

Abyss

Professional Dive Light Polaron Abyss



The power of the SUN... Underwater ! **POLARION**

POLARION

Professional Dive Light Polarion **Abyss**

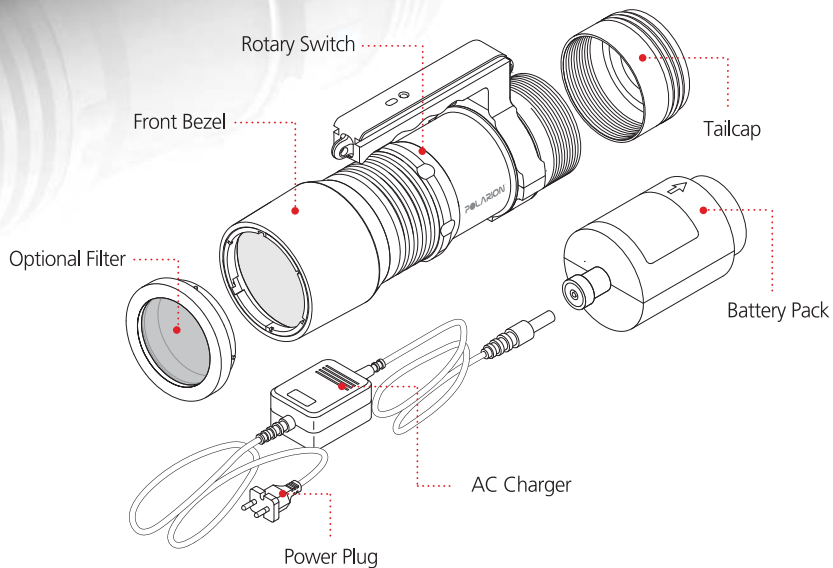
The Polarion Abyss™ is an underwater HID searchlight capable of operating at depths of up to 100 m (330 ft).

It is the perfect solution for both recreational and professional diving applications.

High strength aluminum & precision manufacturing ensures rugged, water-tight performance. 2 types of high grade reflectors are available according to your specific needs, and many optional accessories help you customize your light even more. There's also an all-new rail-type handle which gives you expansion options like never before.

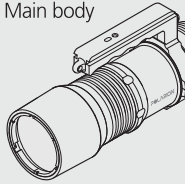
Non-contact magnetic switching ensures reliable operation under extreme conditions, and the interchangeable battery cartridges are double o-ring sealed for extra protection.



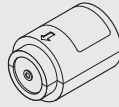


Basic Kit

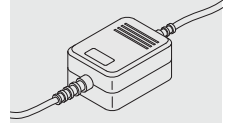
▶ Main body



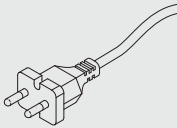
▶ Battery Pack



▶ AC Charger



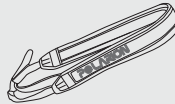
▶ Power Plug



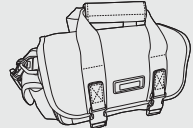
▶ User Manual



▶ Shoulder Strap or Lanyard

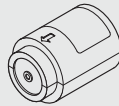


▶ Soft case

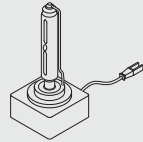


Optional Equipment

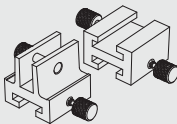
▶ Extra Battery Pack



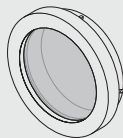
▶ Extra Lamp



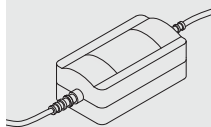
▶ Optional Mounting Brackets



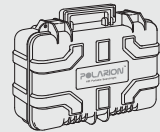
▶ Filters



▶ DC Charger



▶ Hard case



	Item	Description
Main Body	Model	Abyss Dual S / D
	Lamp Type	Metal Halide HID
	Lamp Power	30w / 45w Dual
	Max. Luminous Flux	3000lm(30w) - 4500lm(45w)
	Lamp Life	Up to 2500 hrs
	Color Temperature	4300K
	Illumination Distance	Up to 1.2km (Abyss S)
	Input Voltage	DC 12V ~ 18V
	Operational Current	3.5 A
	Weight (with battery)	1.9kg
	Dimensions (mm)	92 x 255 x 132
Water Resistance	IP68(100m)	
Battery	Battery Type	Li-ion Rechargeable, Cartridge Type
	Battery Capacity	DC 14.4V, 4400mAh
	Run Time	110min(30w) - 70min(45w)
	Weight	0.5 kg
AC Charger	Input Voltage	AC 100 ~ 240 V / 50 ~ 60 Hz
	Output Voltage	DC 19V
	Charge Time	2hrs 30min ± 30min

• Certain specifications may change without prior notice



Caution

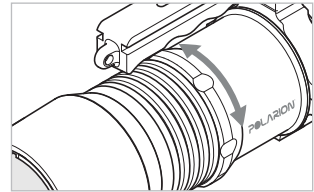
Your Polarion searchlight is a precision made instrument for specialized applications, so please be aware of these cautionary statements.

- The light becomes very hot during operation, so please be careful when handling the light. Be sure not to touch the hot surfaces.
- When not in use for extended periods, please store in a cool place with at least 50% of the charge left in the battery.
- Do not aim the light at someone's eye at close range.
- Be sure to keep the front lens clean. If it becomes dirty, use rubbing alcohol to thoroughly clean it.
- Be sure the light is off when exchanging the battery pack.
- The front lens is made of specially tempered glass, but should it ever break, please be careful and replace it as soon as possible.
- Be sure to check if all caps are properly sealed and completely tight before using the light in harsh conditions (underwater, storms, etc). Failure to do so can not only affect the performance of the light, but may cause the light to fail completely under certain circumstances. Damaged o-rings and gaskets can also lead to light failure so use caution and maintain all seals.
- Make sure the watertight seals are properly tightened and maintained (see page 8 for more information).
- Do not try to disassemble the light. This will void your factory warranty.
- If water ever gets into the light, do not use it. Contact your supplier immediately.

Operation

■ Turning the light On/Off

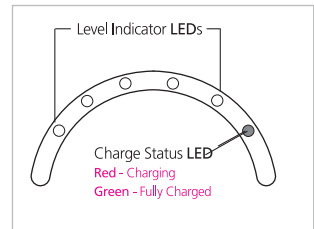
- Be sure to fully charge the battery before initial use.
- Turn the rotary switch in either direction to operate the light.
- The battery charge level is displayed through the tail cap for 5 seconds after the light is turned on.



■ Charging the Battery

Open the tail cap and remove the battery. Plug the connector of the charging unit into the socket of the battery.

- There are a total of 6 LEDs on the battery that monitor the battery and charging status.
- The right most LED indicates the charging status. RED indicates that the light is charging. GREEN indicates that the light is fully charged.
- Each of the 5 other LEDs indicate the charge level. Each LED represents approximately 20% of the charge. So 1 LED = 20%, 2 LEDs = 40%, 3 LEDs = 60% and so on.
- The battery should fully charge in about 3 hours. If it is not fully charged even after 5 hours, please contact your supplier.
- Be sure to completely remove the battery before charging.
- Be sure to charge the battery in a dry area. If there is any moisture on the charger or battery, make sure it is completely dry before charging.
- After the battery has been charged, replace the battery inside the main body and be sure to completely tighten the tail cap to ensure a weathertight seal.



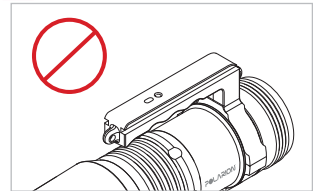
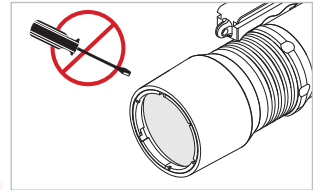
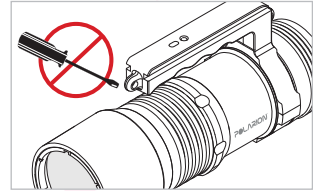
■ When using the AC Charger

- The charger is a universal charger with an input range of 100V ~ 240V, 50 ~ 60Hz. Although it should cover most countries, please check to see if your power source is within this range.
- Charging should be done indoors and out of the elements.
- The charger is not waterproof.
- The charger can get warm during charging, so make sure there are no flammable materials around it.
- Charging should be done in a well ventilated area.

Water Resistance

The Polaron Abyss™ uses Gaskets and O-rings in critical areas for optimal performance underwater. All units are tested before they leave the factory, but please follow these guideline lines for proper maintenance.

- ❶ Do not disassemble the light. This can affect water resistance significantly. It can also void your warranty.
- ❷ When replacing the battery pack, follow the instructions carefully and make sure the tailcap is screwed on correctly and fully tightened before use.
- ❸ Check the tailcap thoroughly after each charge.
- ❹ If there is any water leak due to improper seals, stop usage immediately. Not only can this ruin the light, but it can be extremely dangerous. Please use caution.
- ❺ To ensure proper performance, please keep the o-rings well lubricated at all times. We also recommend that you replace both o-rings every 6 months.
- ❻ Dirt and debris can accumulate inside the switch mechanism after continued use. Please remove the switch and clean according to the instructions. Lubricate the switch and reassemble.
- ❼ Be sure to have the light tested every year to ensure peak performance. Please contact your local dealer for details.
- ❽ Be sure to clean the light thoroughly after each use. Be especially thorough after marine applications. Use soap and water to clean out any remaining salt.



Changing the Battery Pack

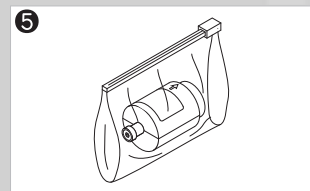
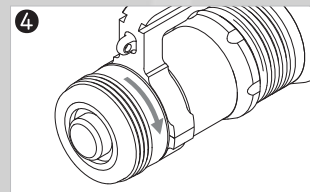
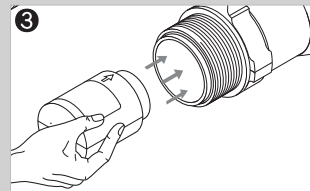
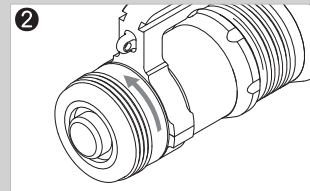
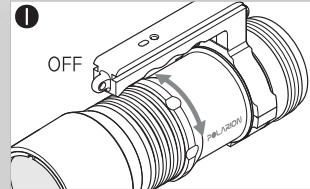
Your Polarion searchlight comes with a high performance Li-ion rechargeable battery pack. Under ideal conditions, it will have a life cycle of approximately 500 charges. When the battery performance is significantly reduced, you should get a new battery.

Your Polarion searchlight is supplied with one battery, but you can use an extra battery (optional) for additional runtime.

- 1 Turn off the searchlight.
- 2 Remove the tail cap.
- 3 Remove the battery pack and replace it with the new (or extra) battery pack. Be sure you insert the battery in the direction of the arrow.
- 4 Replace the tail cap. Be sure to align the screws correctly, and tighten it all the way. There is a weather seal at the end, so keep turning until you can't turn it any more. This will ensure a tight seal.
- 5 When storing the battery, please keep it so that no foreign material can get into the charging port.

< Important >

Storing a completely drained battery for extended periods will degrade the life of the battery. If you wish to store the battery for extended periods, make sure that the battery level is above 50% and store in a cool dry place.



Changing the Lamp

The life of the lamp is rated at 2000+ hours, which will give you years of worry free operation. However, if the need arises that you need a new lamp, please contact your supplier.

Changing the lamp is a very delicate process and can be very dangerous if not done correctly. It is not a user serviceable item.

Optional Filters

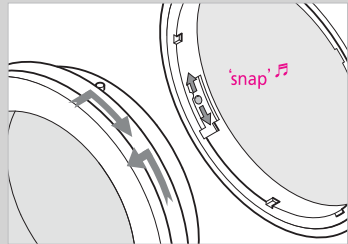
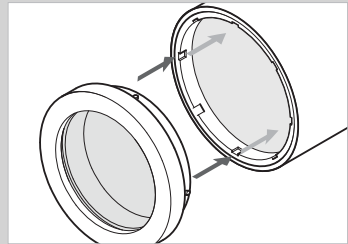
There are various filters available for your specific needs. Please contact your supplier for more information.

■ Optional Filters

- Amber Filter (Fog) - The yellow spectrum helps you see through thick fog and smoke.
- Diffusion Filter - Useful when you need a very even, broad light source.
- Color Filters - Several colors are available for signaling or lighting.
- Titanium Filter - For extra protection of the front lens.
- IR Filter - Infrared filter for various infrared applications.
- UV필터 - 검시용 또는 UV파장대만 투과됩니다.

■ Attaching the Filter

- Align the filter's "bump" with the grooves in front of the searchlight.
- Push into the front lens and turn clockwise, keep turning until you hear a "snap". This will lock the filter in place
- To remove the filter, simply turn it counter clockwise until you again hear the "snap". This will unlock the filter. Keep turning counter clockwise and pull out.



Troubleshooting

■ The light doesn't turn on.

Check to see if the battery is inserted correctly. Check whether the tail cap is aligned correctly and screwed in all the way. Check to see if the battery is drained. If it is, recharge the battery and operate as normal.

■ There is a "whine" when I turn on the light.

The "whining" sound is the ballast starting up. This is normal. The sound should go away after a few seconds.

■ The battery will not charge.

Check to see if all the plugs and connectors are tightly plugged in.

■ The run time is shorter than advertised.

Check to see if the battery is fully charged. Remember, even if all 5 "level indicator LEDs" are lit, you must wait for the "charge status LED" (the right most LED) to turn green. Your Polarion searchlight uses state-of-the-art Li-ion batteries, but after repeated use, the batteries will slowly decrease in run time.

■ While using the light on land, it turns off after 20~30 mins.

Because the Polarion Abyss™ is designed for underwater use, prolonged use on land can cause overheating. When this occurs, it simply triggers the thermal protection circuit and will shut down. It will return to normal operation once the light has cooled down.

■ There is moisture condensation inside the light

If there is a sudden change in temperature, there can be temporary moisture that shows up on the inside of the light, much like moisture forming on the outside of a cold glass of water. This is normal and should go away during normal operation. If there is more condensation than normal, open the tail cap and let the searchlight dry for a couple of hours.

※ If any of the problems listed above still persists after troubleshooting, please stop using the light and contact your supplier. DO NOT try to service the light yourself. It will void the warranty.

Product Warranty

Main Unit - 1 year

Battery - 6 months

The warranty does not cover normal wear and tear; intentional misuse or tampering by the user; or acts of God. Your supplier can provide you with information about servicing lights that are out of warranty for a nominal fee.



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