

DZOFILM

MAKE YOUR MOVIE

CATTA Zoom Lens User' s Manual

35-80mm, T2.9-T22
70-135mm, T2.9-T22

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Introduction

Thank you for your purchase of this product!

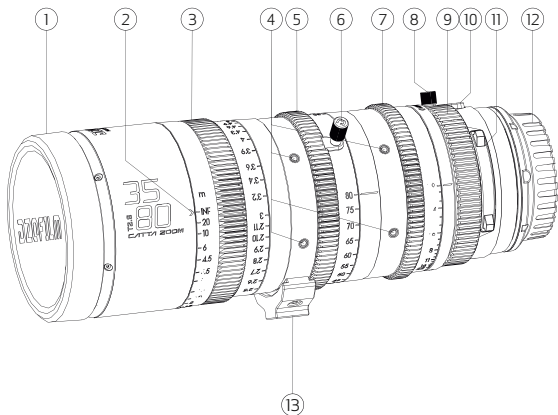
CATTA is DZOFILM's high-performance full frame cinema zoom lens. It allows you to reproduce the details and color in filming. Clear images, natural transition from in-focus to defocus and minimal breathing in focusing...all these can be found in CATTA zoom. A good companion for your documentary/ TVC/ MV/ commercials/ online movie/ variety show/ Live/ independent films, etc.

Safety Notes

- Please do not watch the sun or bright light source through the lens, otherwise it will cause visually disabled.
- Never use organic solvents such as paint thinner or benzene to clean the lens.
- Attach the front and rear caps when the lens is not in use.
- Store the lens and filter in cool, dry locations to prevent mold and rust. Do not store in direct sunlight or with naphtha or camphor moth balls.
- Please keep the lens dry and wipe the water droplets off if there are water droplets on the glass surface.
- Leaving the lens near heater or in other extremely hot locations could cause damage or warping.
- Use a blower to remove dust and lint from the glass surfaces of the lens or filter. To remove smudges and fingerprints, apply a small amount of lens cleaner to a soft, clean cotton cloth or lens-cleaning tissue and clean from the center outwards using a circular motion. Do not leave smears or touch the glass with your finger.

Lens Parts

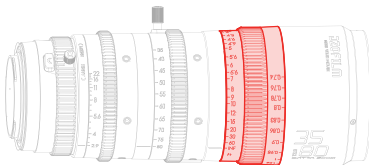
- | | |
|--|---------------------------|
| ① Front cap | ⑧ Lever socket of Mount |
| ② Lens Mark | ⑨ Lock Ring of Mount |
| ③ Focusing Ring | ⑩ Release Button of Mount |
| ④ Screw holes for accessories*10
(M3, 3mm deep) | ⑪ Plug-in Rear Filter |
| ⑤ Zoom Ring | ⑫ Rear Cap |
| ⑥ Zoom Lever Socket | ⑬ Support base |
| ⑦ Aperture Ring | |



Lens Control

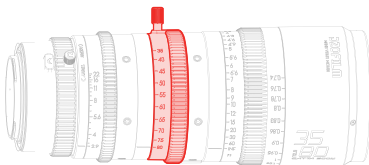
Focus Control

Rotate the focus ring to increase or decrease the focus distance.



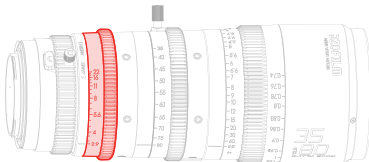
Zoom Control

Rotate the zoom ring to zoom out, increasing the area visible in the frame or zoom in on the subject so that it fills a larger area in the frame.



Aperture Control

Rotate the aperture ring to stop aperture down, raising the T-stop and narrowing the aperture, or lower the T-stop to widen the aperture.



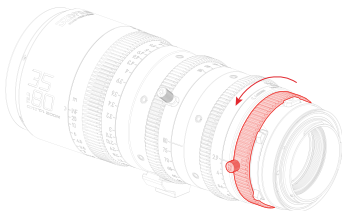
Mount Changing

Go to DZOFILM UK to watch the video. ([Click to jump to the website](#))

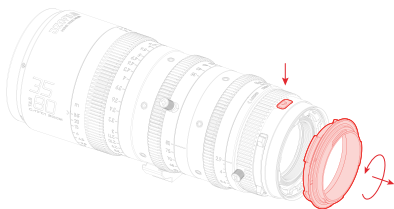
Note: In general situation, there is no need to adjust the shims after changing the mount. If you still need to adjust the flange back distance, please refer to the next section *Flange Back Adjustment*.

1.Mount Disassembling

Step One : Rotate the Lock Ring 90 degrees anticlockwise till the Ring cannot be rotated anymore.

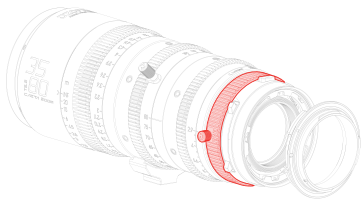


Step Two : Press Lock Button, rotate the mount (silver part) anticlockwise and in the meantime pull out the mount.

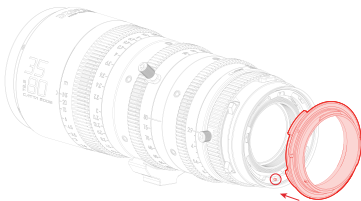


2.Mount Installation

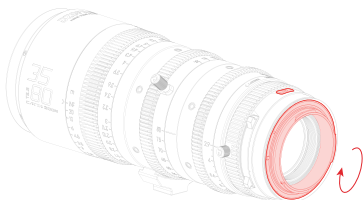
Step One : Please make sure that the Lock Lever Socket is at the top left side (see in the picture).



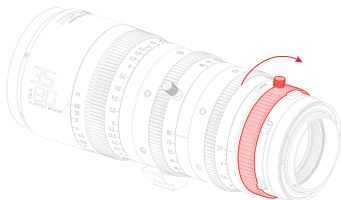
Step Two : Align the breach under the mount to the embossed screw on the mount plane, lay down the mount.



Step Three : Press the Lock Button and rotate clockwise till hear a sound of "clatter".

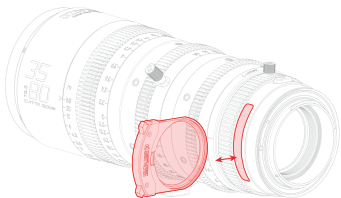


Step Four : Rotate the Lock Ring clockwise to the top. The mount is locked.



3. Install/ Disassemble the Rear Filter

Hold the handle of the rear filter and you can pull in or out the filter.



Flange Back Adjustment

DZOFILM will check and adjust flange back distance of all CATTA lenses before shipping. But the flange back distance might have slight difference among different cameras. To achieve the best performance and match different cameras, flange back adjustment is needed.

1.Preparation

Step One : Ready your subject. You can use a "Star Chart", or other high-resolution black-and-white objects;

Note : You can download and print the chart on DZOFILM website-Download-Star Chart for Adjusting Back Flange ([Click to jump to the website](#))

Step Two : Attach the lens to the camera;

Step Three : Select the maximum aperture (wide open);

Step Four : Set the object 1.5m away from the camera sensor plane, and adjust it to the center of the whole image.

2.Flange Back Adjustment

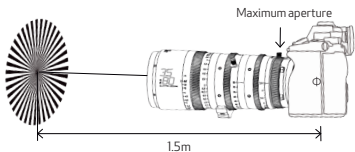
Step One : Rotate the zoom ring to the longest focal length, and rotate the focus ring until the image to its clearest, mark down the focusing distance S_1 ;

Step Two : Rotate the zoom ring to the widest focal length and rotate the focus ring until the image to its clearest, mark down the focusing distance S_2 ;

Step Three : Compare the difference between S_2 and S_1 . If $S_2 < S_1$, then need to add shims; otherwise decrease the shims,

Note : The shim adjustment is evaluated on the angle between S_2 and S_1 . If the angle is bigger, then need to change more shims and vice versa.

Step Four : Repeat step1-2 until $S_2 = S_1$. Then it means the lens in under parfocal.



Set the object 1.5m away from the camera sensor plane, and adjust it to the center of the whole image.

Take CATTa zoom 35-80mm as an example :

Rotate the focal length to 80mm, and focus till the image is at its sharpest, the focusing distance mark is 1.5m (S1). And then rotate the zoom ring to 35mm, re-focus to the image at its sharpest, current focusing distance mark is 1.4m (S2). $S2 < S1$. According to the sheet below, add 0.12mm shims on the lens mount and double check. At this time, both 35mm and 80mm focus at the closest under 1.5 focus mark. That means this lens is under parfocal.

35-80mm shim adjustment reference									
80mm focusing mark S1 (m)	1.5								
35mm focusing mark S2 (m)	1.2	1.3	1.4	1.5	1.6	1.7	1.8	2	2.2
Shim adjustment (mm)	+0.3	+0.19	+0.12	0	-0.08	-0.13	-0.18	-0.23	-0.3

70-135mm shim adjustment reference						
135mm focusing mark S1 (m)	1.5					
70mm focusing mark S2 (m)	1.4	1.45	1.5	1.55	1.6	1.65
Shim adjustment (mm)	+0.3	+0.13	0	-0.1	-0.22	-0.3

Note: Shim adjustment: "+" means adding shims, and "-" decreasing shims.

Specification

Specification		
Focal Length	35-80mm	70-135mm
Mount	E/RF/L/X/Z	
Aperture	T2.9-22	
Image Circle	Φ43.5mm (FF)	
Close Focus (Metric/Imperial)	0.74m/2ft5in	0.76m/2ft6in
Zoom Ratio	2.3X	1.9X
Mag. Ratio (Close Focus)	35mm: 0.0657 80mm: 0.146	70mm: 0.112 135mm: 0.214
Flange Distance	E=18mm, L/RF=20mm, X=17.7mm, Z=17mm	
Iris Control	Manual, max 75°	Manual, max 80°
Focus Control	Manual, max 270°	
Zoom Control	Manual, max 100°	
Front Dia. (Metric/Imperial)	Φ80mm/3.15"	
Filter Size	M77	
Length (Metric/Imperial)	From lens front plane to flange back: 212.4mm/8.36" (RF/L) ; 214.4mm/8.44" (E) ; 214.7mm/8.45"(X) ; 215.4mm/8.48"(Z)	
Iris Blade	16	
Weight	1532g	1597g

The Name and Content of Hazardous Substances

Part Name	Hazardous Substances					
	Pb	Hg	Cd	Cr(VI)	PBB	PBDE
Lens Shell	○	○	○	○	○	○
Inner Mechanics	×	○	○	○	○	○
Optics	○	○	○	○	○	○
Other Parts	○	○	○	○	○	○

This table is formulated in accordance of SJ/T11364.

○: Indicates that the concentration of the hazardous substance in all homogeneous materials in the parts is below the relevant threshold of the GB/T26572 standard.

×: Indicates that the concentration of the hazardous substance of at least one of all homogeneous materials in the parts may be above the relevant threshold of the GB/T26572 standard.

The "×" in the above table indicates that there are one or more exemptions are applied in the parts stated in RoHS (2011/65/EU).