

# Canon

Digital Cinema Lens

**CN-E14mm T3.1 L F**

**CN-E20mm T1.5 L F**

**CN-E24mm T1.5 L F**

**CN-E35mm T1.5 L F**

**CN-E50mm T1.3 L F**

**CN-E85mm T1.3 L F**

**CN-E135mm T2.2 L F**

**CN-E14mm T3.1 FP X**

**CN-E20mm T1.5 FP X**

**CN-E24mm T1.5 FP X**

**CN-E35mm T1.5 FP X**

**CN-E50mm T1.3 FP X**

**CN-E85mm T1.3 FP X**

**CN-E135mm T2.2 FP X**

## OPERATION MANUAL

Read this operation manual before using the product.

## NOTE

This lens is a full manual lens for shooting movies. When used to shoot still images or when manual operations are performed in AE or other Auto modes, the lens may not operate properly or the indications may not be correct. In addition, do not operate the lens during initialization of the camera settings. For details, check the latest support information at the corresponding sales company website.

Also check the website for other latest product information.

# ENGLISH

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## GENERAL SAFETY INFORMATION

The safety warnings and cautions provided on the product or in this operation manual must be observed. Failure to observe these warnings and cautions may result in injury or accident. Read this operation manual carefully to familiarize yourself with its contents and ensure that you can operate the product properly. Also, store this manual in a safe place where it can easily be referenced whenever necessary. This operation manual uses the following symbols and terms to identify hazards in order to prevent accidents.



### WARNING

This indicates a potentially hazardous situation which, if not heeded, may result in death or serious injury to you or others. Be sure to heed all warning notices to ensure safe operation at all times.



### CAUTION

This indicates a potentially hazardous situation which, if not heeded, may result in a minor injury to you or others, or damage to property.

### NOTE

This indicates cautions and recommendations for operation. It contains information which, if not heeded, may result in this product failing to function properly. These notices also contain useful information for operation.

## HANDLING THE PRODUCT



### WARNING

Do not stare at the sun or other bright objects through the lens. It may injure your eyes.

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 **CAUTION**

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1. Ensure that all mountings are securely tightened. If a mounting becomes loose, parts may fall off and cause injury.
2. Inspect mountings regularly (about every six months to one year) to ensure they are securely tightened. If a mounting becomes loose, parts may fall off and cause injury.

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**NOTE**

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1. Do not expose the lens to strong impact. Striking or dropping the lens may cause the malfunction of the product.
2. Take measures to avoid sudden changes in temperature where the lens is used, which may prevent operation temporarily if condensation forms in the lens.

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**DEALING WITH ABNORMALITIES**

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 **WARNING**

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If any of the following situations occurs, immediately dismount the lens from the camera and contact your Canon sales representative or dealer.

- Smoke, fumes, or unusual noises
- Entry of foreign objects (such as liquid or metal objects) inside the product

## MAINTENANCE AND INSPECTION

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### NOTE

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1. Clean off any dust on the lens surface using a lens blower or a soft lens brush. In case of getting fingerprints or stains on the lens, use a clean cotton cloth moistened with commercial lens cleaning fluid, or use lens cleaning paper. Gently wipe in a spiral pattern from the center of the lens. Be careful not to rub dust across the lens, which may scratch the lens surface.
2. Routine inspection about once a year is recommended, depending on the conditions and environment of use. Request overhaul, if needed.

## STORAGE

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### CAUTION

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Always attach the lens cap, hood cap, dust cap or covers before storage. Storing the lens without the caps or covers attached poses a risk of fire if the lens concentrate light in direct sunlight.

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### NOTE

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Immediately wipe off any moisture on the lens from misty or foggy environments, using a dry cloth. Seal the lens in a plastic bag with a desiccant (preferably new) to prevent moisture inside. Otherwise it may cause the mold or the malfunction of the product.

## TO THE CUSTOMER

1. Canon shall bear no responsibility for damage resulting from improper operation of this product by the customer.
2. Canon shall make no guarantees about the product quality, functions, or operation manual and its marketability and suitability for the customer's purpose. Moreover, Canon shall bear no responsibility for any damage, direct or incidental, that results from usage for the customer's purpose.
3. The product specifications, configuration, and appearance are subject to change without prior notice.
4. For further information on repairs, maintenance, or adjustments not mentioned in this operation manual, contact your Canon sales representative or dealer.
5. Note that Canon may be unable to undertake servicing or repair of a product if it is modified without consulting Canon or your Canon sales representative.

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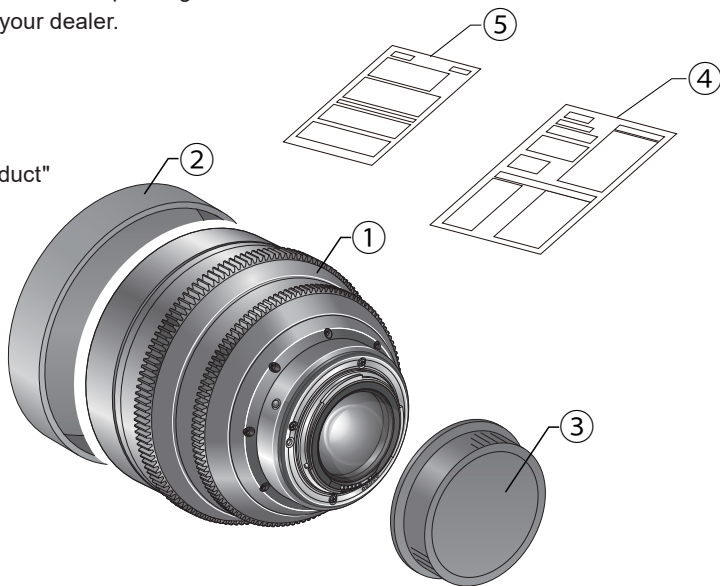
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## PRODUCT LIST

Make sure all of the following items are included in the packing box.  
If you find any item missing, please contact your dealer.

- ① Lens body
- ② Lens cap
- ③ Rear lens cap
- ④ Operation Manual "Before Using The Product"
- ⑤ Operation Manual "Regulations"

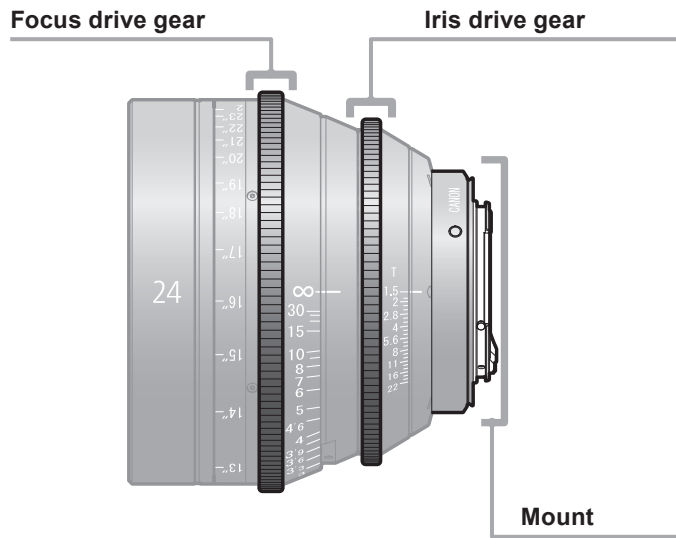


The illustrations in this manual show CN-E24mm T1.5 L F unless otherwise specified.

The shapes of product may vary depending on models and specifications.



# NAMES OF PARTS



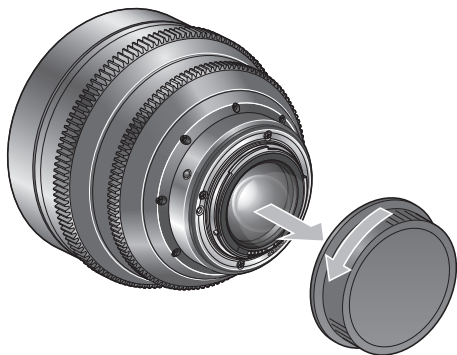
# MOUNTING AND DETACHING THE LENS

See your camera's instructions for details on mounting and detaching the lens.

## Mounting the lens

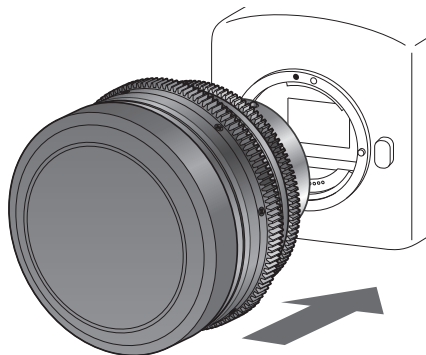
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Remove the rear lens cap.



2

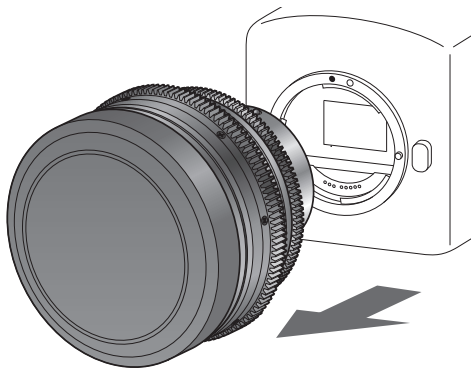
Mount the lens on the camera.



## Detaching the lens

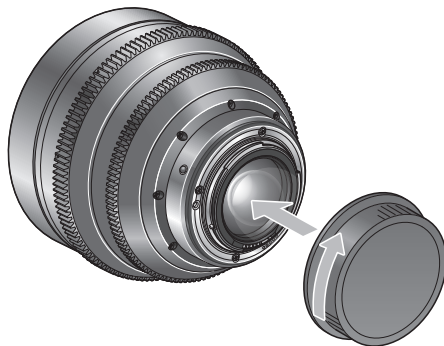
1

Detach the lens from the camera.



2

Attach the rear lens cap to the detached lens.



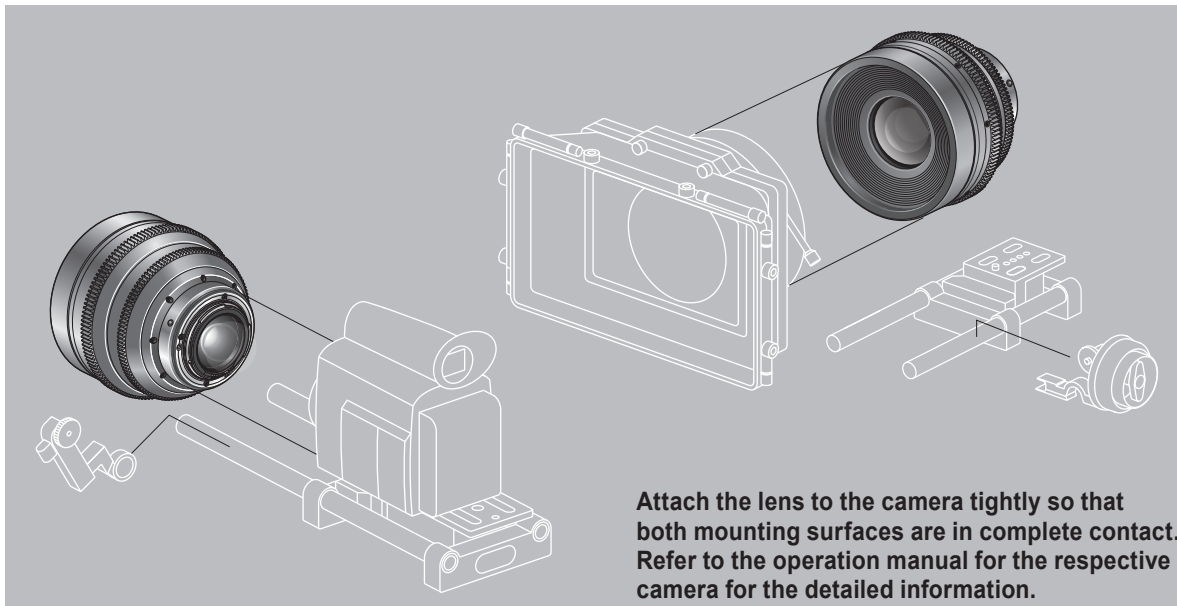
### NOTE

(Excluding PL mount Lens)

- After detaching the lens, place the lens with the rear end up to prevent the lens surface and contacts from getting scratched.
- If the contacts get soiled, scratched, or have fingerprints on them, corrosion or faulty connections can result. The camera and lens may not operate properly.
- If the contacts get soiled or have fingerprints on them, clean them with a soft cloth.

## AVAILABLE ACCESSORIES

A variety of professional camera accessories are available. Be sure to check the mounted condition before use.

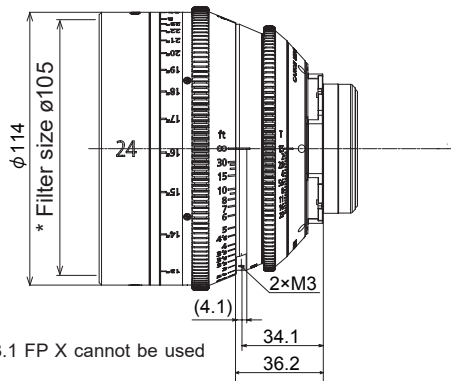




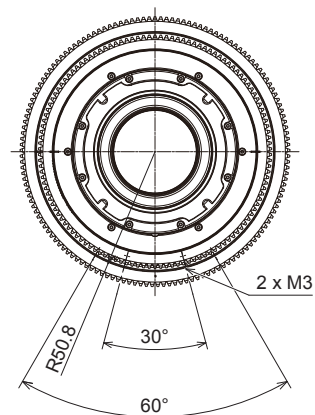
# DIMENSIONS OF PARTS

## PL mount

Unit: mm



\* CN-E14mm T3.1 FP X cannot be used with a filter.



## Spur gear specifications

	Focus drive gear	Iris drive gear
Number of teeth	146	126
Module	0.8	0.8
P.C.D.	116.8 mm	100.8 mm
Angular rotation	300 degrees	36 degrees

# SPECIFICATIONS

		CN-E14mm T3.1 L F	CN-E20mm T1.5 L F	CN-E24mm T1.5 L F	CN-E35mm T1.5 L F	CN-E50mm T1.3 L F
Lens Mount		EF				
Focal Length		14 mm	20 mm	24 mm	35 mm	50 mm
Maximum T-stop		1:3.1	1:1.5			1:1.3
Iris Blades		11 pieces				
Coverage	35mm full size Image Circle / H x V (1.5:1)	φ 43.3 mm / 36.0 x 24.0 mm				
Angular Field of View (H / V)		104.3° / 81.2°	84.0° / 61.9°	73.7° / 53.1°	54.4° / 37.8°	39.6° / 27.0°
Coverage	Image Circle / H x V (1.78:1)	φ 28.2 mm / 24.6 x 13.8 mm				
Angular Field of View (H / V)		82.6° / 52.5°	63.2° / 38.1°	54.3° / 32.1°	38.7° / 22.3°	27.6° / 15.7°
Coverage	Image Circle / H x V (1.9:1)	φ 29.6 mm / 26.2 x 13.8 mm				
Angular Field of View (H / V)		86.2° / 52.5°	66.4° / 38.1°	57.3° / 32.1°	41.0° / 22.3°	29.4° / 15.7°
Minimum Object Distance (M.O.D.) [from the image sensor]		0.2 m / 8"	0.3 m / 12"			0.45 m / 18"
Object Dimensions at M.O.D.	1.5:1	24.8 x 16.5 cm	33.8 x 22.5 cm	28.8 x 19.2 cm	20.1 x 13.4 cm	24.9 x 16.6 cm
	1.78:1	16.9 x 9.5 cm	23.1 x 13.0 cm	19.7 x 11.0 cm	13.7 x 7.7 cm	17.0 x 9.5 cm
	1.9:1	18.0 x 9.5 cm	24.6 x 13.0 cm	21.0 x 11.0 cm	14.6 x 7.7 cm	18.1 x 9.5 cm
Focus Angular Rotation		300 degrees				
Spur Gear Module		0.8				
Front Diameter		φ 114 mm				
Size (W x H x L)		Approx. 118.4 x 118.4 x 94.0 mm	Approx. 118.4 x 118.4 x 101.5 mm			
Weight		Approx. 1.2 kg			Approx. 1.1 kg	
Operation method		Manual				

- A variety of professional camera accessories are available. Be sure to check the mounted condition before use.
- This lens is compatible with cameras that have a 35mm full-size sensor. When mounted on a camera with a different image size, the angle of view changes.

		CN-E85mm T1.3 L F	CN-E135mm T2.2 L F
Lens Mount		EF	
Focal Length		85 mm	135 mm
Maximum T-stop		1:1.3	1:2.2
Iris Blades		11 pieces	
Coverage	35mm full size Image Circle / H x V (1.5:1)	φ 43.3 mm / 36.0 x 24.0 mm	
Angular Field of View (H / V)		23.9° / 16.1°	15.2° / 10.2°
Coverage	Image Circle / H x V (1.78:1)	φ 28.2 mm / 24.6 x 13.8 mm	
Angular Field of View (H / V)		16.5° / 9.3°	10.4° / 5.9°
Coverage	Image Circle / H x V (1.9:1)	φ 29.6 mm / 26.2 x 13.8 mm	
Angular Field of View (H / V)		17.5° / 9.3°	11.1° / 5.9°
Minimum Object Distance (M.O.D.) [from the image sensor]		0.95m / 3'2"	1m / 3'4"
Object Dimensions at M.O.D.	1.5:1	34.3 x 22.9 cm	21.1x 14.1 cm
	1.78:1	23.4 x 13.1 cm	14.4x 8.1 cm
	1.9:1	25.0 x 13.1 cm	15.4 x 8.1 cm
Focus Angular Rotation		300 degrees	
Spur Gear Module		0.8	
Front Diameter		φ 114 mm	
Size (W x H x L)		Approx. 118.4 x 118.4 x 101.5 mm	Approx. 118.4 x 118.4 x 115.6 mm
Weight		Approx. 1.3 kg	Approx. 1.4 kg
Operation method		Manual	

- A variety of professional camera accessories are available. Be sure to check the mounted condition before use.
- This lens is compatible with cameras that have a 35mm full-size sensor. When mounted on a camera with a different image size, the angle of view changes.



		CN-E14mm T3.1 FP X	CN-E20mm T1.5 FP X	CN-E24mm T1.5 FP X	CN-E35mm T1.5 FP X	CN-E50mm T1.3 FP X
Lens Mount		PL				
Focal Length		14 mm	20 mm	24 mm	35 mm	50 mm
Maximum T-stop		1:3.1	1:1.5			1:1.3
Iris Blades		11 pieces				
Coverage	35mm full size Image Circle / H x V (1.5:1)	φ 43.3 mm / 36.0 x 24.0 mm				
Angular Field of View (H / V)		104.3° / 81.2°	84.0° / 61.9°	73.7° / 53.1°	54.4° / 37.8°	39.6° / 27.0°
Coverage	Image Circle / H x V (1.78:1)	φ 28.2 mm / 24.6 x 13.8 mm				
Angular Field of View (H / V)		82.6° / 52.5°	63.2° / 38.1°	54.3° / 32.1°	38.7° / 22.3°	27.6° / 15.7°
Coverage	Image Circle / H x V (1.9:1)	φ 29.6 mm / 26.2 x 13.8 mm				
Angular Field of View (H / V)		86.2° / 52.5°	66.4° / 38.1°	57.3° / 32.1°	41.0° / 22.3°	29.4° / 15.7°
Minimum Object Distance (M.O.D.) [from the image sensor]		0.2 m / 8"	0.3 m / 12"			0.45 m / 18"
Object Dimensions at M.O.D.	1.5:1	25.2 x 16.8 cm	33.8 x 22.5 cm	28.8 x 19.2 cm	20.2 x 13.5 cm	25.0 x 16.7 cm
	1.78:1	17.2 x 9.7 cm	23.1 x 13.0 cm	19.7 x 11.0 cm	13.8 x 7.7 cm	17.1 x 9.6 cm
	1.9:1	18.3 x 9.7 cm	24.6 x 13.0 cm	21.0 x 11.0 cm	14.7 x 7.7 cm	18.2 x 9.6 cm
Focus Angular Rotation		300 degrees				
Spur Gear Module		0.8				
Front Diameter		φ 114 mm				
Size (W x H x L)		Approx. 118.4 x 118.4 x 86.0 mm	Approx. 118.4 x 118.4 x 93.5 mm			
Weight		Approx. 1.2 kg			Approx. 1.1 kg	
Operation method		Manual				

- A variety of professional camera accessories are available. Be sure to check the mounted condition before use.
- This lens is compatible with cameras that have a 35mm full-size sensor. When mounted on a camera with a different image size, the angle of view changes.

		CN-E85mm T1.3 L F	CN-E135mm T2.2 L F
Lens Mount		PL	
Focal Length		85 mm	135 mm
Maximum T-stop		1:1.3	1:2.2
Iris Blades		11 pieces	
Coverage	35mm full size Image Circle / H x V (1.5:1)	φ 43.3 mm / 36.0 x 24.0 mm	
Angular Field of View (H / V)		23.9° / 16.1°	15.2° / 10.2°
Coverage	Image Circle / H x V (1.78:1)	φ 28.2 mm / 24.6 x 13.8 mm	
Angular Field of View (H / V)		16.5° / 9.3°	10.4° / 5.9°
Coverage	Image Circle / H x V (1.9:1)	φ 29.6 mm / 26.2 x 13.8 mm	
Angular Field of View (H / V)		17.5° / 9.3°	11.1° / 5.9°
Minimum Object Distance (M.O.D.) [from the image sensor]		0.95 m / 3'2"	1 m / 3'4"
Object Dimensions at M.O.D.	1.5:1	34.4 x 22.9 cm	21.1 x 14.1 cm
	1.78:1	23.5 x 13.2 cm	14.4 x 8.1 cm
	1.9:1	25.0 x 13.2 cm	15.4 x 8.1 cm
Focus Angular Rotation		300 degrees	
Spur Gear Module		0.8	
Front Diameter		φ 114 mm	
Size (W x H x L)		Approx. 118.4 x 118.4 x 93.5 mm	Approx. 118.4 x 118.4 x 107.6 mm
Weight		Approx. 1.3 kg	Approx. 1.4 kg
Operation method		Manual	

- A variety of professional camera accessories are available. Be sure to check the mounted condition before use.
- This lens is compatible with cameras that have a 35mm full-size sensor. When mounted on a camera with a different image size, the angle of view changes.

## Reference Information

This lens is a full manual lens for shooting movies.

- EF Cinema lenses were developed primarily for movie production, and have a color balance typical for movies. This means that the color reproduction is warmer (shifted toward yellow in the CCI coordinate system) than that of EF lenses which are basically used to shoot still images. Therefore, when using both types of lens together, adjust the color balance (redo the white balance etc.) as necessary.
- In general, the depth of field becomes shallow and the focusing range becomes extremely narrow near the widest aperture and when shooting a subject at close range. In addition, this tendency increases for lenses with longer focal lengths. When shooting images, carefully check the focusing condition using the zoom mode of the finder or other means, and shoot a sufficient number of test images before performing focus operations.

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# APPENDIX

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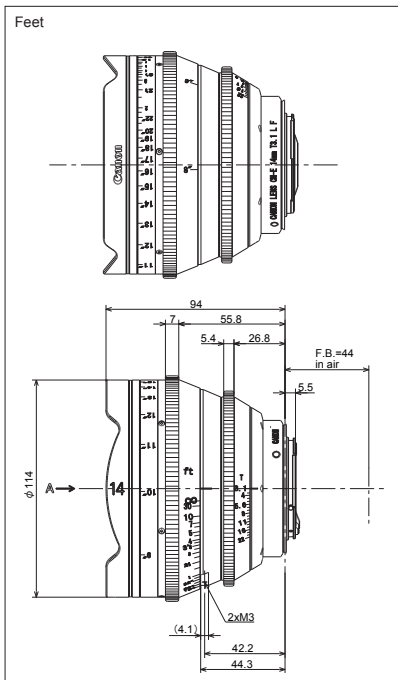
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## External view

CN-E14mm T3.1 L F .....	apx. 2
CN-E20mm T1.5 L F .....	apx. 3
CN-E24mm T1.5 L F .....	apx. 4
CN-E35mm T1.5 L F .....	apx. 5
CN-E50mm T1.3 L F .....	apx. 6
CN-E85mm T1.3 L F .....	apx. 7
CN-E135mm T2.2 L F .....	apx. 8
CN-E14mm T3.1 FP X.....	apx. 9
CN-E20mm T1.5 FP X.....	apx. 10
CN-E24mm T1.5 FP X.....	apx. 11
CN-E35mm T1.5 FP X.....	apx. 12
CN-E50mm T1.3 FP X.....	apx. 13
CN-E85mm T1.3 FP X.....	apx. 14
CN-E135mm T2.2 FP X.....	apx. 15

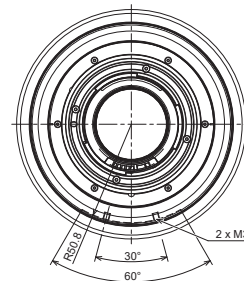
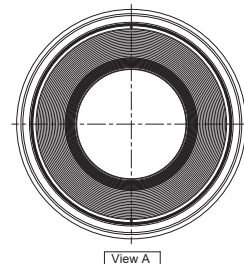
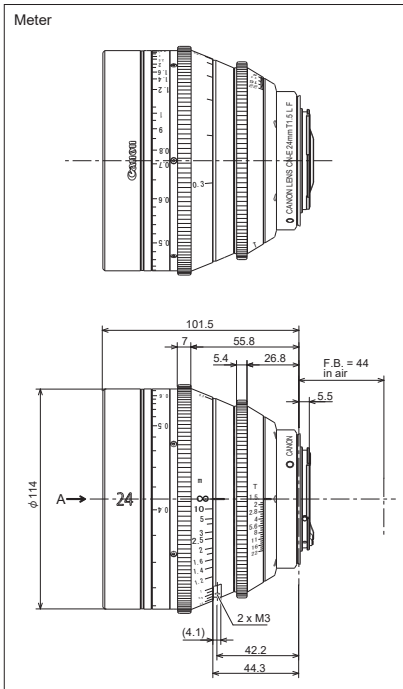
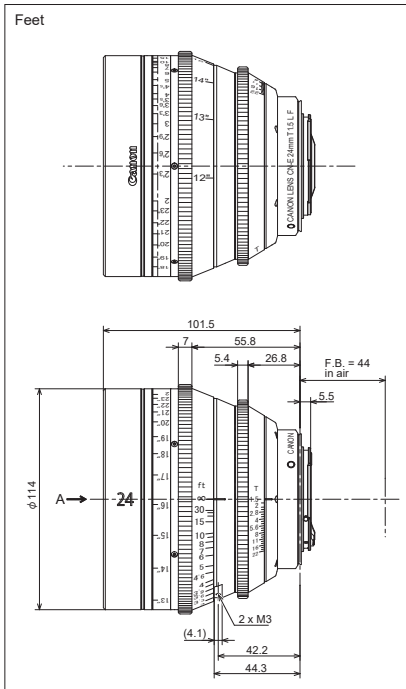
# External view

CN-E14mm T3.1 L F





# CN-E24mm T1.5 L F



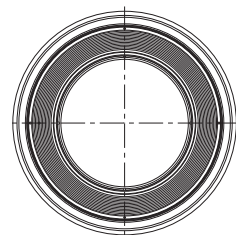
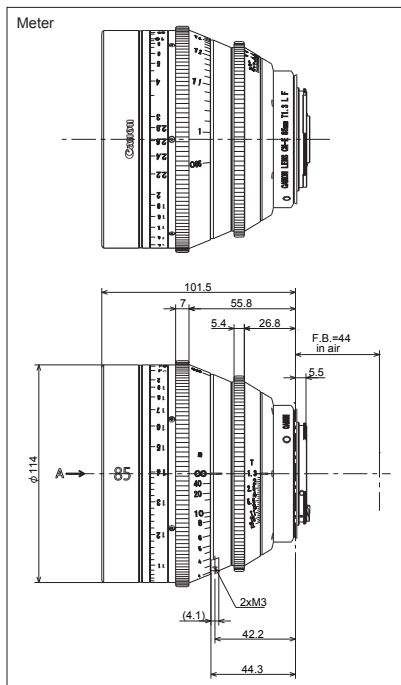
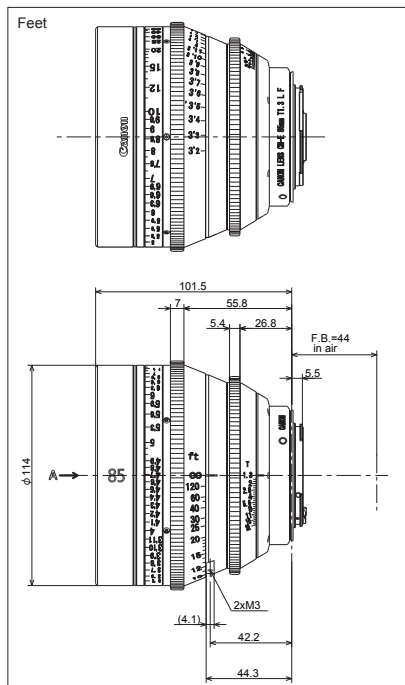
(Unit: mm)



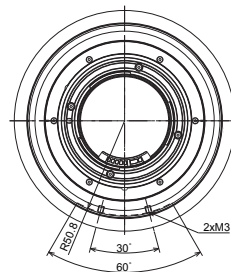




# CN-E85mm T1.3 L F

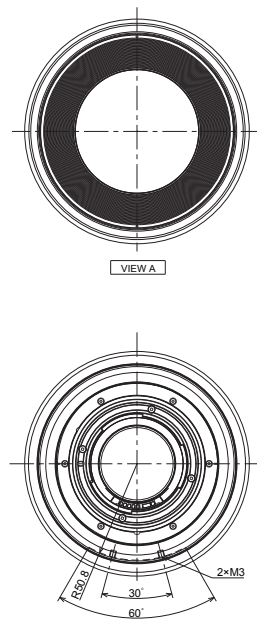
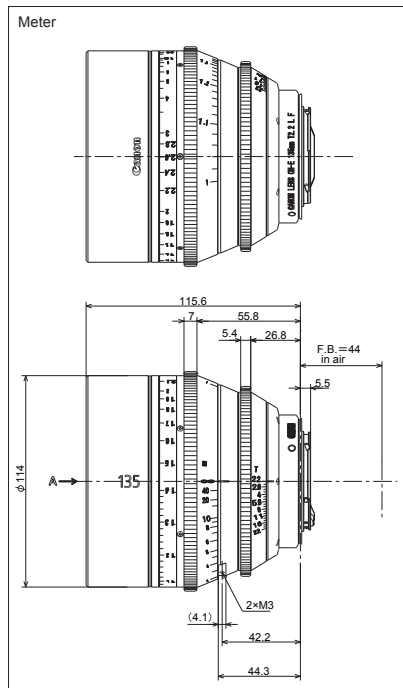
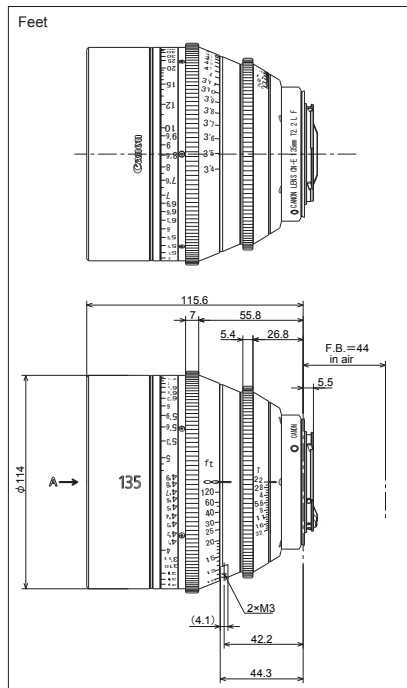


View A



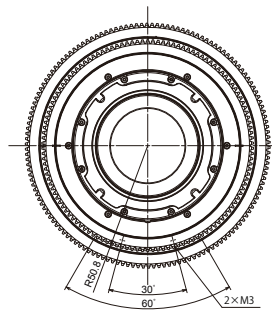
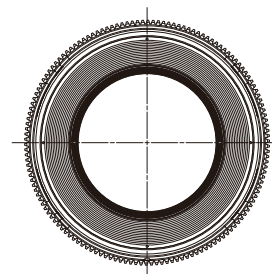
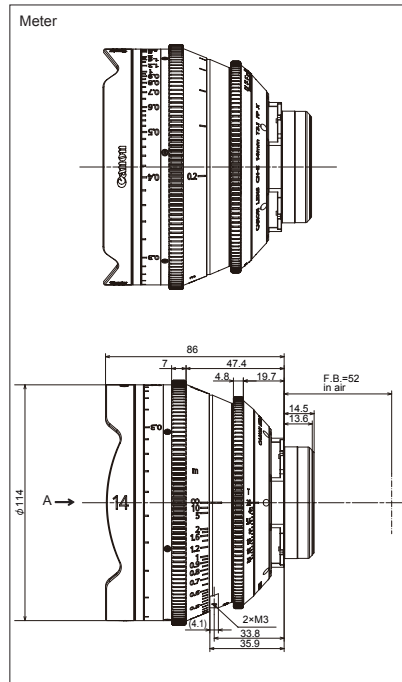
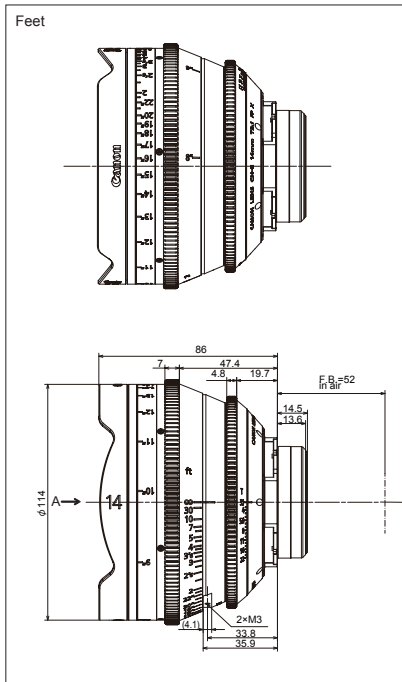
(Unit: mm)

# CN-E135mm T2.2 L F



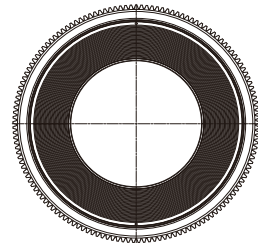
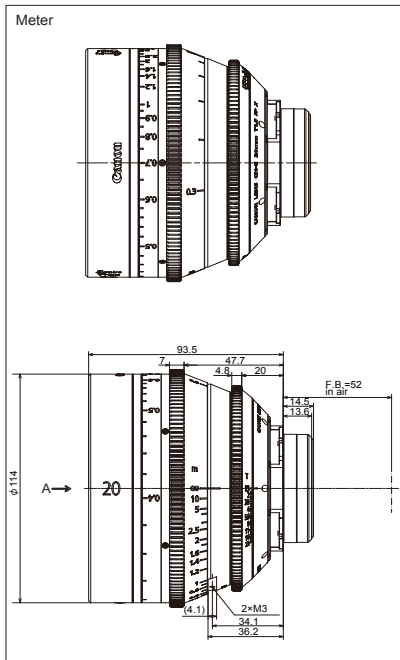
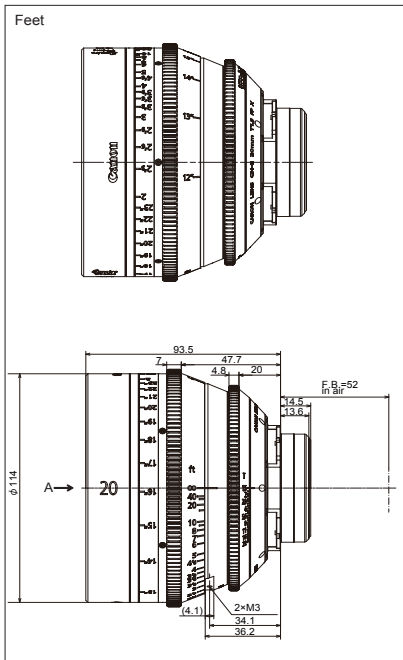
(Unit: mm)

# CN-E14mm T3.1 FP X

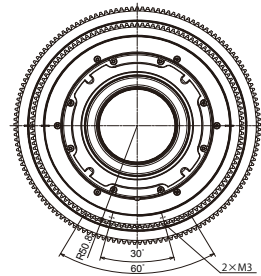


(Unit: mm)

# CN-E20mm T1.5 FP X

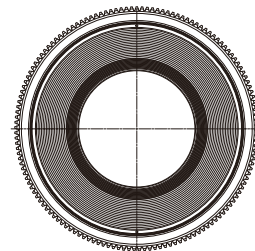
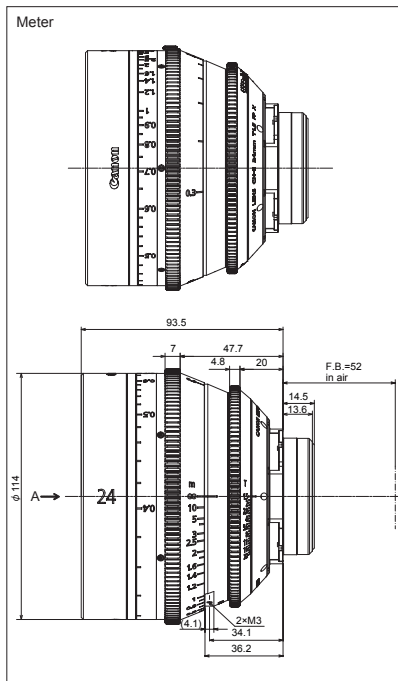
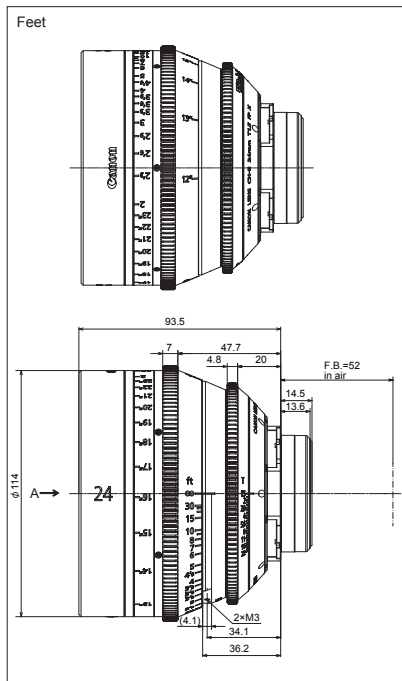


View A

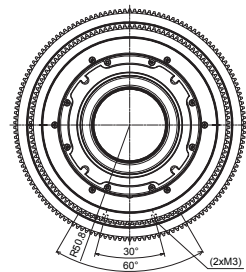


(Unit: mm)

# CN-E24mm T1.5 FP X

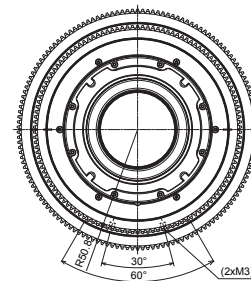
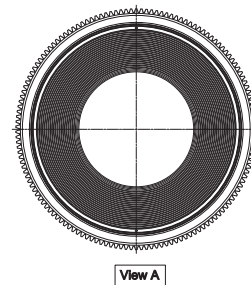
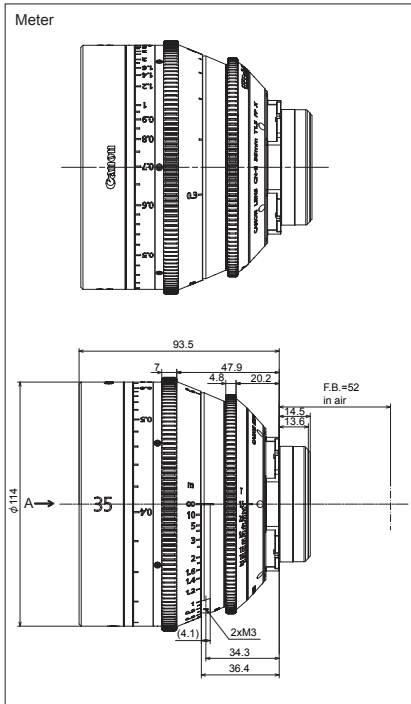
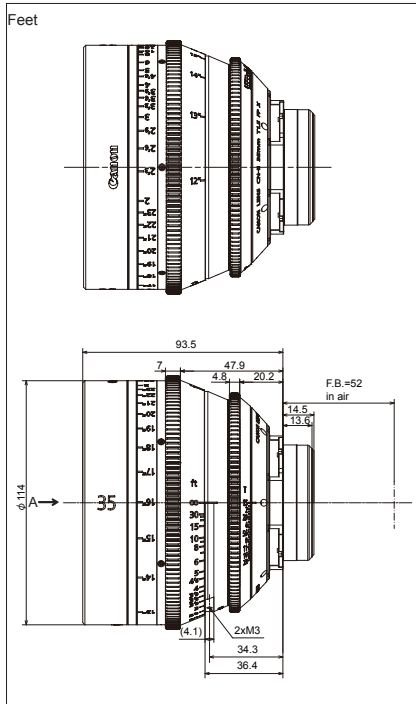


View A



(Unit: mm)

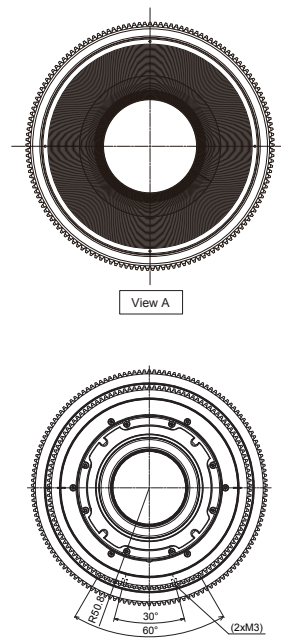
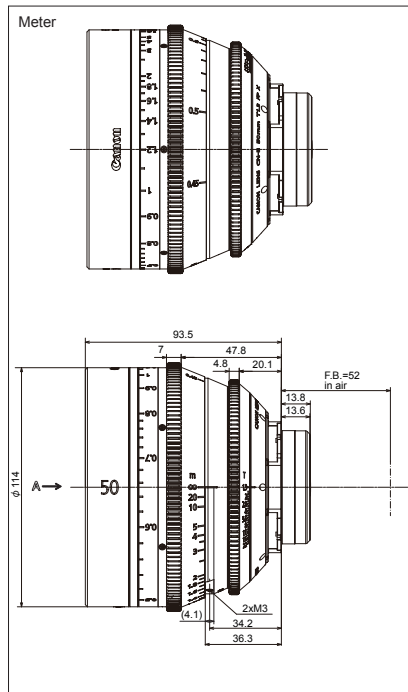
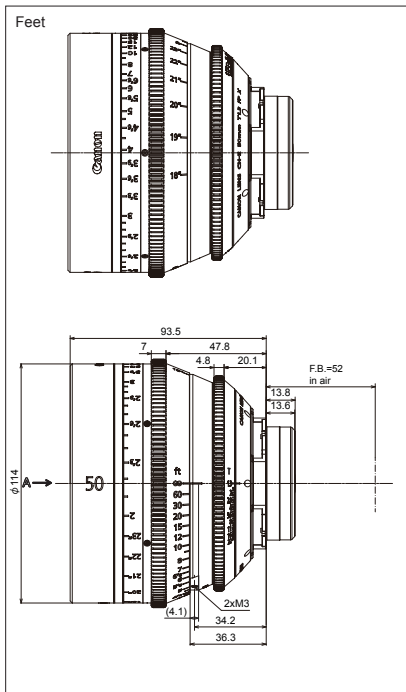
# CN-E35mm T1.5 FP X



(Unit: mm)



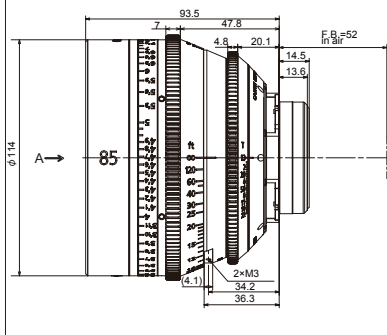
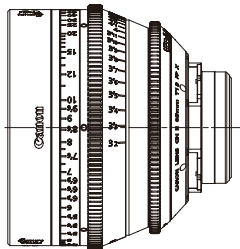
# CN-E50mm T1.3 FP X



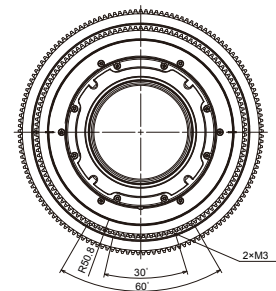
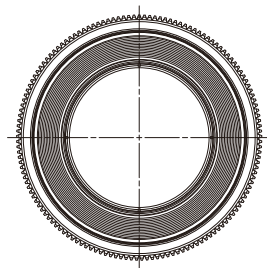
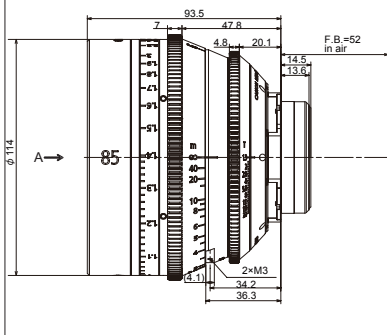
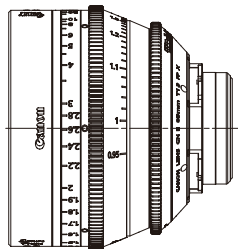
(Unit: mm)

# CN-E85mm T1.3 FP X

Feet

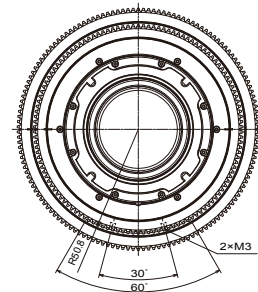
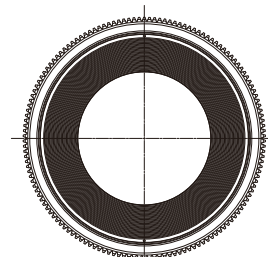
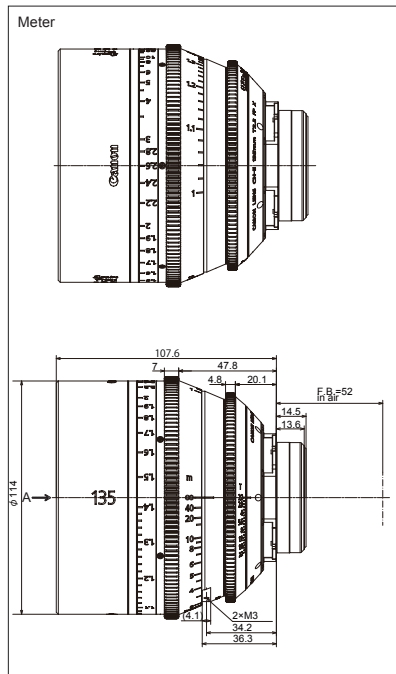
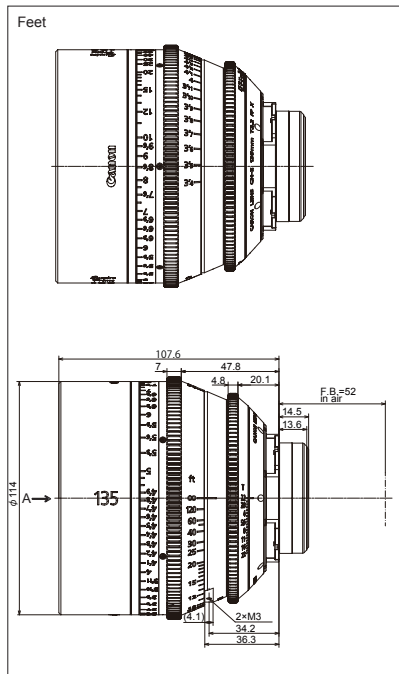


Meter



(Unit: mm)

# CN-E135mm T2.2 FP X



(Unit: mm)



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