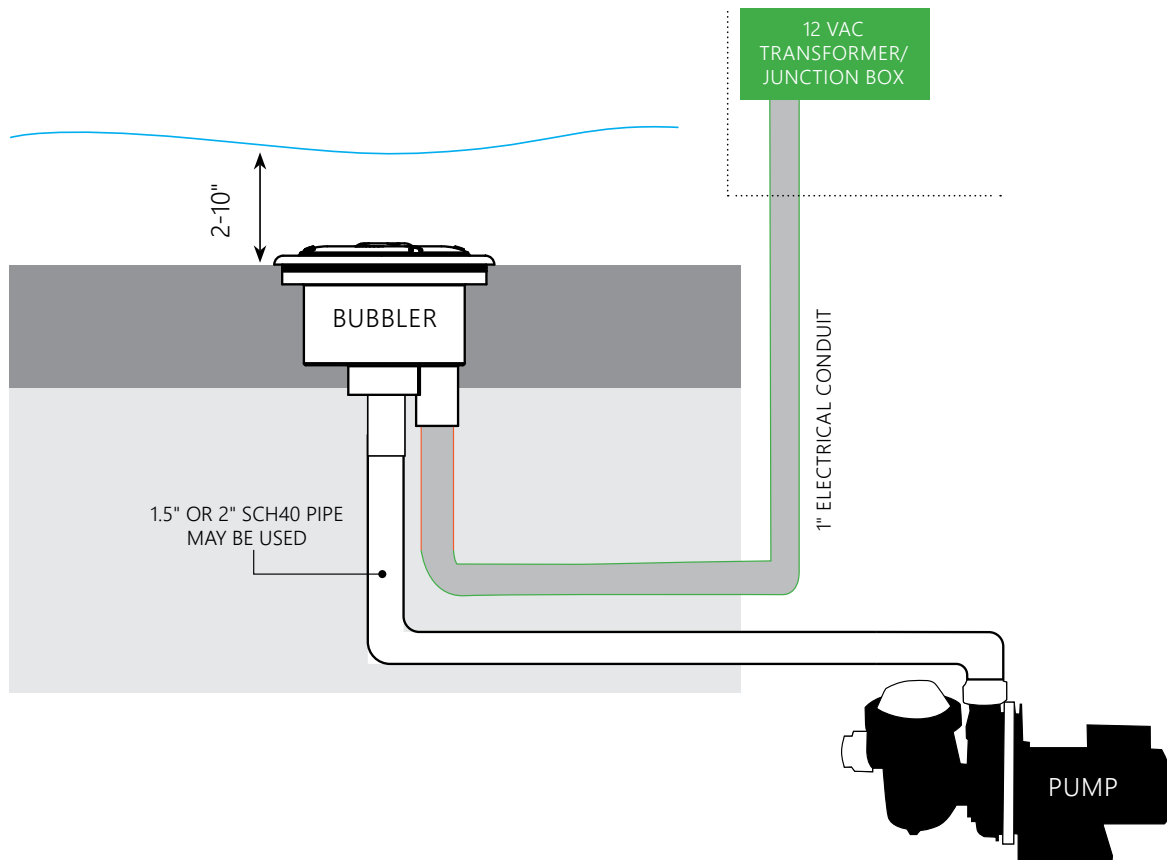


FIGURE 1: SYSTEM BLOCK DIAGRAM

## C. INSTALLATION GUIDE



**WARNING**

### RISK OF ELECTRICAL SHOCK OR ELECTROCUTION

This light must be installed by a licensed or certified electrician or a qualified pool serviceman in accordance with the National Electric code and all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers, or others due to electrical shock. Always disconnect power to light at the circuit breaker before servicing the light.

### READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL

#### NOTICE

External flexible cord cannot be replaced. Do not damage cord.



**WARNING**

Do not replace wires by splicing wires under water, or behind the niche.



**WARNING**

12 VAC system. Only use and approved AC transformer (sold separately). When using a junction box, connect 12V AC connections to the junction box terminals. NEVER connect the light directly to high voltage lines.

## C.1 MECHANICAL INSTALLATION

This Brilliant Wonders Lighted Bubbler Unit must be installed as specified by these instructions. Please follow ALL of the instructions enclosed with this unit. It is recommended to keep the unit in its original packaging until the site is prepared for installation. Refer to Figure 1 Block Diagram above for reference.

**NOTICE USE ONLY WATER THAT HAS BEEN PROPERLY FILTERED.**

Each unit is carefully packed at the factory and comes with a construction debris cover that prevents most construction contamination prior to operation. Remove the light module from the body by first removing the LED Module Restraining Screw, and then turn the light module **CLOCKWISE** to remove (Figure 2). Install the debris cover. Put the light module in a safe place until ready for final installation.

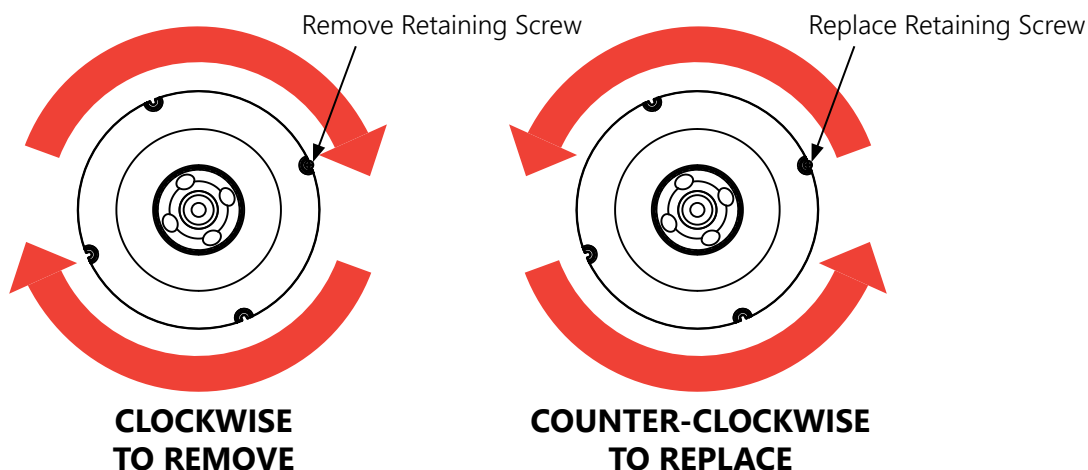


FIGURE 2: LED MODULE INSTALLATION

## NOTICE FLUSH THE PIPE PRIOR TO INSTALLATION

- C.1.1 Determine the location(s) for the Brilliant Wonders Lighted Bubbler(s). The unit can be installed in various positions from the typical horizontal mount or used as in a vertical wall mount. Begin by prepping the area for installation as you would a main drain sump. There is a 1 ½" – 2" PVC combination socket located on the bottom of the body of the bubbler to run water service. There is also a 1" PVC slip socket on the bottom to run conduit for electrical connections. CMP recommends mounting the bubbler no more than 14" below the surface of the water horizontally when installed as a bubbler/fountain for the best combination effect of water and light.
- C.1.2 When using the unit as a light only, glue a plug into the water port on the back of the body, and thread the Light Use Only Cap onto the front. (P/N 25552-309-300) If the bubbler is mounted on a vertical wall, the unit will act more like a lighted jet and will not give the same effect as a horizontal application.
- C.1.3 Install the light module and run cord through the conduit to the junction box. Install the "hold down" screw.
- C.1.4 Complete the rough-in by plumbing the water line to the desired pumping system. Flush the water line prior to any startup to remove any foreign material from construction that may be inside the system. Be sure to install an in-line flow control valve to adjust the height and flow of the water.
- C.1.5 After the system has been started, adjust the height of the water using this valve to get the desired effect. The following tables (FIGURE 2) provides approximate values for water column height with combinations of GPM and depth of the Brilliant Wonders Lighted Bubbler mounted in the horizontal position.
- C.1.6 Install the electrical conduit from the bubbler to the system control box. (See C.2 Electrical Installation)

**⚠ WARNING 12 VAC ONLY**

**⚠ CAUTION INSTALL CONTROL BOX AT LEAST TWO (2) FEET ABOVE THE WATER LEVEL**

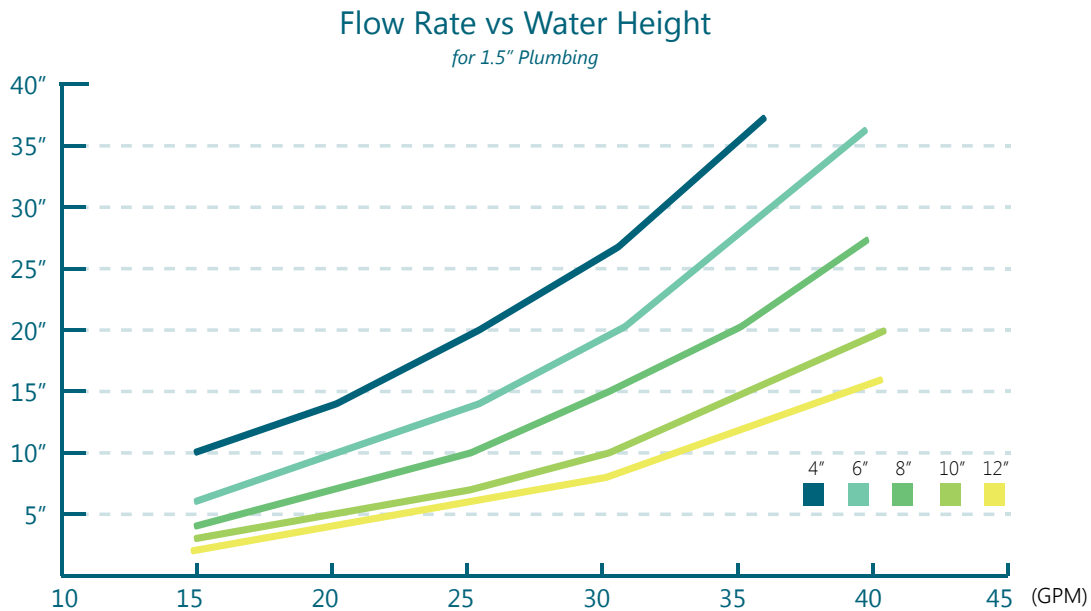


FIGURE 3: PERFORMANCE DATA

## Plume Height At Given Water Depths

	1/2" REDUCER					3/4" REDUCER				
	4"	6"	8"	10"	12"	4"	6"	8"	10"	12"
10gpm	13	7								
15gpm	30	20	13	10	8	9	6	4.5	3.5	2
20gpm	55	34	24	18	13	13.5	10	8	6.5	4.5
25gpm	-	-	38	28	20	20	15	12	9.5	7
30gpm	-	-	-	-	-	28	21	16	12.5	10
35gpm	-	-	-	-	-	38	29	20.5	16	13
40gpm	-	-	-	-	-	-	37	26	20	16

21.1mm Nozzle with 2" Piping | Water height may vary

FIGURE 4: SUPPLEMENTAL PERFORMANCE DATA

## C.2 ELECTRICAL INSTALLATION

C.2.1 With all of the different components and applications in the pool and spa industry, proper installation recommendations cannot be taken for granted. This procedure gives specific recommendations to ensure that electrical wiring of your Brilliant Wonders Lighted Bubbler Unit is properly installed. The installer should also consult local inspectors to insure that the unit is installed according to all local building codes and regulations. Refer to the schematic below for installation of the electrical system (Figure 7).

C.2.2 The 12VAC transformer (not included) is to be located in a waterproof enclosure. The conduit from the Brilliant Wonders Bubbler should be connected to the transformer enclosure. Pull the cable from the Brilliant Wonders Bubbler through the conduit to the transformer enclosure (not included). Leave about 12-24" of wire in the Brilliant Wonders Lighted Bubbler's inner housing (this is to allow for servicing of the LED module - Figure 6). Pull the rest of the cable through to the transformer box. The bubbler unit can be mounted onto the hub by winding the excess cable around the inner hub inside the housing and lining up the LED module with the guide pins on the hub. Secure the light by pushing the light downward onto the hub and twisting the light unit **COUNTER-CLOCKWISE** (Figure 5). Secure the unit by replacing the LED Module Retaining Screw.

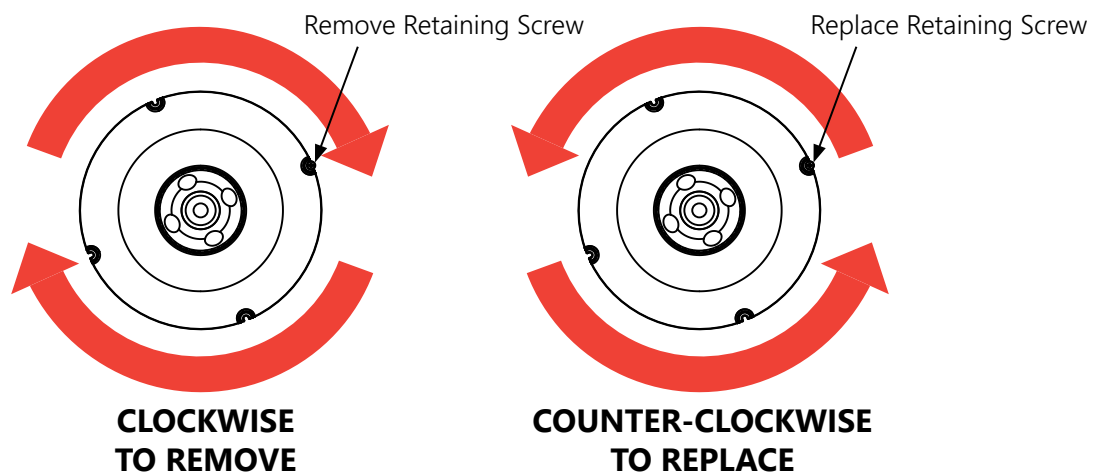


FIGURE 5: LED MODULE INSTALLATION

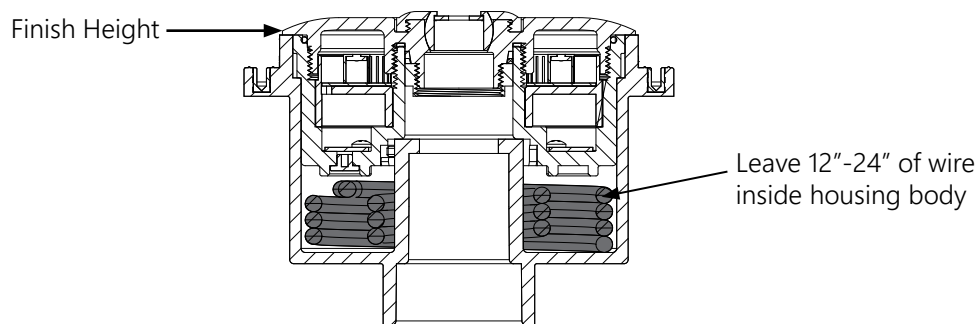


FIGURE 6: EXTRA WIRE IN HOUSING

C.2.3 Connect the 120VAC switched input to the input side of the transformer as shown in the sample below. Locate the power transformer output terminals and attach the two feed wires (one Black and one White) from the bubbler. These black and white wires may be connected in any order to the output terminals on the transformer as they are not polarity dependent. Attach any grounded wire to the appropriate terminals and ensure all connections have been installed properly. Ensure the switch is in the OFF position prior to startup. Your LED Unit is now ready for operation.

**NOTICE** NEVER CONNECT UNIT TO A DIMMER SWITCH. THIS CAN PERMANENTLY DAMAGE BUBBLER UNIT

**NOTICE** FOR WARRANTY CLAIMS, BUBBLER MUST HAVE COMPLETE CORD INTACT. CUT ELECTRICAL CONNECTION CORDS WILL VOID WARRANTY

**WARNING** 12VAC INPUT ONLY. FAILURE TO USE 12 VAC SYSTEM WILL PERMANENTLY DAMAGE THE LED UNIT

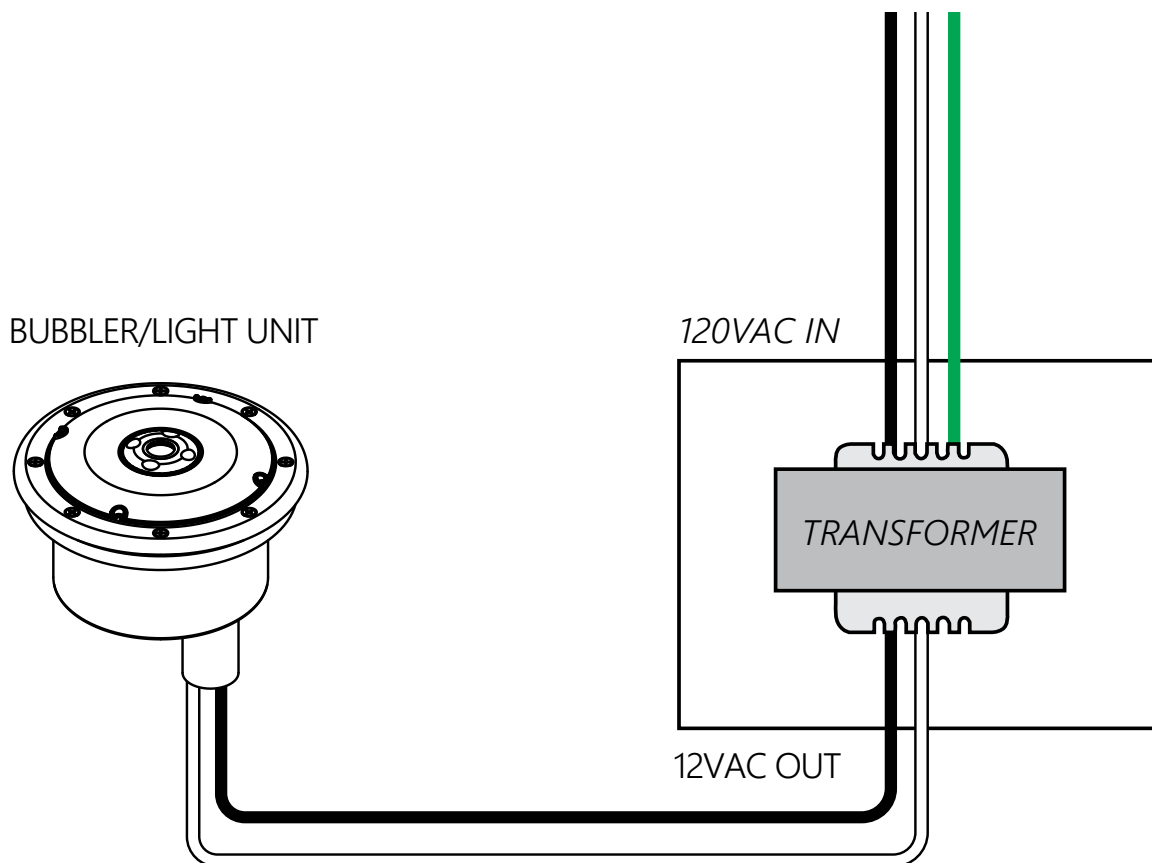


FIGURE 7: ELECTRIC SCHEMATIC EXAMPLE