



## **Underwater Housing for Panasonic Lumix ZS200, TZ200, TZ202 Digital Cameras**

Product # 6170.12

### **Product Registration**

Please register your product at [ikelite.com](http://ikelite.com) within 15 days of purchase. Our product registration database is the best way for us to contact you in the event of a product update.

## About this Product

Thank you for your purchase of Ikelite equipment. Please read this instruction manual completely before attempting to operate or dive with this product. Please visit [ikelite.com](http://ikelite.com) to register your product to receive information on any updates or notices pertaining to your equipment.

## Included in the Box

- Housing
- O-Ring # 0109 (installed)
- Port cover # 0200.08 (installed)
- Silicone lubricant 1 cc tube

## Specifications

- 200 ft (60m) depth rating
- Controls for all camera functions except Diopter Adjustment Dial and Flash open lever; Flash may be opened prior to installing camera in the housing
- Near neutral buoyancy in fresh water
- 1/4-20 thread tray mounting with 3" (76mm) spacing
- 2.8 lb (1270 g)
- 6.2 x 5.1 x 6.8" (157 x 130 x 173 mm)
- 3.9" diameter glass lens port allows effective zoom range of 24-135 mm

## Important Notices

- » **To prevent salt build-up and sticking controls, submerge the empty housing in clean, freshwater. Operate the controls several times each while underwater to flush out any residue.**
- » **Never leave a housing in a rinse tank, even if it is the only system in the tank. Most catastrophic floods happen when the user walks away from a housing while it is in the rinse tank.**
- » **Do not use alcohol, cleaning agents, spray lubricants, Rain-X, or other solvents on the housing or lens port. Use of an incompatible chemical compound can damage the plastic and o-rings, and may result in leaking.**
- » **Always assemble in a cool, dry location. Opening the housing in a humid environment will lead to fogging.**
- » **This housing is designed specifically for use with the Panasonic Lumix DC-ZS200, DC-TZ200 and DC-TZ202 cameras. Other camera models will not likely fit or function properly in this housing.**

## Accessory Port

- » **Do not remove the Accessory Port Hole Plug unless you are installing a compatible accessory.**

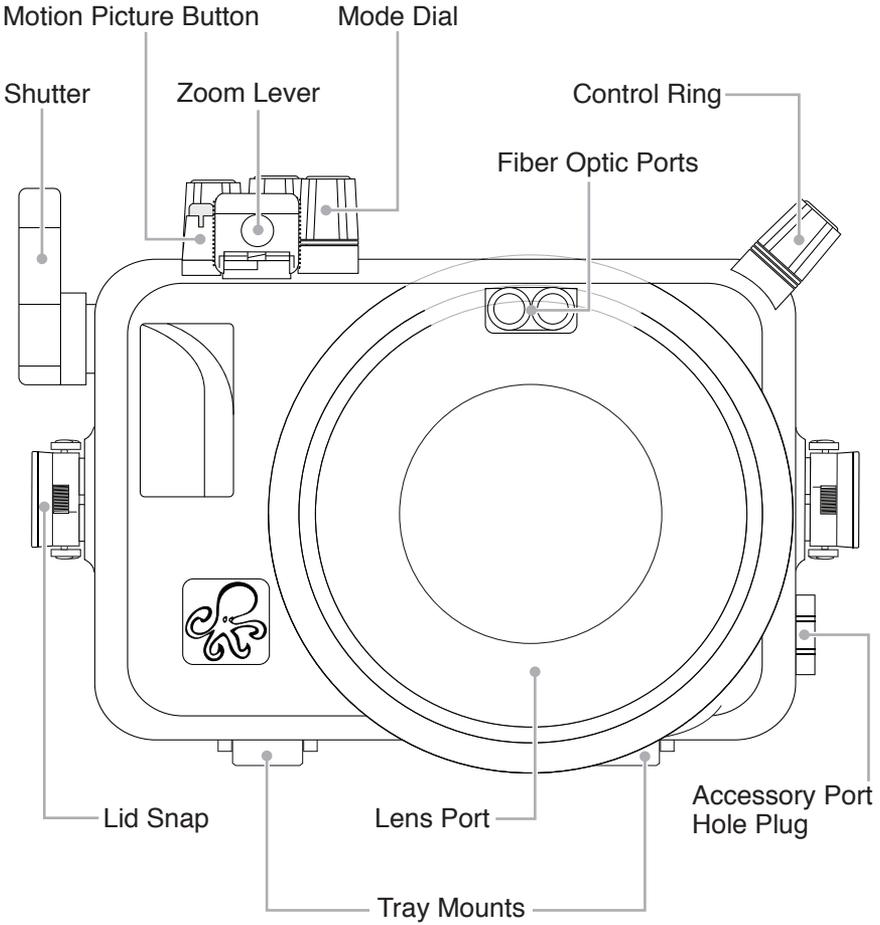
Your housing features an Accessory Port which may be used for attachment of factory optional or aftermarket housing accessories. The Accessory Port is 1/2-20 threaded.

Visit [ikelite.com](http://ikelite.com) for information on optional accessories.

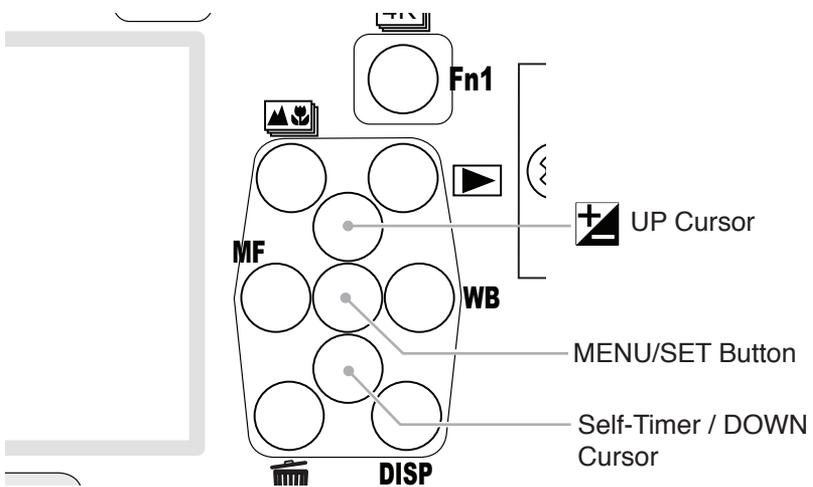
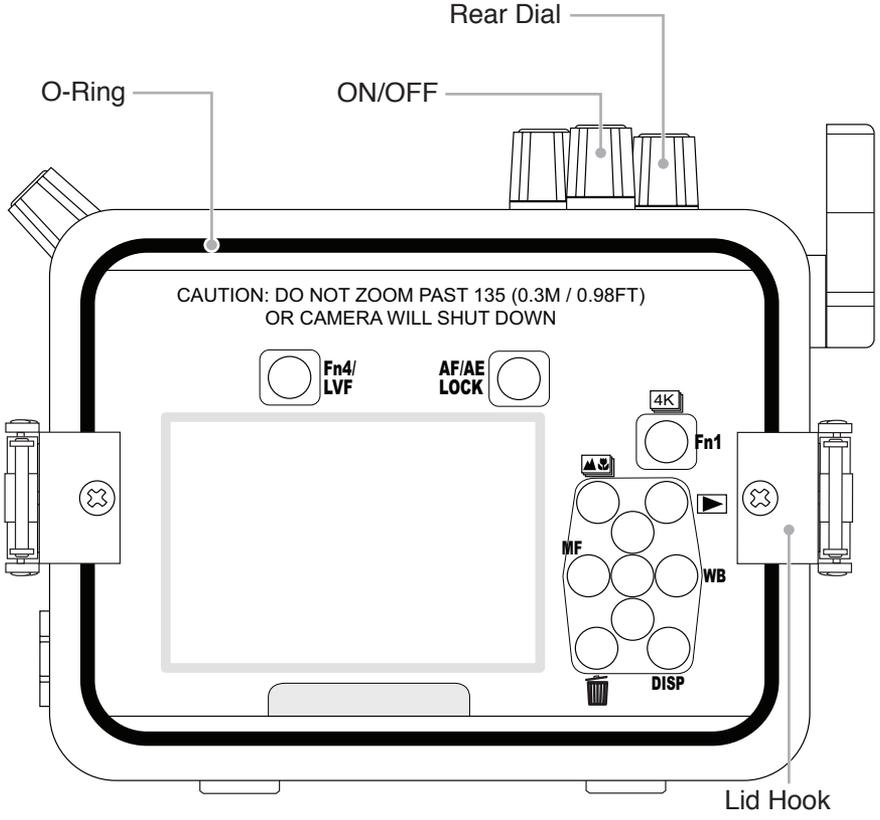
# Contents

<b>Product Registration</b> .....	<b>1</b>
<b>About this Product</b> .....	<b>2</b>
<b>Included in the Box</b> .....	<b>2</b>
<b>Specifications</b> .....	<b>2</b>
<b>Important Notices</b> .....	<b>3</b>
<b>Accessory Port</b> .....	<b>3</b>
<b>Getting to Know Your Housing</b> .....	<b>5</b>
Getting to Know Your Housing - cont.....	6
Accessory Port.....	7
<b>Setting Up Your Camera</b> .....	<b>7</b>
Pre-Installation Checklist & Initial Camera Settings.....	7
<b>Setting Up Your Housing</b> .....	<b>9</b>
Opening the Housing.....	9
Inserting the Camera.....	10
Closing the Housing.....	11
Final Check.....	11
Entering the Water.....	12
<b>Built-in Flash and External Strobe Use</b> .....	<b>13</b>
About the Built-In Flash.....	13
Attaching a Fiber Optic Cord.....	13
<b>Zoom and Macro Close-up</b> .....	<b>14</b>
<b>Spare Parts</b> .....	<b>15</b>
<b>Maintenance</b> .....	<b>15</b>
Post-Dive.....	15
Travel and Storage.....	15
<b>Troubleshooting</b> .....	<b>16</b>
<b>Limited Warranty</b> .....	<b>18</b>
<b>Service and Repairs</b> .....	<b>19</b>
<b>Contact Us</b> .....	<b>20</b>

# Getting to Know Your Housing



# Getting to Know Your Housing - cont.



## Accessory Port

Your housing features one 1/2-20 threaded Accessory Port which may be used for attachment of factory optional or aftermarket housing accessories. We recommend Vacuum Kit # 47012 which allows you to pull a vacuum on the housing to simulate pressure at depth and check for leaks prior to entering the water.

DO NOT remove the Accessory Hole Plug unless you are installing a compatible accessory. Visit **ikelite.com** for an updated list of factory optional accessories.

Use the following steps to replace an Accessory Port Hole Plug with an accessory fitting:

1. Remove the Hole Plug using an 11/16 inch open end wrench.
2. Check the accessory fitting o-ring sealing area. If an o-ring is not present, use the Hole Plug o-ring. Lightly lubricate o-ring with Ikelite Lubricant. Use ONLY Ikelite lubricant. Other manufacturer lubricants can cause the o-ring to swell. Check o-ring and o-ring sealing area. Both should be clean and free of hair, sand, or other debris.
3. Carefully screw in and tighten accessory fitting. The accessory port features a 1/2-20 threaded hole. Make sure your fitting is the same thread pattern. DO NOT cross-thread. DO NOT overtighten.

 **NOTICE:** Your Ikelite housing warranty DOES NOT extend to cover the attachment of aftermarket housing accessories by 3rd parties. Warranty DOES cover factory optional accessories attached by certified Ikelite service technicians.

## Setting Up Your Camera

### Pre-Installation Checklist & Initial Camera Settings

1. Insert a fully charged camera battery.
2. Insert a properly formatted memory card.

- 3.** Set Mode Dial to “A” Aperture Priority. Manually adjust aperture setting to achieve the best exposure for your shooting conditions. The shutter speed will be locked at 1/60th second when the camera flash is active. If a faster shutter speed is desired, set Mode Dial to “M” Manual mode to manually adjust both aperture and shutter speed settings.
- 4.** Set AFS/AFF/AFC to AFS and ISO Sensitivity to “200.”
- 5.** Set AF Mode to “1-Area.”
- 6.** Set Metering Mode to  “Center-Weighted.”
- 7.** Set Flash Mode to  “Forced Flash On” when connecting a fiber optic strobe.
- 8.** Set Shutter Type to “MSHTR.” Flash may not fire if this setting is incorrect.
- 9.** In Custom Focus Menu: Set Eye Sensor AF and AF Assist Lamp to “OFF.”
- 10.** In Custom Operation Menu: Set Touch Screen to “OFF.”  
Set Step Zoom function in the Custom menu > Operation > Zoom lever >  .  
 **CAUTION:** Zoom the camera in small steps. DO NOT zoom past the 135 setting or the camera lens may extend and contact the ports lens, shutting down the camera. If this occurs, turn the camera off until the LCD screen goes dark. Turn camera back on to reset.
- 11.** In Custom Monitor / Display Menu: Set Auto Review to “5SEC.”
- 12.** In Economy, set Sleep Mode to “5MIN.” and Auto LVF/Monitor Off to “5MIN.”
- 13.** Set Eye Sensor - LVF/Monitor Switch to “MON.”
- 14.** Set Focus Mode to “AF Macro  .”

15. Set White Balance to “AWB.” When recording video or shooting stills images without a strobe, AWB can still be used, but for more accurate and consistent colors we recommend setting Custom white balance “.

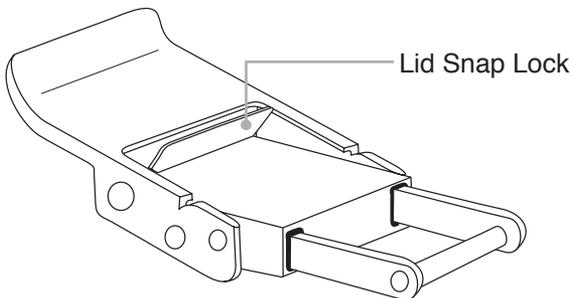
**⚠ DO NOT** open the camera flash until AFTER the camera has been installed in the housing front. Once the housing back is attached and closed, the camera flash CANNOT be opened.

All camera user settings not listed should be set to the user’s preference. Adjust settings as necessary for each shooting situation.

## Setting Up Your Housing

### Opening the Housing

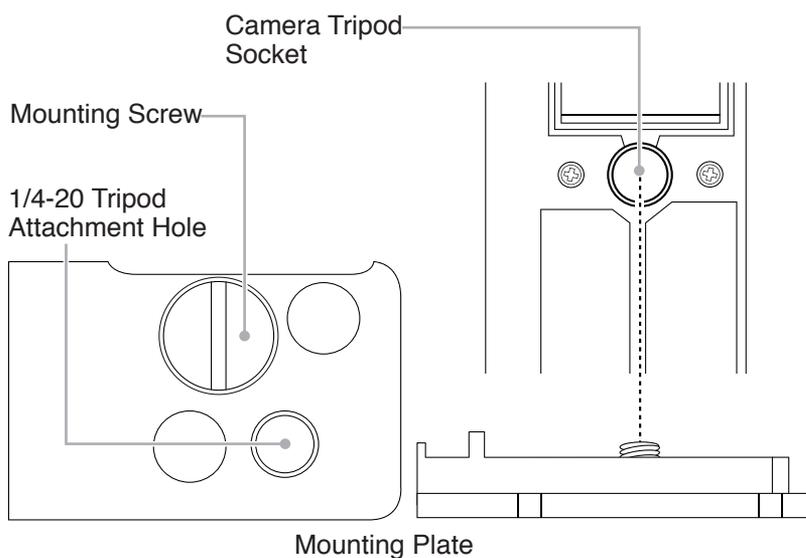
1. Push the lid snap lock forward and start to lift the curved end away from the housing.
2. Lid snaps are designed to provide enough force to compress the o-ring for a proper seal. Keep firm pressure against the lid snap while lifting it away.



3. Repeat with remaining lid snaps.
4. Remove the housing back.

## Inserting the Camera

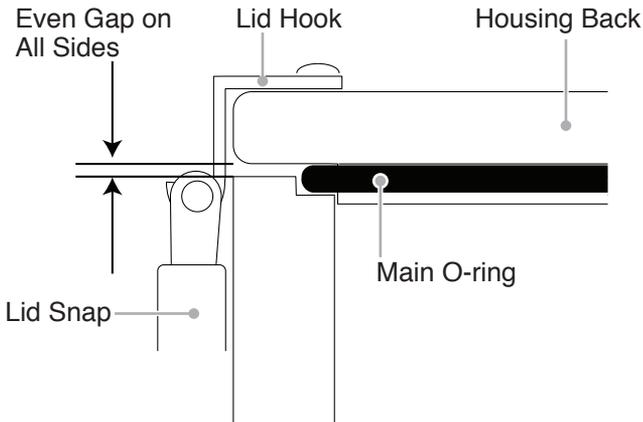
1. Remove any lanyard or neck strap which may be attached to the camera.
2. Remove the camera Mounting Plate from the inside bottom of the housing.
3. Line the mounting screw up with the camera's tripod socket. Use a coin or flat head screwdriver (preferred) to tighten the mounting plate to the camera.



4. Pull out on the housing control knobs to move them out of the way.
5. Insert the mounting plate into the slot on the inside bottom of the housing. Push the camera all of the way forward until the back of the mounting plate is flush with the back of the housing mount.
6. OPEN the camera flash AFTER the camera has been installed in the housing front. Once the housing back is attached and closed, the camera flash cannot be opened.

## Closing the Housing

1. Make sure the o-ring is clean and in its proper location on the back of the housing. The main o-ring does not require lubricant to make a seal.
2. Place the back onto the housing front.
3. Make sure no controls or wires are interfering with the o-ring or the back of the housing.
4. Place each lid snap into the corresponding hook on the housing back.
5. Push the lid snaps towards the housing until they are flat against the housing and the lock has engaged. Close opposing lid snaps at the same time.
6. Check the o-ring seal. The o-ring should form a uniform, solid line around the back of the housing. There will be a small, even gap around the housing between the housing back and the housing front.



## Final Check

1. Re-check the o-ring seal. The seal should form an even, solid line around the back of the housing.

2. Turn on the camera and check all control functions.
3. Make sure that the camera can obtain focus and take a photo.
4. Check battery life and open storage space on your memory card.
5. Check the flash, if using.
6. Submerge the housing in a fresh water tank dedicated to underwater photography equipment. Visually confirm that there are no signs of water intrusion or a steady stream of bubbles coming from one of the housing seals.

## Entering the Water

1. If possible, we recommend entering the water without your housing to ensure that you are comfortable and your life-saving equipment is in working order. Once you are stable, have someone pass your camera housing to you.
2. Submerge the housing at the surface of the water and visually confirm that there are no signs of water intrusion or a steady stream of bubbles coming from one of the housing seals. If water does appear to be entering the housing, point the lens port downward and return the housing to the surface as quickly as possible. Always observe all necessary safety precautions. NEVER ascend faster than accepted safety limits.
3. Use your hand to gently flush away any small bubbles that may be on the face of the lens port. Bubbles will produce soft focus spots in your photo or video.

# Built-in Flash and External Strobe Use

## About the Built-In Flash

Due to the opaque housing design, the internal “built-in” flash can ONLY be used to trigger external fiber optic strobes. For the best color and clarity, we recommend adding a filter, strobe, or constant-on light. To shoot flash photography underwater, an external strobe must be connected to the housing and then triggered via fiber optic cord. Two ports are provided for the connection of up to two fiber optic cords.

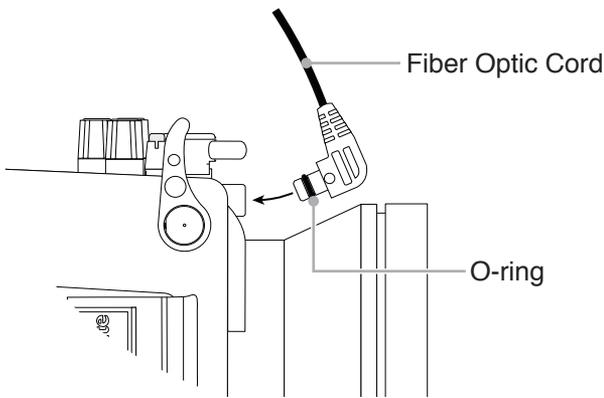
Any Ikelite DS strobe may be connected using the Fiber Optic Converter # 4401.1 and Fiber Optic Cord # 4501. The AF35 strobe is NOT compatible with this housing.

We recommend attaching an external strobe for the optimal color and clarity in a wide variety of shooting situations, including daylight photography.

## Attaching a Fiber Optic Cord

1. Check the end of the fiber optic cord to ensure that it is clean and smooth.
2. Ensure that the fiber optic cord o-ring is in place. This o-ring does not provide waterproofing, however it does keep the fiber optic cord in place.

3. Attach one end of the fiber optic cord into one of the fiber optic ports on the front of the housing. The connector is a press-fit into the fiber optic port.



4. Attach the other end of the fiber optic cord to a compatible strobe.
5. Set the strobe to the appropriate setting based on manufacturer recommendations.
6. Turn the camera on and then the strobe(s).
7. Take a test photo to ensure proper functioning properly.

## Zoom and Macro Close-up

The optional WD-4 Wide Angle Dome provides a wider angle of view underwater without the edge distortion, heaviness, or difficult attachment typically associated with an external wide angle lens. The WD-4 is a 0.75x magnification factor and simply slides on and off of the housing lens port.

A press-fit Macro Adapter is available for the attachment of 67mm threaded accessory macro lenses. We recommend a macro lens which is designed for underwater use like those from Epoque, INON, Subsea, Nauticam, and other manufacturers. The adapter should not be used with 67mm threaded wide angle lenses. The wide angle lens would be too far away from the camera's lens to provide an improved image.

## Spare Parts

- 0109 Main housing o-ring
- 0200.08 Port cover
- 0184.2 Silicone lubricant resealable 2cc tube

## Maintenance

### Post-Dive

1. Rinse the housing in fresh water. Rotate the housing controls and press each button while submerged in fresh water to flush out any salt or debris to ensure smooth operation on future dives.
2. NEVER leave your housing in the fresh water rinse tank. Collisions with other peoples' gear can cause scratches or damage to your equipment.
3. Store the housing in a shaded place where it is protected from impact or overheating. If no shade is available, we recommend covering the housing with a towel or cloth.
4. Check the memory card capacity and battery life of your camera and strobe(s). Recharge as necessary.
5. Always re-check o-ring seal after opening the housing.

### Travel and Storage

1. Remove the camera from the housing for travel or storage.
2. Check the main housing o-ring.
3. Close the empty housing and submerge in lukewarm fresh water. While submerged, rotate each control and depress each button to flush out any salt or debris.
4. Remove the housing from water and rinse with running water.

5. Do not rinse the inside of the housing or submerge the open housing in water. If the inside of the housing needs to be cleaned, wipe with a clean, slightly damp cloth.
6. Dry the housing with a clean, lint-free cloth.
7. Store in a cool, dry place.
8. Like regulators and other pressure-sensitive equipment, we recommend careful care and cleaning along with annual replacement of the factory seals.

## Troubleshooting

### Water enters the housing

- Re-clean and re-install the main o-ring.
- Take the housing underwater without a camera installed to ensure that the leaking has been corrected.

### Photos are over-exposed (too light)

- Adjust aperture (smaller), shutter speed (faster), or ISO (lower) setting.
- Move lights(s) farther away from your subject.
- Adjust exposure compensation in the camera.
- Adjust lighting power.

### Photos are under-exposed (too dark)

- Adjust aperture (larger), shutter speed (slower), or ISO (higher) setting.
- Move light(s) closer to your subject.
- Adjust exposure compensation in the camera.
- Adjust lighting power.

### **Strobe will not fire**

- Turn on strobe and check that the fiber optic cord is attached.
- Check that the camera flash is opened properly and facing forward.
- Check that the camera flash is set to fire on every photo.
- In the camera menu, set Shutter Type to “MSHTR.”

### **Buttons are stuck**

- Soak the housing in lukewarm fresh water. Depress each button several times while the housing is submerged.
- Apply lubricant to the button. Press the button several times to distribute the lubricant.

### **Button(s) or control(s) do not line up**

- Ensure that nothing is preventing the camera from going into the housing.
- Push the camera mounting plate forward until it is flush with the housing base plate.

### **Camera is not functioning normally underwater**

- Ensure that the camera mounting plate is pushed all of the way into the housing mounting plate.
- Check each housing control while underwater to ensure that they are disengaged. An inadvertently engaged control may limit functioning of the camera.
- Check that the zoom control is not engaged.

### **Backscatter or “snow” in images**

- Position strobes/lights farther away from lens and at a slight angle.
- Avoid using strobes in extremely low-visibility conditions.

## **Limited Warranty**

This Ikelite product is warranted against any manufacturing defects for a period of two (2) years from the original date of purchase. Defective products should be returned to Ikelite postage paid. Ikelite will, at its sole discretion, repair or replace such products, and will return to customer postage paid. All other claims of any nature are not covered. Except as mentioned above, no other warranty expressed or implied applies to this Ikelite product.

## **Service and Repairs**

Ikelite is most interested in performing any service to ensure that all products perform as intended. Evidence of purchase date must be provided to obtain warranty service.

No prior authorization is required. You may return directly to us or through your dealer. Please include a brief description of the problem, any relevant email correspondence, and/or description of the service request. Always include name, shipping address, email address, and phone number inside of the package.

Send postage paid to:

Ikelite Underwater Systems  
Attn: Service Department  
50 West 33rd Street  
Indianapolis, IN 46208 USA

For the separate international customs documentation form that you complete to accompany the shipment, please state or designate that the enclosed products were originally manufactured in the USA and are being returned to the manufacturer for repair service. Value of the equipment listed for customs purposes should be zero.

## Contact Us

If you have any questions about your product or need advice on getting the images you want, please get in touch with us and we'll do everything we can to help you capture your unique perspective.

Ikelite Underwater Systems  
50 W 33rd St  
Indianapolis, IN 46208 USA  
(317) 923-4523

Email: [ikelite@ikelite.com](mailto:ikelite@ikelite.com)