

# INON

# UFL-G140 SD

## Underwater Semi-fisheye

## Conversion Lens

### User Manual

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#### 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.

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**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.

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**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

## INON UFL-G140 SD Underwater Semi-fisheye Conversion Lens

Thank you for purchasing INON product.

The INON UFL-G140 SD Underwater Semi-fisheye Conversion Lens is dedicated wet lens mainly designed for action cameras increasing angle of view underwater nearly same as shooting on land and enabling super close-up imaging as well.

### Compatibility

Besides your camera, this lens requires INON SD Mount Cage, SD Front Mask or SD Mount Base and genuine camera housing (for particular camera). Check below table to prepare necessary item(s) according to your camera.

Manufacture	Camera	Genuine housing	INON SD Front Mask
GoPro	HERO13/12/11/10/9 Black	Dive Housing (for HERO13/12/11/10/9 Black)	SD Front Mask for HERO9
	HERO8 Black	Dive Housing (for HERO8 Black)	SD Front Mask for HERO8
	HERO7/6/5 Black	Dive Housing (for HERO7/6/5 Black)	SD Front Mask for HERO5/6/7
	HERO4, HERO3+, HERO3	Dive Housing (depth rating: 60m/197 ft.)	SD Mount Cage for HERO3/3+/4
		Standard Housing (depth rating: 40m/131 ft.)	
	HERO, HERO+, HERO+LCD	---	SD Front Mask STD
Insta360	GO 3S	Dive Case (for Insta360 GO 3S)	SD Front Mask for GO 3S
Olympus	TG-Tracker	---	SD Mount Base for TG-Tracker
Sony	FDR-X3000 / X3000R, HDR-AS300 / AS300R	MPK-UWH1	SD Mount Base UWH1

### Features

- The native coverage of action camera gets narrow down underwater due to different refraction index. INON UFL-G140 SD provides ultra wide semi-fisheye imaging with **underwater angle of view 140°(\*1)** enabling wild underwater video work as like using the camera on land.
- INON UFL-G140 SD provides **closer minimum focusing distance** supporting you to shoot a subject at close range to enjoy deformed result (\*2).
- Bayonet **INON SD Mount** compatible to support friendly and speedy lens exchange underwater.
- Optional INON **AD Lens Holder** can hold the UFL-G140 SD when the lens is not in use.
- Optics is constructed of 4 elements in 4 groups. Rear element is made from high refractive index glass lens to minimize whole size dramatically without sacrificing performance.
- The inner surface of the front acrylic dome has 5 layers multi-coating to deliver quality footage as like a glass dome at budget price.

(\*1) Maximum angle of view (field of view) by using this lens. It varies among different action cameras.

(\*2) Refer to *Depth of Field (DoF) Range* on the last page of this manual to see measured DoF data of each camera.

### Package Contents

- UFL-G140 SD ①
- Front Cap (rubber/with lanyard) ②
- Rear Cap (PC) ③
- Lens Hood G140 ④
- M2.5 Hollow Screw ⑤ ×5\*  
(\*including one spare)
- Allen Wrench (WAF1.3mm) ⑥
- Detachable Strap ⑦
- Pouch



## Lens Hood

The “Lens Hood G140” is not fixed to the lens when shipped from the factory. So, it may be stuck inside the lens cap.



## Lens Hood Installation

Install the Lens Hood on the lens with the lens being attached to the *SD Front Mask*.

\*Please note context below refers to “Front Mask” but also it applies to installation procedure on “SD Mount Cage”, “SD Mount Base” as well.

### Installation on SD Front Mask

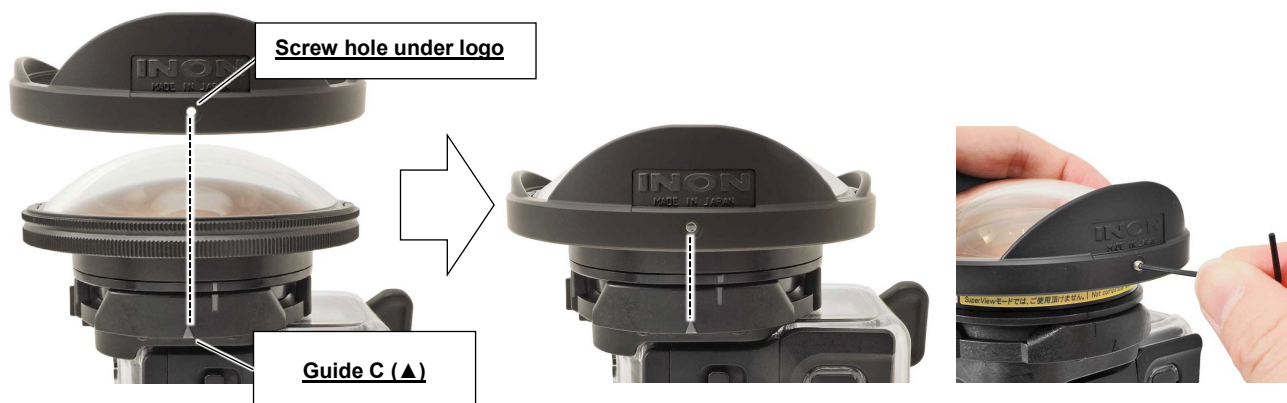
- Match **Guide A [Lens]** with **Guide A [Mask]** as in below left image and put the male bayonet mount of the lens in the *SD Front Mask*.
- Rotate the lens clockwise until **Guide A [Lens]** is coupled with **Guide B [Mask]** where you should feel and hear **clicking**.
- When removing the lens, with pressing the Lock Lever, rotate the lens counterclockwise.



### Installing Lens Hood

- Install the Lens Hood on the lens with the lens being attached to the *SD Front Mask*.
- Put the Lens Hood over the lens body all the way so that the **“screw hole” under the INON logo on the hood and the “Guide C (▲)” on the top of the *SD Front Mask* are aligned**.
- With holding the lens hood, lightly and evenly tighten the four hollow screws little by little drawing cross pattern.

⚠ **DO NOT** overtighten as overtightening can damage the lens hood



- Once submerged, remove the lens underwater and shake it well** to drop trapped bubbles especially from the rear lens surface then install the lens on the *SD Front Mask* again following same procedure.

## Attaching Strap

The lens mount has a **strap eyelet**. Attach the supplied detachable strap to prevent accidental falling of the lens.



## Usage

### [Common]

- **This lens is designed only for underwater use.** (When using on land, distant subject is not in focus and angle of view is not as wide as rated)
- **Incomplete/improper lens hood installation can cause vignetting.** When using the lens hood, refer to "Installing Lens Hood" section in this manual and make sure to install the lens hood properly and completely.

### [When using for GoPro]

- **Always set camera's Field of View (FOV)/Digital Lenses to [WIDE].**
- **Shoot in 4:3 or 16:9 frame/aspect ratio (HERO11/12/13)**  
Vignetting will occur in 8:7 or [HyperView™] mode which compresses clip in 16:9 aspect ratio by using the full 8:7 sensor. Note that the lens hood may be appeared in a clip if camera is moved aggressively even shooting in 4:3 or 16:9 frame/aspect ratio.
- **Shooting in 9:16 frame/aspect ratio will have lens hood on top/bottom in clips**  
Shoot without the lens hood or shoot in 4:3/16:9 frame aspect ratio.(HERO12/13)
- **[SuperView™] mode is not recommended.**  
The [SuperView™] mode stretches both ends of the image inside the camera to fit into a 16:9 aspect ratio from originally obtained 4:3 aspect ratio image by the camera sensor. Since the edges of the frame are stretched horizontally, attaching a wide-angle lens further stretches the edges of the frame, resulting in an unnatural image.
- **Set the camera's image stabilization (HyperSmooth) to [Standard], [High], or [On].**  
Setting to [Off] will cause vignetting in image corners, and [Boost] will crop the image significantly.
- **The FOV/Digital Lenses setting [Wide] in Photo mode causes vignetting in image corners.**

### [When using for TG-Tracker]

- Enable image stabilization function of the camera to avoid vignetting.
- Usable range of DoF (depth of field) with this lens is "1cm/0.4in~80cm/2.6ft" and distant subject beyond this range gets blur.
- DO NOT use this lens when taking still image to avoid significant vignetting.

### [When using for FDR-X3000 / HDR-AS300]

- Select SteadyShot (Movie) "Act" when shooting video as "Std" and "OFF" cause slight vignetting.
- Excessive camera movement may result vignetting even SteadyShot(Movie) "Act" is selected.
- Select SteadyShot (Still) "ON" when shooting still image.
- Always set camera's angle setting to "Wide". Using "Medium" or "Narrow" won't bring optimal performance of this lens.

## Handling Precautions

- **Do not place facing down the dome lens surface. Doing so may cause scratches.**  
Make sure to attach the front cap when placing the lens facing downwards.
- **Follow instruction/procedure in this manual to install the lens properly on the SD Front Mask and make sure to check if the lens is properly coupled with the Front Mask when the lens receives impact shock.** The lens may be accidentally disengaged when hitting on a rock etc. When using underwater, periodically check if the lens is firmly attached on the *SD Front Mask*.
- **DO NOT hold this product only to transport whole system** to avoid accidental damage on this product or separation of combined Front Mask. During transportation, make sure not to apply impact shock, vibration or excessive load.
- **After using, never put the lens caps on or place the lens in a carry pouch with any water (salt or fresh) remaining on the lens surfaces.** Doing so may degrade the coatings or dome material itself, or cause spotting or discoloration. Heavy surface degradation would necessitate replacing the damaged lens element which is NOT covered by warranty.
- **DO NOT disassemble.** Disassembling lens could cause damage and subsequent flooding, and will void warranty.
- **DO NOT** subject lens to large shocks or vibrations, which can lead to damage and possible flooding.
- **DO NOT** leave lens exposed to strong sunlight as the lens will collect and concentrate the sunlight, creating a fire hazard. Never attempt to see the sun or strong light source through the lens or camera to avoid irreparable injury to the eyes.
- **DO NOT** leave lens exposed to strong sunlight such as a boat deck or to high temperatures like in sun-heated car etc. to prevent damage and subsequent flooding.
- **DO NOT** use the lens if you observe any damage on the lens surface to avoid possible flooding.

## Maintenance

- After using, **always remove this product from the Front Mask and separate the lens hood.** Soak the lens in fresh water (below 30°C/ 86°F) for several hours to dissolve any remaining salt, then take out the lens and **blow off water droplets** by compressed air etc. Leave the lens at **shaded** and well-ventilated area to dry **with no water drops on the both lens surfaces** (it may take several days to completely dry).

## Storage

- **After completely dry, put lens caps on,** and store out of direct sunlight and well-ventilated area. **DO NOT** store the lens in area with chemical fumes, high humidity or extreme temperature fluctuations. Storage in such area may lead to damage, water leakage, lens surface degradation or mold.
- Keep the product out of reach of children. They may swallow parts of this product. See a doctor immediately if a child swallow parts.

## Specifications

### INON UFL-G140 SD Underwater Semi-fisheye Lens Specifications(\*1)

Model	UFL-G140 SD
Size (*2)	φ93.4mm/3.7in x 41.8mm/1.6in
Weight (*2)	Air. Approx. 300g/10.6oz, underwater approx. 153g/5.4oz
Lens mount	INON SD Mount
Depth rating	60m/197ft
Body material/finishing	Corrosion-resistant aluminum alloy/rigid black almite, PC
Lens material/finishing	Optical glass/both side coating Optical plastic/both side hard coating/inner multi-coating
Underwater FOV (*3)	Approx 140°

### Depth of field with UFL-G140 SD (\*4)

Mfr.	Camera	DoF	Remarks
GoPro	HERO13 Black HERO12 Black HERO11 Black HERO10 Black HERO9 Black HERO8 Black HERO7 Black HERO6 Black HERO5 Black HERO4 HERO3+ Black HERO HERO+ HERO+ LCD	4cm/1.6in through infinity	(*5)
	HERO3 Black	10cm / 3.9in through infinity	
Insta360	GO 3S	4cm/1.6in through infinity	
Olympus	TG-Tracker	1cm/0.4in~80cm/2.6ft	
Sony	FDR-X3000 HDR-AS300	4cm/1.6in through infinity	

[\*1] Specification is subject to change without prior notice

[\*2] Including *Lens Hood*

[\*3] Maximum angle of view underwater. It varies among different action cameras.

[\*4] Measured DoF from foreground of the lens surface. Divide by 1.33 for visual distance underwater.

[\*5] Measured distance underwater for GoPro® HERO11 BLACK/HERO10 BLACK/HERO9 BLACK/HERO8 BLACK/HERO7 BLACK/HERO6 BLACK/HERO5 BLACK/HERO4/HERO3+ BLACK/HERO3 BLACK/HERO /HERO+/HERO+LCD. Other Edition has not been tested.

[\*6] All brand name, product name and function name in this manual are trademarks or registered trademarks of respective manufactures

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