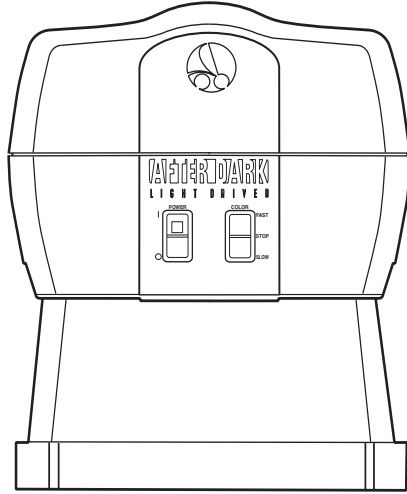


# OWNER'S MANUAL



 **PolarisAfterDark**

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IMPORTANT INFORMATION

# Important Information

- The AD150/AD151 light driver operates on 120 VAC. The AD150i/AD151i light driver operates on 240VAC. Do not attempt to alter the unit to operate on any other voltage.
- Install the light driver at least 5 feet (1.5 meters) from the pool, spa or hot tub.
- Keep the ventilation slots at the bottom of the housing clear of leaves and debris. The unit must be ventilated at all times to avoid damage and voiding of the warranty. **Clean the inlet filter screen routinely.** Do not remove the screen.
- Do not sit or stand on the light driver, or place anything on top of it.
- Do not submerge the light driver in water or operate it while it is buried in snow.
- Do not allow children to play with the light driver.
- **Do not manually turn or otherwise tamper with the color wheel** as this will void the warranty.
- **To maximize light output, center the fiber cable** in the light manifold at installation.
- The light driver is equipped with a metal-halide lamp which builds brightness gradually. It may take as long as 2 minutes for the light intensity to peak. If the light driver is shut off after warming up, it may take up to two minutes to regain full intensity.
- Use only Polaris Lamp (#AD305) to replace the bulb in this light driver. Failure to do so could result in bodily injury or damage to the light driver.
- The Polaris AfterDark light driver is designed to work with Polaris Mega-Lite or Mega-Glow fiber optic cable only. Polaris is not responsible for damage to non-Polaris fiber optic cable. When ordering cable, over estimate length to provide ample supply for service runs, filler fiber, etc.

## For customer service or support:

- Please mail Warranty Card immediately.
- For on-line support: [www.polarispool.com](http://www.polarispool.com)
- To contact Polaris: **US and Canada**  
Customer Service  
2620 Commerce Way  
Vista, CA 92081-8438  
1-800-822-7933

## Model Specifications

**Model: AD150 (Colored Light)**

Lamp Type: Metal-Halide Lamp, CDM  
Replacement Lamp P/N: AD305  
Colors: 9  
Color Wheel Motor: 12 VDC, 2 speeds  
Voltage: 120 VAC 50/60 Hz  
Power Consumption: 200 Watts Max  
Start Current Load: 4.4 Amps  
Run Current Load: 1.8 Amps  
Enclosure Material: Luran® S ASA  
Ventilation: 110 cu. ft/min.  
Weight: 21 lbs.

**Model: AD150i (Colored Light)**

Lamp Type: Metal-Halide Lamp, CDM  
Replacement Lamp P/N: AD305  
Colors: 9  
Color Wheel Motor: 12 VDC, 2 speeds  
Voltage: 240 VAC 50/60 Hz  
Power Consumption: 200 Watts Max  
Start Current Load: 4.4 Amps  
Run Current Load: 1.8 Amps  
Enclosure Material: Luran® S ASA  
Ventilation: 110 cu. ft/min.  
Weight: 21 lbs.

**Model: AD151 or AD151i (White Light)**

Lamp Type: Metal-Halide Lamp, CDM  
Replacement Lamp P/N: AD305  
No Colors  
No Color Wheel Motor  
Voltage: 120 VAC (240 VAC for 150i) 50/60 Hz  
Power Consumption: 200 Watts Max  
Start Current Load: 4.4 Amps  
Run Current Load: 1.8 Amps  
Enclosure Material: Luran® S ASA  
Ventilation: 110 cu. ft/min.  
Weight: 20 lbs.

# Introduction

Congratulations on the purchase of your new fiber optic lighting system and thank you for choosing Polaris. The Polaris AfterDark® light driver is designed to provide safe, beautifully colored lighting and years of trouble-free service.

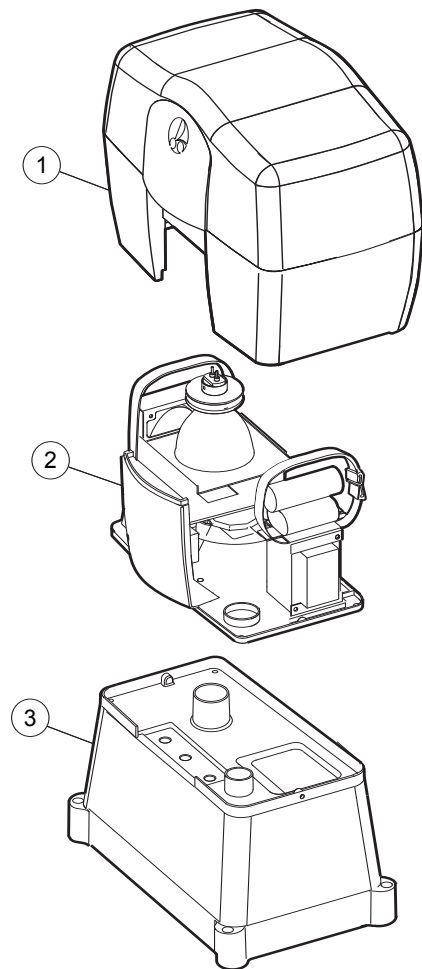
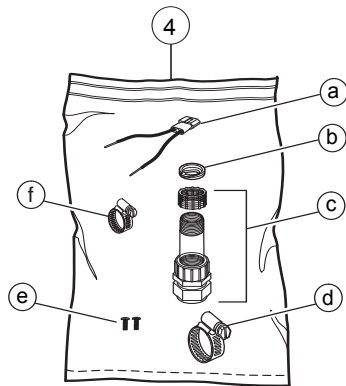
The brightness of a fiber optic lighting system is determined by many factors including the cable length, the size of the pool, the color of the pool's interior, and the amount of ambient light in the pool area. If you have purchased the AD150 equipped with a Color Wheel, you will notice variations in color intensity in different colors. Each color emits a different level of brightness, white is the brightest and magenta is the least bright.

The Polaris AfterDark provides synchronized color displays when multiple units are installed on the same power source.

Always insist on genuine Polaris replacement parts. Non-Polaris parts are not made to our specifications and can adversely affect the operation of your light driver.

## Polaris AfterDark Complete

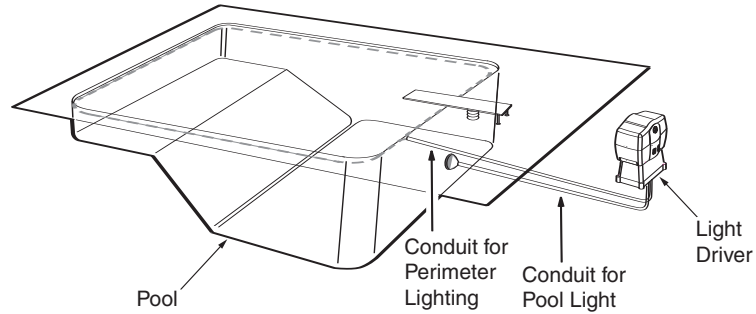
1. Cover
2. Chassis Assembly
3. Installation Base
4. Parts Bag
  - a. Color Wheel Control Plug
  - b. Manifold Insert
  - c. Manifold
  - d. Large Clamp
  - e. Screws
  - f. Small Clamp



# Installation Instructions

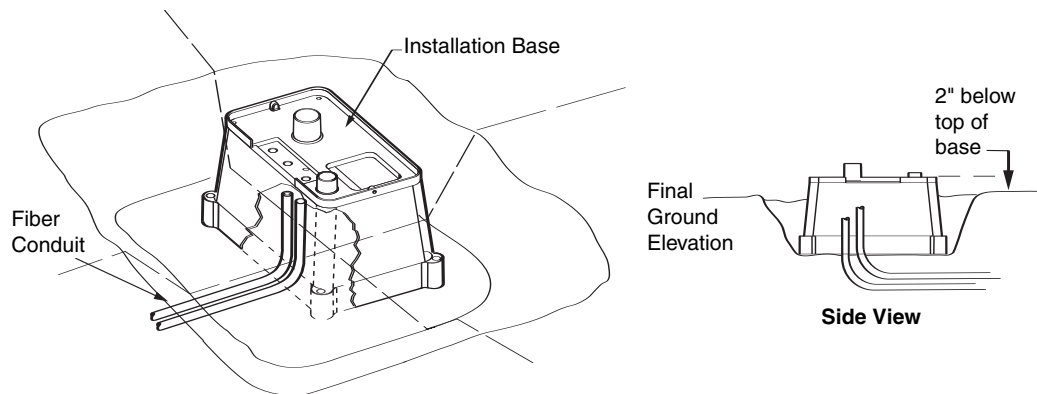
## 1 Prepare the Conduit

Run separate conduits for each lens location and perimeter fiber runs. Use only sweep ells or heat-bent PVC, not standard 90° plumbing fittings. **Installation Tip:** For perimeter lighting, optimize light intensity by looping the fiber back to the light driver to light from both ends. Center the fiber optic conduits where the installation base will be placed.

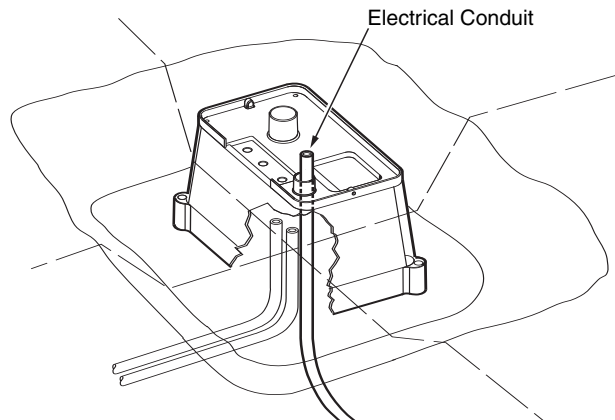


Remove the cover and separate the chassis assembly from the installation base. Using the handles, lift the chassis off the base and place it in a safe location until ready to complete the electrical connections.

Cut the conduit so it protrudes 1/3 of the way into the installation base.



Guide the electrical conduit through the small hole in the installation base until it extends 1" to 4" above the base. Remove the base to continue with fiber installation.



# 2

## Install the Fiber

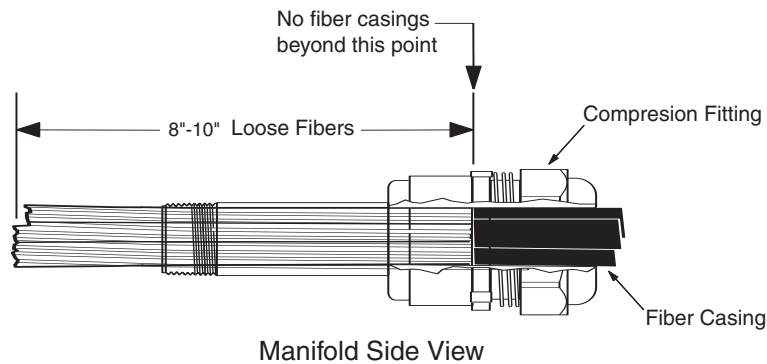
If installing underwater lights, install the Universal Fiber Lens (part #AD10) first and then install the light driver. If installing a light kit, install the fiber first and then install the light driver.

### **Fibers must be centered and held securely by the fiber manifold compression fitting.**

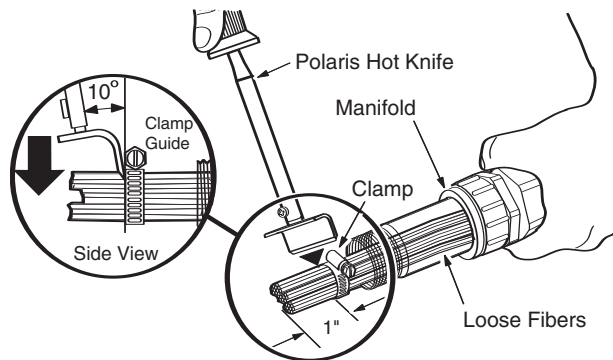
If fiber runs are not centered properly, lighting quality is greatly diminished. When routing multiple fibers, the longest runs should be closest to the center to optimize light intensity.

1. Feed the fiber optic cable through the conduits. Measure enough cable for a service loop of at least 18" but no more than 36" at the light driver. Cut a few 10-12" pieces of fiber to use as fillers.
2. Insert the fiber through the manifold fitting and tighten. Add filler fibers as necessary to ensure that the **entire area inside the fitting is filled with fiber, the fiber runs are centered and the fiber is held securely**. Loosen the fitting and remove the fiber.
3. Strip the casing of all cables, including the fillers, back 8-10" to expose the bare fibers. Holding the tips of the fibers even, insert them through the manifold fitting until the bare fibers extend 3-4" past the manifold opening. The fitting should contact casing material so that the individual fibers are not damaged but **no casing material should extend past the fitting into the manifold as this can cause melting of the fibers**.

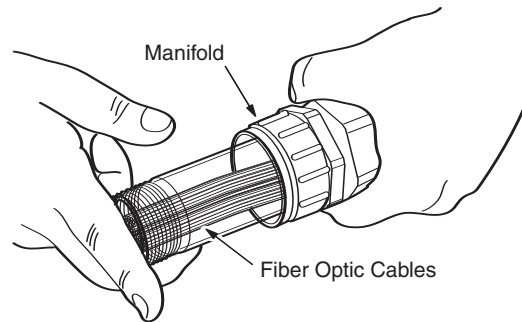
**Installation Tip:** To keep fiber runs centered, separate the fillers and insert them from the opposite side of the manifold after the runs are through the fitting.



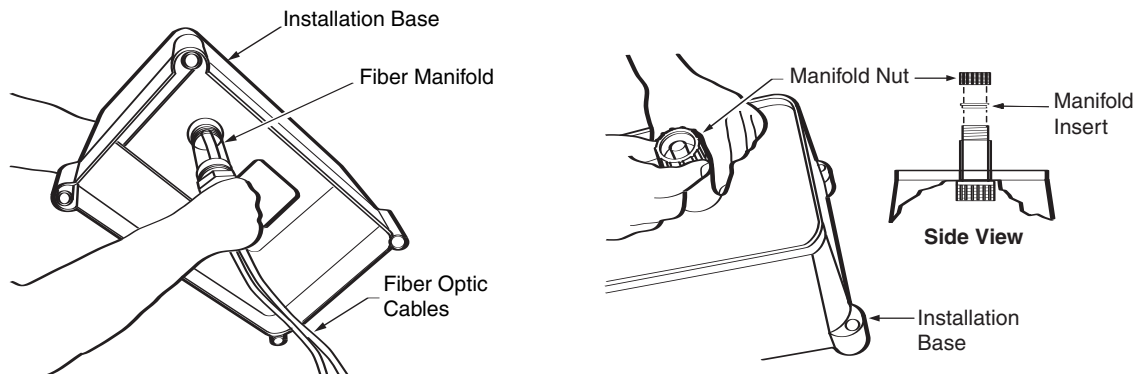
4. Secure the loose fibers with the appropriately sized clamp, with the individual fibers extending at least 1" beyond the clamp. Using the Polaris Hot Knife (part #AD25), trim the fibers at a 10-degree angle, clean and even with the clamp. The cut will create a seal over the fiber strands.



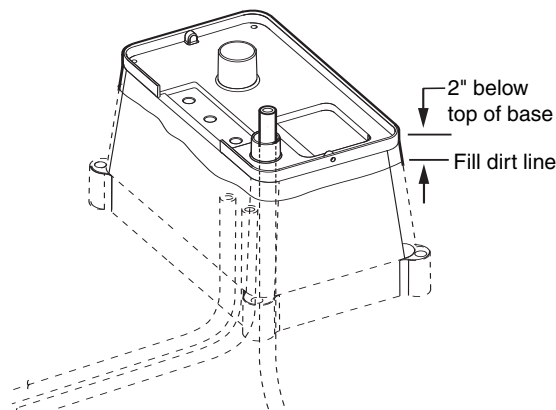
- Remove the clamp and slide the fibers back so that they are flush with the manifold opening. Hand tighten the compression fitting.



- Insert the fiber manifold into the installation base from the bottom. To center the fiber and maximize light driver brightness, install the manifold insert; then secure the assembly at the top with the manifold nut.



- Position the installation base over the fiber optic conduits while guiding the electrical conduit up through the smaller hole.
- Backfill dirt around the installation base to secure it. The top of the base should be at least 2" below the final landscaped ground level.



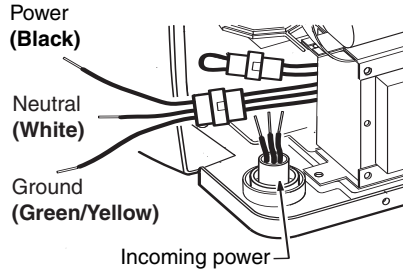
# 3

## Install Chassis Assembly

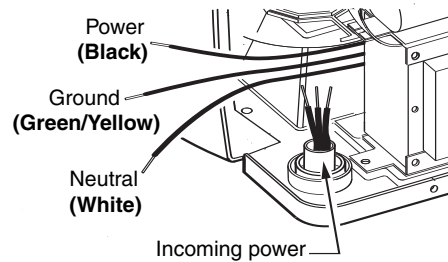
Using the handles, lift the chassis assembly onto the installation base and secure.

To connect the electrical supply, check the model number of your light driver and refer to the wiring connection requirements below for the proper configuration.

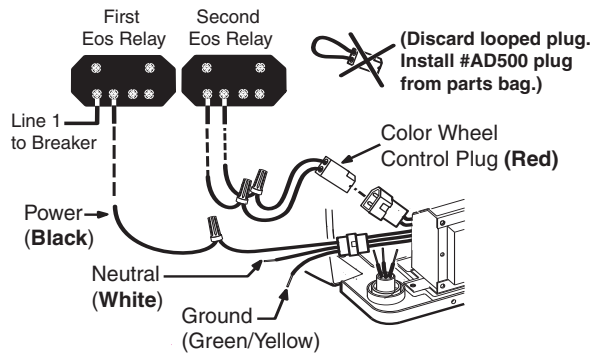
### Model AD150 colored light driver



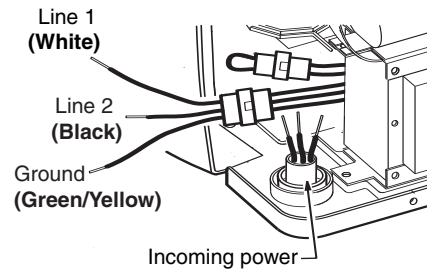
### Model AD151 white light only light driver



### Model AD150/AD151 controlled by Polaris Eos, Polaris Sol or another external control system.



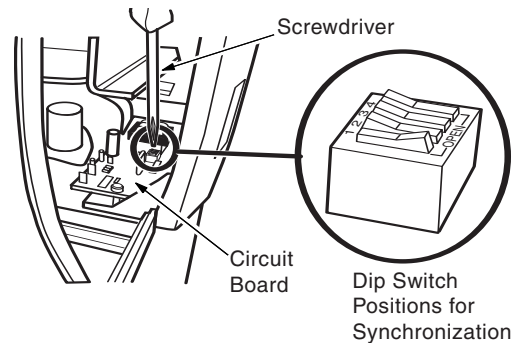
### International Model AD150i colored light driver.



## Synchronized Color Displays

To set up synchronized displays with multiple units:

1. Wire all units to the same power source so they power on at the same time.
2. Locate the dip switches on the circuit board and change the dip switch #1 position on each unit.
3. Set the Color Wheel Switch on each unit to the same, FAST or SLOW, setting.



When all connections are complete, position and secure the cover onto the base/chassis assembly. Turn on power to the unit(s).

# Operation

## Power Switches

The switch plate controls power and light. If you have model AD151 which emits white light only, there will be no color wheel switch.

When turned on, the cooling fan will engage and the indicator light on the power switch will glow. Due to the nature of the metal-halide lamp system, the fiber optic light will get brighter gradually; it may take up to two minutes to reach full intensity.

If using a Polaris Eos or Polaris Sol controller, or any other external remote control system, leave the power switch on at all times. Power to the light driver is activated by the external remote control.

## Color Wheel Settings

(Model AD150/AD150I)

The color wheel switch has three positions: STOP, FAST, and SLOW.

STOP: the color wheel stays on one color.

FAST: the color wheel rotates quickly (1 RPM) and the colors change every 6.5 seconds.

SLOW: the color wheel rotates slowly (1/2 RPM) and the colors change approximately every 13 seconds.

Activation of the color wheel can be controlled remotely by the external control system (Eos, Sol, etc.); however, the rotation speed of the color wheel can only be changed manually at the light driver control panel.

## Synchronized Displays

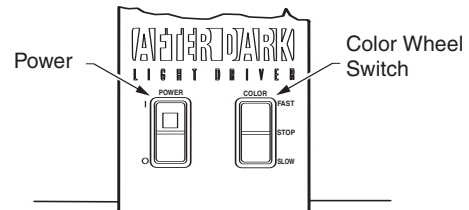
At startup, It will take approximately 1-1/2 minutes on high speed or 2-1/2 minutes on low speed for the units to synchronize.

Over time, if it becomes necessary to reset synchronization, turn the units off for at least 10 seconds and then turn them back on.

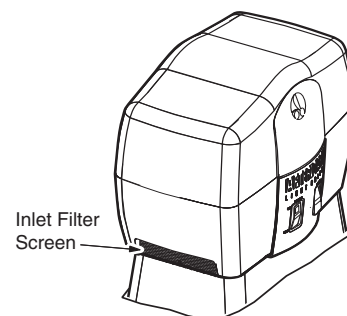
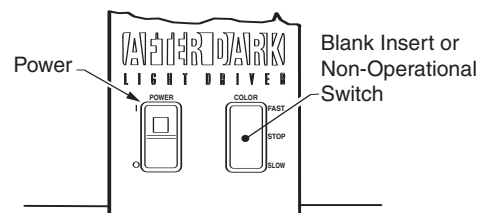
## Inlet Filter Screen

A filter screen covers the inlet of the light driver housing. To maintain airflow over the internal components, check the filter routinely and wipe away any leaves or debris that may be caught in the screen. Do not remove the filter screen.

AD150 Control Panel. Light Driver With Color Wheel.

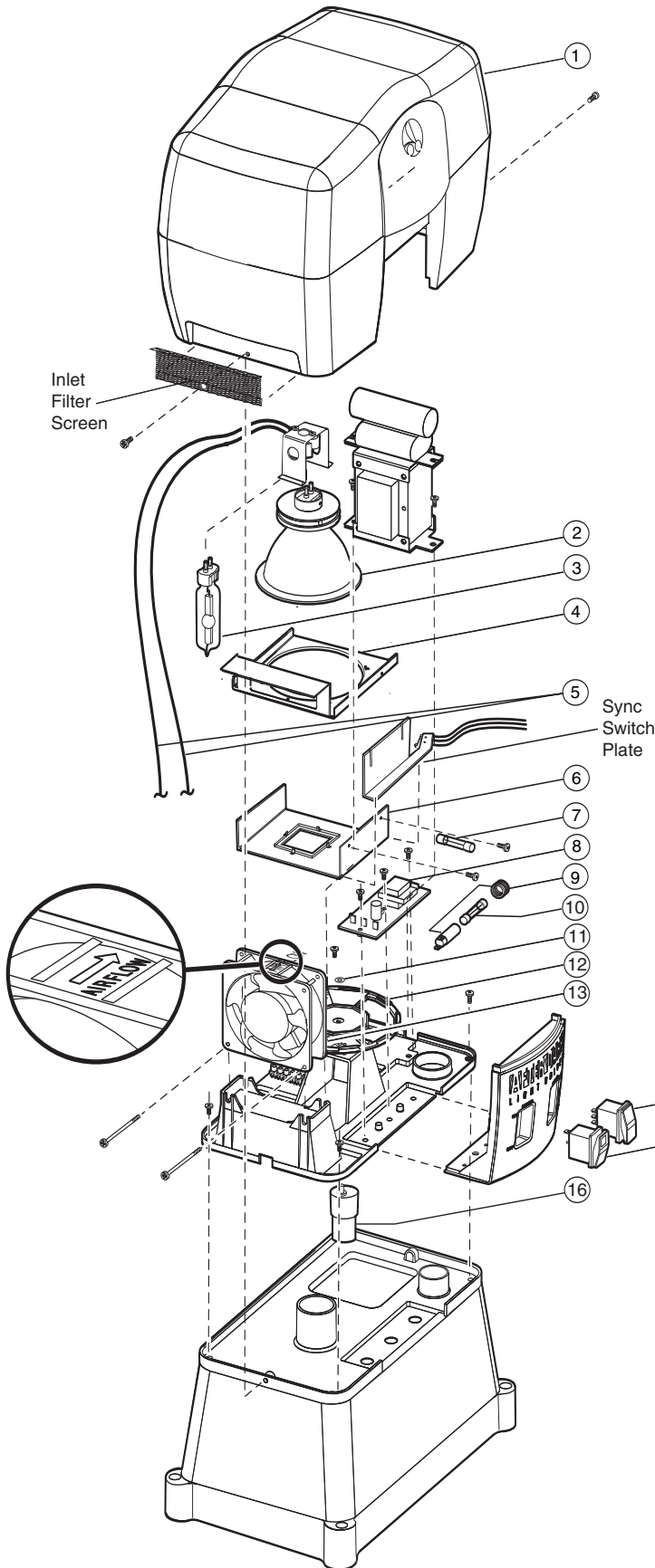


AD151 Control Panel. Light Driver With No Color Wheel



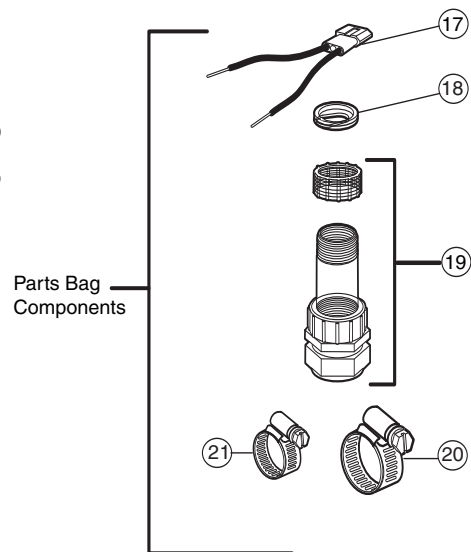
# PolarisAfterDark

## Exploded Parts Diagram



No.	Part	Description	Qty
1	AD210	Cover	1
	**	Inlet Filter Screen	1
2	AD300	Lamp/Reflector Assembly	1
3	AD305	Lamp Only, 150W H.I.D	1
4	AD310	Lamp Bracket	1
5	AD325	Lamp Wire/Socket Assembly	1
6	AD320	Heat Filter Assembly	1
7	AD435	Fuse, Color Wheel	1
8	AD430	Color Wheel Control Board	1
9	AD640	Fuse Holder, Main Power	1
10	AD650	Fuse, Main Power	1
11	AD410	Color Wheel Retainer	1
12	AD400	Color Wheel Assembly	1
13	AD630	Fan	1
14	AD620	Switch, Color Wheel Power 3-Way	1
15	AD610	Switch, Main Power 2-Way	1
16	AD420	Color Wheel Motor	1
17	AD500	Plug, Color Wheel Control	1
18	AD110	Light Fiber Centering Ring	1
19	AD100	Manifold Assembly	1
20	**	Clamp, Large Hose Relief	1
21	**	Clamp, Small Hose Relief	1

\*\* Not sold separately.



# Troubleshooting

If the Polaris AfterDark displays any of the following actions, adjustments may be necessary to restore performance. Refer to the exploded parts diagram for part references.

**Action: The light driver does not come on.**

- Solution:
1. Verify that unit is turned on.
  2. If using an external remote controller to activate the 120/240 VAC supply, make sure that the relay controlling the light driver is on ("I") position and supplying power.
  3. Locate the Ground Fault Circuit Interrupter (G.F.C.I.) protecting the circuit and verify proper operation by following the Test and Reset instructions on the G.F.C.I.
  4. Verify that the in-line fuse, located on the chassis, is intact.

**Action: The color wheel does not rotate.**

- Solution:
1. Verify that the color switch is positioned for slow or fast operation.
  2. If using an external remote controller, make sure the relay controlling it is on and supplying power.
  3. Check the spade connectors on the color wheel control board and verify that they are connected properly.

**Action: The light output has dimmed over time.**

- Solution:
1. Turn off the power to the light driver and check for dirt build up on the manifold tip, color wheel, and heat filter. Clean as necessary.
  2. If a Universal Fiber Lens is installed, make sure it is not filled with water. The area around the fiber tip inside the lens must be dry. Replace if necessary.

**Action: The light driver is turned on but it continues to cycle on and off.**

- Solution:
1. With the unit operating, listen for the fan. If it is not heard, it may be blocked. Turn off the main power to the light driver, remove the cover, clear the fan of any debris and check its wiring.

**Action: Multiple light drivers will not synchronize.**

- Solution:
1. At startup, It will take approximately 1-1/2 minutes on high speed or 2-1/2 minutes on low speed for the units to synchronize.
  2. Verify that all units are connected to the same power source and power up at the same time.
  3. Check the Color Wheel Switch settings. Each unit should be set the same.
  4. Verify that dip switch #1 position on each unit is correct. If it is reset, the unit must be turned off and then back on to set the adjustment.

## **Polaris AfterDark® Light Driver Limited Warranty**

This limited warranty is extended to the original consumer purchaser of this Polaris AfterDark light driver manufactured by Zodiac Pool Care, Inc. ("Zodiac"), 2620 Commerce Way, Vista, California 92081-8438, USA.

Zodiac warrants the light driver it manufactures, including all parts and components thereof, to be free of defects in material and workmanship. We do not cover improper installation of the Polaris AfterDark light driver or fiber optic cable but our instruction manual is complete enough to solve any problems — particularly if it is read before, rather than after, the installation. If you have any questions regarding your Polaris AfterDark product, please feel free to call or write us. Be sure to include the serial number of your unit.

The warranty commences on the date of installation of the Polaris AfterDark light driver. The Polaris AfterDark light driver parts are warranted for a period of one year. Zodiac will not be responsible for any damage to non-Polaris fiber optic cable. This Polaris AfterDark light driver is designed to work only with genuine Polaris fiber optic cable.

This limited warranty does not apply if the failure is caused by or contributed to any of the following: improper handling, improper storage, winter freezing, abuse, improper installation, unsuitable application of the unit, lack of reasonable and necessary maintenance, or repairs made or attempted by other than Zodiac or one of its Authorized Service Centers. Zodiac will repair or replace, at its option, a unit or part proved to be defective within the warranty period and under the conditions of the warranty.

Zodiac is not responsible for the cost of removal of the unit or part, damages due to removal, or any other expenses incurred in shipping the unit or part to or from the factory or its Authorized Service Centers, or the installation of the repaired or replacement unit. The consumer must bear these expenses.

This warranty does not cover repair or replacement of a unit or part except at our factory or a Polaris Authorized Service Center.

THIS LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL SUCH OTHER WARRANTIES ARE DISCLAIMED EXCEPT TO THE EXTENT ANY IMPLIED WARRANTY MAY BE IMPOSED BY STATE CONSUMER LAW. ANY SUCH IMPLIED WARRANTY IMPOSED BY STATE CONSUMER LAW IS LIMITED IN DURATION TO ONE (1) YEAR FROM DATE OF PURCHASE. IN NO EVENT SHALL ZODIAC BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE OR KIND OR FOR DAMAGES TO PERSONS OR PROPERTY.

Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

This limited warranty is valid only in the United States of America, Canada and Australia, and it does not apply to Polaris AfterDark light drivers sold or installed in any other country.



**Your pool. Our reputation.**

2620 Commerce Way, Vista, CA 92081-8438 • 760-599-9600 • 1-800-822-7933

[www.polarispool.com](http://www.polarispool.com)