

INON UWL-H100 28LD

Wide Conversion Lens

User Manual

Safety Precautions

- Before using your lens, please ensure that you have read and understood the safety precautions described below and user manuals. Please retain user manuals handy for easy reference.
- The safety precautions are intended to instruct you in the safe and correct operation of the strobe to prevent injuries or damage to yourself, other persons and equipment.



WARNING

Failure to observe the precautions described below may lead to possibility of serious injury or death.

Never attempt to see the sun or strong light source through the lens or camera to avoid irreparable injury to the eyes, or temporary visual impairment which may affect your performance requiring safety aspects.

Do not leave the lens in a place subject to direct sunlight to prevent fire which may be caused by the lens collecting sunlight

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INON UWL-H100 28LD Wide Conversion Lens

Thank you for purchasing INON product.

INON UWL-H100 28LD Wide Conversion Lens is an attachment lens to acquire ultra wide shot by simply attaching the lens on 28mm (35mm film equivalent) wide digital camera/housing through 「28LD Mount Base」. The lens can be easily attached or detached underwater.

Optional 28LD Mount Base is necessary to mount the lens on compatible housing.

The lens cannot be attached on AD Mount Base/28AD Mount Base/28AD Port/M67 Mount Base.

Features

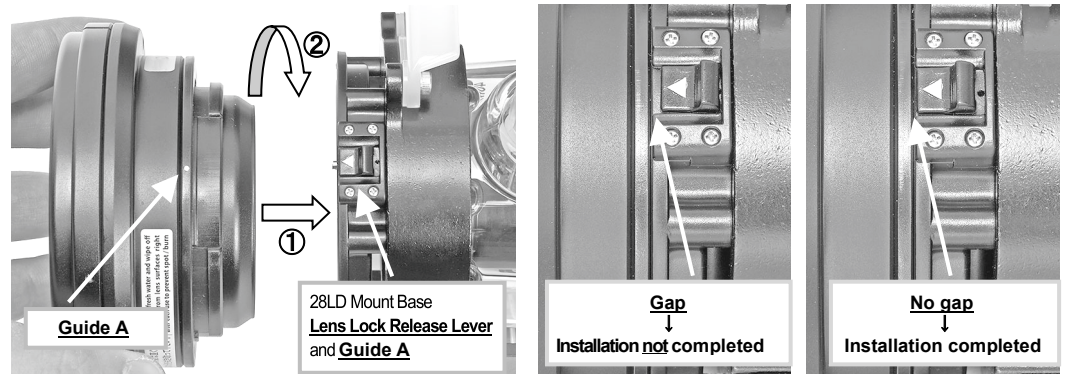
- **Dual use for land/underwater.** **Ultra Wide Converter** underwater and **Fish-eye Converter** in air(100.8° underwater / 179.0°[③] air). Upcoming dedicated super wide option 「Dome Lens Unit II for UWL-H100」 widens its view angle and enables to get almost same view angle underwater as in air.
- Unique optical design allows to shorten minimum focal distance with ultra wide view angle thus effective for **Wide Macro shot**.
- Newly designed optical construction to accommodate with latest camera model carrying larger image sensor and brighter master lens. Using highly refractive optical elements provides larger effective diameter of the rear optical element in compact size.
- Lockable **INON 28LD Mount** compatible. Easy, speedy yet reliable installation on 「28LD Mount Base」 can be obtained.

Package contents:

- UWL-H100 28LD Wide Conversion Lens
- Lens Cap(object side×1/ camera side×1)
- This user manual

Compatible housing/: • Canon 「WP-DC38」 + INON 「28LD Mount Base·DC38」
Mount Base
(as of December 2010)

- How to attach** :
- Remove the lens cap (camera side) by rotating the cap counter- clockwise.
Then apply a little amount of grease (supplied with an underwater case) on the leading edges of the bayonet as shown in the image (total three points).
 - Put the UWL-H100 28LD in 「28LD Mount Base」 so that 『Guide A』of UWL-H100 28LD is coupled to 『Guide A』of the 「28LD Mount Base」 (①).
 - Rotate the UWL-H100 28LD clockwise until the lens lock release lever moves back to the original position where you should feel and hear clicking.



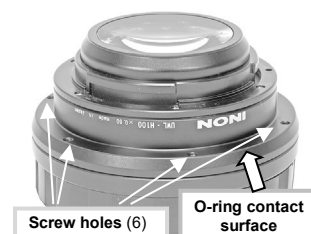
- Attach the lens underwater or re-install underwater to escape air between housing lens port and UWL-H100 28LD.

How to remove:

- Pulling the 「28LD Mount Base」 Lens Lock Release Lever to unlock the lens, rotate the lens in the reverse direction to separate from the 28LD Mount Base. Do not rotate the lens without being unlocked to prevent damage on this product and/or 「28LD Mount Base」.

- How to use** :
- **Zoom position of camera**
Set camera's zoom position at wide end. If vignetting is observed, crop after taking an image.
The product is designed to acquire optimal performance at the position.
 - **Focus setting of camera**
UWL-H100 28LD can be used in all focus range of compatible camera. Actual shooting distance (distance between a subject and subject side lens) with UWL-H100 28LD shifts to subject side comparing to focus range without UWL-H100 28LD. Please see a table at the end of this manual.
 - **Built-in flash setting**
Built-in flash light could be blocked depending on housing type, shooting distance or view angle. If no external strobe is used, "no flash" mode is recommended.
When using an external strobe, compatible external strobe (INON S-2000 etc.) with INON 「Clear Photo System」 would be recommended.
There might be limitation in available shooting situation or problem in an image if Clear Photo System is not used. Please see boxed column in this page for detail.

- Maintenance** :
- **Make sure to detach the UWL-H100 28LD from 28LD Mount Base** and soak the lens in fresh water (below 30°C / 86°F) for several hours after use to dissolve any salt build up. **Blow off water drop by air gun/blower** and dry the lens in **shaded and well ventilated area without any water drop being on lens surface.** It may take several 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 of 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.
 - 6 screw holes (as shown in right image) are for optional Lens Hood for UWL-H100 28LD and do not have any screws when purchased. These screw holes do not affect water-proof property even without screws.



- 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 affect 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 28LD Mount Base.** Excessive pressure on lens frame 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.

※ 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.

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 28LD, view angle of UWL-H100 28LD can be widen to same degree of max view angle of UWL-H100 28LD 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.



- 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.



- 28LD Mount Base ·DC38

Mount Base equipped with 28LD Mount for a housing of compatible digital camera with wide master lens; 28mm at wide end (equivalent to 35mm film) to have INON 28LD Mount series attachment lens.

INON offers 28LD Mount Base for Canon WP-DC38 as of November 2010.



- LD Lens Holder W

- LD Lens Holder S

- LD Lens Holder for Float Arm

The LD Lens Holder is attached to INON Arm/Float Arm to help you with speedy replacement of lens underwater. In combination with optional 「AD-LD Mount Converter for UCL-165AD」 / 「M67-LD Mount Converter for UCL-330/165M67」, AD/M67 Mount series close-up lens can be attached as well.



INON Wide Conversion Lens UWL series

Specification [①]	
Model	UWL-H100 28LD
Outer diameter	φ90.4mm (3.6in.)
Length	45.4mm (1.8in.)
Mount system	INON 28LD Mount
Weight	Air: 530g (18.7oz) U/W: approx.326g (11.5oz)
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)

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Focus range of compatible camera at wide side					
Housing	Camera	Focus range[④] (w ithout wide converter)		Vignetting[⑤][⑦]	
		Normal Mode	Macro Mode	Underwater	Air
WP-DC38	PowerShot S95	∞ ~ 0cm (∞ ~ 5cm)	15.2cm ~ 0cm (50cm ~ 5cm)	No vignetting	[⑥]

[①] Specification is subject to change without prior notice.

[②] UWL-H100 28LD performance itself (telescopic magnification : v).

[③] Actual view angle may vary depending on camera/housing to be used.

[④] Actual distance on land or visual distance underwater. For actual distance underwater, multiply by 1.33.

[⑤] View angle/vignetting may vary depending on a housing to be used though using same camera.

[⑥] Slightly vignetting on image corners at wide end. Crop the image after taking shot.

[⑦] Test data is based on not using the image stabilizer.