

# INON

## INON Dome Lens Unit II for UWL-S100 ZM80

Thank you for purchasing INON product.

Installing INON Dome Lens Unit II for UWL-S100 ZM80 on compatible INON UWL-S100 ZM80, enables you to 「take more wide image」 and 「get more closer to subject」 comparing to sole use of UWL-S100 ZM80.

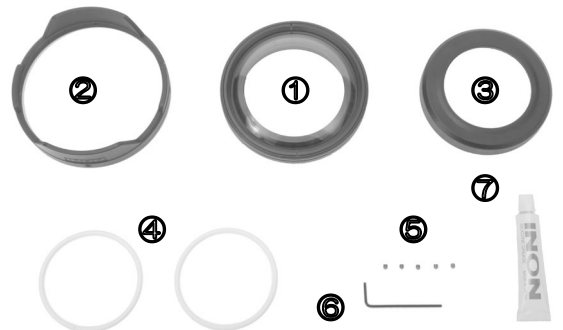
This product can not be used by itself and must be used with compatible INON UWL-S100 ZM80 wide conversion lens. As a nature of this product to keep airtight during self assembly, please read through this user manual carefully before you commence assembly of this product.

### Features

- The Dome Lens Unit II functions as a **Semi-Fisheye Converter** when attached to an INON UWL-S100 ZM80 wide conversion lens. The Dome Lens Unit II increases underwater angle of view close to that of the UWL-S100 ZM80 when used in air.
- While the special optical design enables wider angle of view(149.8° underwater), the Dome Lens Unit II also allows closer focusing distances for **ultra wide macro imaging**.
- The Dome Lens Unit II is specially designed for the UWL-S100 ZM80 wide conversion lens making it compact and lightweight. Its optical material has anti-reflection multi-coating and antifouling coating on its inner surface to suppress flare and ghost and enhance durability while outer surface has hard coating to prevent accidental scratches.

**Compatible attachment lens :** · INON UWL-S100 ZM80 wide conversion lens  
(as of December 2012)

<b>Package contents :</b>	· Dome Lens Unit II S100	①	×1
	· Protector S100	②	×1
	· Dome Lens Unit II Base S100	③	×1
	· Yellow O-ring (incl. spare)	④	×2
	· Hollow Screw (incl. one spare)	⑤	×5
	· Allen Wrench (1.5mm WAF)	⑥	×1
	· INON Grease	⑦	×1
	· This user manual		×1



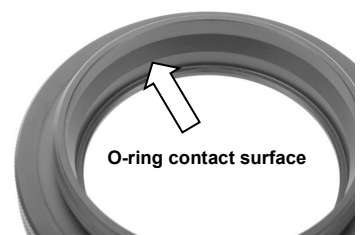
### UWL-S100 ZM80: inspection

- Remove rubber protector of the UWL-S100 ZM80 and **check your UWL-S100 ZM80 to make sure there is no scratches or adherent substances on the O-ring groove and its surrounding area (indicated by arrow in image right).** If you find any damage on the surface, contact your purchasing dealer for inspection and possible repair. Damaged surface will cause flooding of the Dome Lens Unit.
- Check lens condition of your UWL-S100 ZM80 to make sure there is no heavy spotting or discoloration on the subject side lens. If your UWL-S100 ZM80 has heavy spotting / discoloration, it would affect on image and it may be necessary to replace the lens. Contact your purchasing dealer for inspection and replacement.



### Preparation before assembly

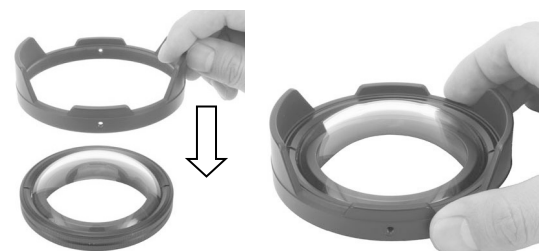
- Dome Lens Unit II S100, Dome Lens Unit II Base S100 and UWL-S100 ZM80 **must be completely dry before assembly** in order to prevent dew condensation during use.
- **Clean lens surfaces** of the Dome Lens Unit and UWL-S100 ZM80 as necessary.
- Check and confirm **there is no scratches or debris on O-ring Contact Surface** of the Dome Lens Unit II (as shown in image right).
- Check and confirm **there is no cuts, cracks or attaches debris** on the Yellow O-ring.



Dome Lens Unit II S100

### How to assemble

- **Attach Protector on Dome Lens Unit II**  
As shown in the right image, place the protector over the Dome Lens Unit II completely so that shades facing up.



Fasten the protector with hollow screws by supplied Allen Wrench (1.5mm WAF) without changing the protector position. **When tightening hollow screws, tighten alternately and evenly by making cross pattern.** Do not tighten too much or tighten unequally to prevent accidental damage on the Dome Lens Unit II or protector.



- **Attach Dome Lens Unit II on UWL-S100 ZM80**  
To avoid dew condensation, **assemble in a cool and dry area.**

First, place Dome Lens Unit II with shades side down.



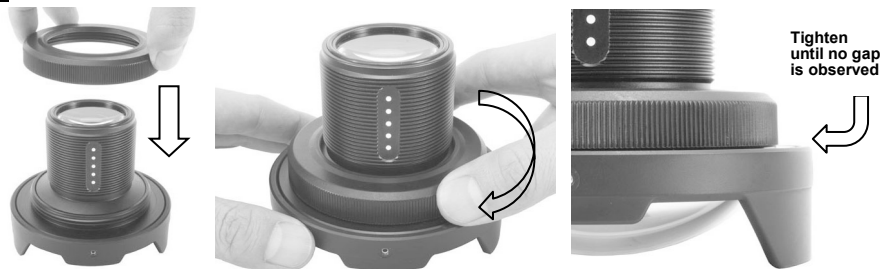
Apply thin film of INON grease on the Yellow O-ring evenly. Set the O-ring in the O-ring groove on the UWL-S100 ZM80. **Make sure that the O-ring is seated uniformly and completely with no twists.**



Carefully set the UWL-S100 ZM80 on the Dome Lens Unit II **without dropping the installed O-ring.**



Flip over the Dome Lens Unit II Base S100 on to the Dome Lens Unit II / UWL-S100 ZM80 and **turn the base clockwise completely until there is no gap between the Dome Lens Unit II Base S100 and Dome Lens Unit II.**



**Dome Lens Unit II, Dome Lens Unit II Base S100 and UWL-S100 ZM80 must be completely dry before assembly and assemble must be conducted in cool and dry area in order to prevent dew condensation during use.**

**Leak Test** : • After assembly and before using, **always confirm that the Dome Lens Unit II has been assembled properly and is watertight by conducting a “Leak Test.” Immerse the Dome Lens Unit II / UWL-S100 ZM80 Lens assembly in a bathtub or tank of water (30 °C /86°F or less). No water should come between the Lens and Dome Unit.** If water leaks between the two, disassemble, dry and reassemble again.

**Usage** : • **Attaching to Housing**  
Attaching the Dome Lens Unit II/UWL-S100 ZM80 Lens assembly on an underwater housing is same as installing UWL-S100 ZM80 standalone. Refer to UWL-S100 ZM80 user manual. Make sure no air bubbles are trapped between the lens rear element and the housing port. If necessary, **install underwater, or partially unscrew the lens and tighten again underwater** to allow air bubbles to escape.

• **Setting Camera Zoom Position**  
**As same as using UWL-S100 ZM80 itself, set to zoom position 80mm (35mm film equivalent) until no vignetting is observed.** Do not zoom beyond necessity as it will sacrifice view angle not to appreciate optimal performance of the lens.

- **Setting Camera Aperture Value (f number)**

As same as using UWL-S100 ZM80 itself, **stop down aperture as much as possible if your camera system allows adjusting the aperture setting to obtain best results.** Using open aperture or nearly open aperture setting may have ordinary results. In case of underexposure, use higher ISO setting, slower shutter speed or an external strobe to compensate it.

- **Setting Camera Focus Mode**

Generally, set **Macro Mode to ON.** However, depending on the particular focus range and aperture capabilities, some subjects at further distances may not be in focus. In such cases, set Macro Mode to OFF. For various camera's focus settings and actual focus ranges (distance from the subject to dome surface) see the specification charts at the end of this Manual.

**Maintenance**

- After using, **always remove from housing,** soak for several hours in fresh water (at 30°C / 86°F or less) to dissolve salt deposits, **blow off water droplets with compressed air, wipe off any remaining moisture on the lens surfaces** and store in a shade area with good ventilation. (It may take several days to completely dry).
- **Then, after completely drying,** remove the Dome Lens Unit II from the UWL-S100 ZM80 using the reverse of the previously explained assembly process. Clean the O-ring, O-ring groove and O-ring contact surface.
- Store in shaded and well-ventilated area. Do not store in areas with solvents or chemical fumes, with high humidity, high ozone or extreme temperature fluctuations. Storage in such conditions may lead to water leakage or other damage such as lens surface degradation, discoloration or mold.

**Handling Precautions:**

- Due the inherent design and characteristics of the Dome Lens Unit II as an add-on accessory to the UWL-S100 ZM80, even if the camera zoom position is optimum, compared to the UWL-S100 ZM80 alone, image quality may be somewhat less, in particular at the edges of an image. **Setting the aperture size as small as practically possible can improve image quality.**
- **After using, always make sure no water droplets or moisture remains on the optical surfaces. Never put wet lens covers on the Dome Lens Unit II.** Doing so may cause degradation of the glass surface, or cause spotting or discoloration. Slight spotting or discoloration will have minimal adverse effect on the image, but heavy surface degradation would necessitate replacing the damaged dome lens element. Contact purchasing dealer if you require a dome lens element replacement.
- **Do not disassemble this product.** Doing so could cause damage and subsequent flooding, and will void warranty. Also, when removing the Dome Lens Unit II/ UWL-S100 ZM80 assembly from the housing **do not grasp and twist the Dome Lens Unit II portion of the assembly. Instead grasp the middle area of the UWL-S100 ZM80 lens barrel.** Grasp this middle area and rotate to remove. Applying torque or rotational force to the Dome Lens Unit II could cause loosening of internal parts, causing damage and subsequent flooding.
- Do not subject Dome Lens Unit II to large shocks or vibrations, which can lead to damage and possible flooding.
- Do not leave exposed to strong sunlight, especially on such surfaces as a boat deck, car dashboard etc. as the optical elements will collect and concentrate the sunlight, creating a fire hazard.
- Never look at sun through Dome Lens Unit II.
- Do not expose to extreme heat, such as the inside of a hot car, or in hot direct sunlight, such as a beach or boat deck. Doing so may cause damage and subsequent flooding.
- The Dome Lens Unit II will block the camera's built-in flash light from reaching the subject. We recommend using an external strobe such as the INON D-2000.
- The subject side lens is made from optical plastic. Though the outer surface has hard coating to ensure practical durability, we recommend to use optional neoprene cover listed below when transporting on land (lens must be dry) to prevent accidental damage on the lens surface.

**Options**

- **Front Port Cover  $\phi$ 100**  
Neoprene cover usable underwater protects lens element.
- **Replacement Spare O-ring (for Dome Lens Unit II for UWL-S100 ZM80)**  
One of ④ in product image.



**INON Dome Lens Unit II for UWL-S100 ZM80 Specification [(1)]**

Outer diameter [(2)]	Φ97.8mm (3.9in.)
Length (standalone / with UWL-S100 ZM80)	39.4mm (1.6in.) / 81.5mm (3.2in.)
Weight (standalone on land / with UWL-S100 ZM80 underwater)[(2)]	148g(5.2oz)/approx. 176g(6.2oz)
Depth rating	60m (196.9ft)
Body material / finishing	Corrosion resistant aluminum alloy / Black rigid alumite/PC/POM etc.
Glass material / finishing	Optical plastic/antireflection multi- coating (inner side), antifouling coating/outer hard coating (※)

**Actual shooting distance(from Dome)****and camera's focus setting**

Camera's focus setting[(3)]	Shooting distance(from Dome)[(4)]
280.5mm	0mm
800mm	22mm
1000mm	44.4mm
2000mm	320.8mm
2693.7mm	∞(infinity)

- [(1)] Specification is subject to change without prior notice  
 [(2)] Including 「Lens Protector」  
 [(3)] Focus range/position on land (=visual distance underwater). Multiply by 1.33 for measured distance underwater.  
 [(4)] Measured distance underwater. Divide by 1.33 for visual distance underwater.  
 [※] Faint flack or spot etc. may be observed on land, which does not affect on image.

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