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INON UWL-H100 28M67 Type1/Type2 Wide Conversion Lens

Thank you for purchasing INON product.

The INON UWL-H100 28M67 Type1/Type2 Wide Conversion Lens is an attachment lens to acquire ultra wide shot by simply screwing on lens port of compatible underwater housing for 28mm (35mm film equivalent) wide digital camera or camcorder. The lens can be easily attached or detached underwater. Compatible camera/housing is different between Type1 and Type2. Refer to the compatible camera/housing section for detail.

Features

- **Dual use for land/underwater.** Ultra Wide Converter underwater and Fish-eye Converter in air(100.8° underwater / 179.0°[③] air. Dedicated super wide option 「Dome Lens Unit II for UWL-H100」 further widen its view angle and enables to get almost same view angle underwater as in air.
- Unique optical design allows to shorten minimum focal distance with ultra wide view angle thus effective for **Wide Macro shot**.
- As same as 「UWL-H100 28LD」, highly refractive optical elements are used to accommodate with latest camera model carrying larger image sensor and brighter master lens yet in compact size.
- The UWL-H100 28M67 is equipped with 「28M67 Mount」 which is same as highly versatile 「M67 Mount」 to attach on camera system. There is a selection either of Type1 or Type2 to accommodate with wide range of compatible cameras to enhance combined camera's performance.

Package contents:

- UWL-H100 28M67 Type1 (or Type2) Wide Conversion Lens
- Lens Cap(object side×1/ camera side×1)
- This user manual

Compatible camera/housing (As of May 2011)

• UWL-H100 28M67 Type1	Olympus	「PT-050」
• UWL-H100 28M67 Type2	Canon	「WP-V3」

How to attach :

- Apply a little amount of grease (supplied with an underwater case) on the threaded ring to prevent anchoring between the UWL-H100 28M67 and housing due to 「salt build-up」 or 「electric corrosion」
- Screw the UWL-H100 28M67 onto housing port. It is necessary to fill the space between UWL-H100 28M67 and housing port with water, so attach UWL-H100 28M67 underwater or partially unscrew the lens allowing inside air to escape then retighten.

Usage :

- **Zoom setting**
Use zoom wide end. Crop an image after shooting if you observe vignetting. This lens is designed to have optimal optical performance at this condition.
- **Focus setting**
All focus range of the compatible camera is usable. When using this product, actual shooting distance (distance between subject and subject side lens) gets short comparing to camera's stand-alone point of focus, so it is possible to get close-up image of a subject at less than minimum focusing distance.
- **Built-in flash setting**
It is recommended not using the built-in flash since built-in flash light could be blocked depending on shooting conditions including housing, shooting distance or angle of view even when not using external strobe. When using an external strobe, INON external strobe (S-2000 etc.) connected via 「Clear Photo System」 is recommended.
Without using Clear Photo System may cause limitation on shooting situations or problem on an image. Refer to the boxed column on the last page for detail.

Maintenance :

- After using, always remove UWL-H100 28M67 from housing and soak the UWL-H100 28M67 in fresh water (below 30°C/86°F) for several hours to dissolve any remaining salt. Then blow off water on the both lens surface. Leave the lens at shaded and well-ventilated area to dry with no water drops on the both lens surface (it may take few days to completely dry).
- Attach lens cap after completely dry and keep the lens in shaded and well ventilated area. Do not store the lens in the area near chemical, in high humidity or temperature fluctuation to avoid malfunction, flooding, damage to lens surface or mold.
- Be careful not to scratch/damage slope portion and flat area where 6 screw holes are located on the lens barrel (see image right) where O-ring contacts when optional Dome Lens Unit II for UWL-H100 is attached. If this part gets scratched/damaged, Dome Lens Unit cannot be attached.
- The 6 screw holes do not have any screws when purchased. These screw holes do not affect water-proof property even without screws.



Type Conversion :

- It is possible to change Type of UWL-H100 28M67 by replacing its screw ring. If you need to change to another type, optional 「M67 Screw Ring Set for UWL-H100 28M67 Type1」 or 「M67 Screw Ring Set for UWL-H100 28M67 Type2」 is available to purchase to support self-modification. Depending on usage, original screw ring could be anchored due to salt build-up. If you find any difficulties to remove original screw ring, do not proceed self-modification and consult your purchasing dealer.

Handling precautions:

- Do not leave any water drop(seawater/fresh water) on lens surface after using or store in wet carry pouch.** Remaining water could cause spot/burn of coating or glass itself. Slight spot/burn would not affected to an image, but heavy one affects an image and the damaged lens needs to be replaced at customer's expense.
Especially if air temperature is relatively high where remaining water on the lens surface will be vaporized very quickly, the lens has high chance to get spot/burn with remaining water on the lens surface even for a short period of time.
- DO NOT disassemble the lens.** Improper disassembly could cause malfunction or flooding. **Please make sure NOT to hold lens frame (which holds subject side lens) but to hold lens barrel where INON logo/product name is printed and rotate it when detaching the lens from combined housing.** Excessive pressure on lens frame of this product could damage it and lead to possibility of flooding.
- DO NOT exercise thumping vibration or excessive shock on the lens to avoid malfunction or flooding.
- DO NOT leave the lens under direct sunlight. The lens may collect the sunlight and cause fire. Never attempt to see the sun through the lens to avoid serious damage to eyes.
- DO NOT leave the lens under direct sunlight like beach or boat deck and in area of high temperature like in sun-heated car to avoid malfunction or flooding.

Accessories :

- Lens Hood II for UWL-H100**

The Lens Hood II exclusively designed for UWL-H100 lens series to shade unnecessary light from outside of view angle and reduce flare/ghost which could happen in backlit condition. The hood also protects lens surface. We recommend to attach the lens hood on UWL-H100 lens always when shooting.



- Dome Lens Unit II for UWL-H100**

The Dome Lens Unit II is exclusively designed for UWL-H100 lens (PAT. P). By attaching Dome Lens Unit II for UWL-H100 on UWL-H100 28M67, view angle of UWL-H100 28M67 underwater can be widen to same degree of max view angle of UWL-H100 28M67 on land. The Dome Lens Unit is equipped with protector which protects Dome Lens Unit surface and reduce flare/ghost by shading unnecessary light from outside of view angle.



- M67 Screw Ring Set for UWL-H100 28M67 Type1**
- M67 Screw Ring Set for UWL-H100 28M67 Type2**

The Set consists of threaded ring either of Type1 or Type2, cap screws and Allen Wrench. The M67 Screw Ring Set is for Type conversion or replacement for worn original screw ring.



- UWL-100 Neoprene Carry Pouch**

Carrying pouch made from neoprene same material as wet suits. The carry pouch can be used underwater. By storing the lens in the carry pouch, accidental damage during transportation can be avoided.



- M67 Lens Holder W**
- M67 Lens Holder S**
- M67 Lens Holder for Float Arm**

Attaches to INON Arm System to hold one(S) or two(W) M67 Mount Series Lenses to help easy handling of multiple lenses underwater.



※ When using built-in flash with attachment lens without Clear Photo System . .

When using built-in flash with attachment lens being mounted and Clear Photo System is not used, there may be possibility to have ghost/flare in an image depending on shooting condition/camera housing/Mount Base being used.

This is because built-in flash light gets into the attachment lens from its mounting part. In the case, it is recommended to use External Strobe with Clear Photo System. If you have to use built-in flash only by necessity, ghost/flare could be reduced by preventing built-in flash light from being get into attachment lens from its mounting part. INON Inc. assume no responsibility whatsoever for any direct/indirect damage resulting from user's modification on camera system.

INON Wide Conversion Lens UWL series	
Specification [①]	
Model	UWL-H100 28M67 Type1/Type2
Outer diameter	φ 90.4mm (3.6in.)
Length	45.4mm (1.8in.)
Mount system	INON 28M67 Mount
Weight	Type1...Air: 555g (19.6oz) U/W: approx.345g (12.2oz) Type2...Air: 556g (19.6oz) U/W: approx.346g (12.2oz)
Depth rating	60m (196.9ft)
Material / surface finishing (lens body)	corrosion-resistant aluminum alloy, rigid black almite/ PC etc.
Glass / Coating	Optical glass / both side anti-reflection coating
Lens construction / magnification [②]	4 groups 4 elements / 0.60 (afocal)
Max. view angle [③]	100.8°(underwater) / 179.0°(air)

- ① Specification is subject to change-without prior notice.
- ② UWL-H100 28M67 performance itself (telescopic magnification : v).
- ③ Actual view angle may vary depending on camera/housing to be used.

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