

# COMPACT-SERVO LENSES

LENSES AS VERSATILE AS YOU



# A NEW CLASS OF CINEMA-QUALITY LENSES FEATURING INTEGRATED SERVO CONTROL IN A COMPACT, LIGHTWEIGHT DESIGN

The Compact Servo family of lenses are a new 4K Super 35mm lens category within Canon's Cinema EOS lineup. They combine the qualities from our EF lenses such as light weight, compact size, integrated autofocus and excellent optical quality with the professional video features of our Cinema lenses, such as minimal focus breathing and parfocal zooming. These features, along with 4K optical performance and functionality such as integrated servo controls for zoom, iris and focus for electronic control from a camera, optional remote controller or optional ZSG-C10 Zoom Servo Grip make the Compact Servo lenses ideal for those seeking the traditional lens operational practices associated with professional cinematography. The COMPACT-SERVO 18-80mm T4.4 EF and the COMPACT-SERVO 70-200mm T4.4 EF<sup>†</sup> offer professional video functionality all at an affordable price, making them ideal for a wide range of video applications including documentary, cinema, news gathering, wedding and other video production.



4K

COMPACT-SERVO  
18-80MM T4.4 EF  
CN-E18-80MM T4.4 L IS KAS S

4K

NEW  
COMPACT-SERVO  
70-200MM T4.4 EF  
CN-E70-200MM T4.4 L IS KAS S

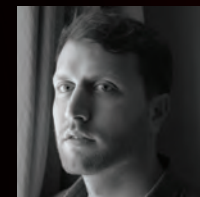
Lenses shown with the optional ZSG-C10 Zoom Servo Grip

## DOCUMENTARY



“  
*I have never used cinema lenses, and to be able to have a cinema-style zoom lens that is this small is amazing.*  
”

**Matthew Heineman**  
Director/Cinematographer



# CINEMA/NEWS GATHERING



“  
*Because of its zoom range, light weight, image stabilization, and ability to match my CN-E primes, this lens has become an essential part of my kit.*  
”



**Nathan Golon**  
Cinematographer



# WEDDING VIDEOGRAPHY



“  
*As a wedding videographer, we mostly do run and gun and I loved using a COMPACT-SERVO lens the entire time! It's so compact and versatile that it's the perfect lens for any event.*  
”



**Paul Santiago**  
Director/Owner of Boffo Video



## CINEMA QUALITY OPTICS

### High Level 4K Optical Performance

4K optical performance produces a significantly sharper image than 2K/HD. Various advanced design strategies help ensure over 4K resolution at picture center and a careful control of falloff of image sharpness at picture extremities.

**4K**

The excellent contrast range associated with High Dynamic Range (HDR) imaging helps ensure both deep black reproduction and the excellent handling of scene specular highlights. HDR image capture significantly enhances both the contrast and the richness of colors in a scene, but it also poses a potential challenge in exacerbating the visibility of any lens chromatic aberrations. The Compact-Servo lenses optical design carefully anticipated this and advanced optical design strategies minimize such aberrations.



### Parfocal Operation - Precise Focus Through The Entire Zoom Range

Canon Compact Servo lenses are parfocal in both manual and autofocus modes. Our Compact Servo zoom lenses employ a special compensating lens group that moves to maintain precise focus while a separate lens group performs the zooming action. Maintaining focus while changing focal length allows the Canon Compact Zooms to be used in video production where zooming while recording is required.

### Consistent Brightness Throughout The Entire Zoom Range

Canon Compact Servo zoom lenses maintain a wide aperture of T4.4 (F4.0) throughout their zoom range. This allows zooming while at maximum aperture without any dimming of the image.

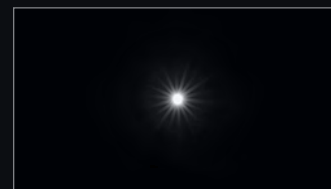
### Minimized Focus Breathing

Designed specifically for video production, Canon Compact Servo lenses minimize focus breathing when adjusting focus, making them ideal for cinema production. Focus breathing is a change in magnification of the image when adjusting focus.



### Continuous Iris Control

Canon's Compact Servo lenses can smoothly adjust between open and closed for precise exposure control and live in-shot changes. Their 9-blade iris creates a rounded aperture so out-of-focus highlights appear circular. An odd number of iris blades also helps create a less distracting flare. Compact Servo irises can also be completely closed, which is useful when adjusting black balance.



9 blades



6 blades

### Image Stabilization (IS)

Compact Servo lenses offer three levels of Image Stabilization, including the standard mode for handheld operation, a maximum mode for high frequency movement and a smooth mode intended for tripod-based operating. The IS function can also be switched off entirely.



Image Stabilizer ON



Image Stabilizer OFF

### Color Consistency with Canon Cinema Lenses

Canon's color science has become highly refined over generations of lens designs, paying the closest attention to a pleasing skin tone reproduction. Compact Servo and Cinema lenses can be used interchangeably during the same production since both have the same warm, cine-look color characteristics — making it easier to maintain consistent color when multiple lenses are used.

## SMALL SIZE, FEATURE-PACKED DESIGN

### Focal Length

The wide zoom range of Compact Servo lenses is highly versatile, allowing them to be your main workhorse lenses. The generous 10mm overlap in focal lengths helps minimize the need to switch between lenses in the midst of a "fast-action" shoot. Go from wide angle to extreme telephoto with just two lenses. For further versatility, you can add to the zoom range of the COMPACT-SERVO 70-200mm T4.4 EF with an optional extender such as the Canon EF 1.4x III and EF 2x III Extenders.

### Compact and Lightweight Design

Compact Servo lenses borrow from Canon's experience in EF lenses to deliver a compact and lightweight design. This allows lenses to be used in a wide range of shooting applications and environments.

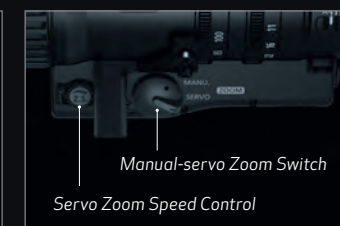
### Manual Operating Ease

Servo controls can be disengaged for the focus, iris and zoom rings. All three rings are designed for smooth, fluid operation. In full manual mode, the barrel rings are direct controls for precise adjustment. The focus ring rotates 130 degrees for precise focus mark settings. The rings are geared to engage separate accessory controllers.



### Servo Zoom Drive Unit

The built-in servo drive controls zoom and can be powered through the lens mount or a separate port. It is compatible with Canon zoom and focus broadcast style controllers. For handheld use, the ZSG-C10 Zoom Servo Grip can be mounted directly to the servo drive of both Canon Compact Servo zooms.



### AF and AE Capability

Ultrasonic Motor drives (USM) provide fast and quiet autofocus. Select Canon EF-mount Cinema cameras with Dual Pixel Autofocus are supported. Canon Electromagnetic Diaphragm technology incorporates a motor directly to the lens iris for precise and smooth autoexposure response.

**Dual Pixel CMOS AF**

### EF Communication Functions

Compact Servo lenses are designed to work with select Canon EF-mount Cinema cameras. Because these devices are designed to function together, the complete kit adds enhanced functionality. Integrated autofocus, smooth image stabilization, connected control and metadata information, and lateral chromatic aberration correction are all included when using the Compact Servo line-up on compatible EF mount Canon Cinema cameras.

### Supports a Wide Range of Optional Accessories

Compact Servo lenses are compatible with a variety of professional lens accessories. The front diameter is 84mm for mattebox mounting with a removable sunshade included. The COMPACT-SERVO 18-80mm T4.4 EF and the COMPACT-SERVO 70-200mm T4.4 EF both accept 77mm screw-in filters. An integrated support foot can be used to stabilize the lens on standard camera bracketry, and the zoom, focus and iris rings are geared for use with follow focus and remote motors. The optional ZSG-C10 Zoom Servo Grip mounts directly to either lens for handheld use and control of zoom, One-Shot AF and record trigger. The optional Zacuto Z-CNYC Y-cable can be used to connect both Canon zoom and focus broadcast style controllers simultaneously for remote operation.

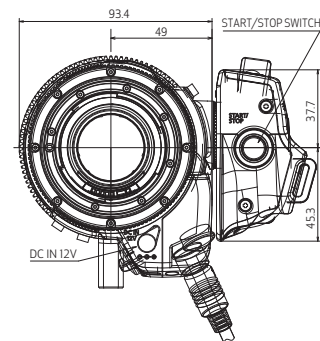
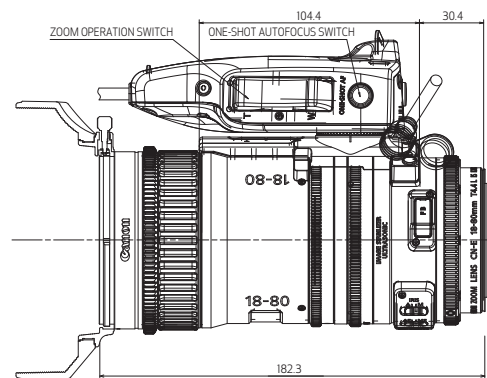


## SPECIFICATIONS

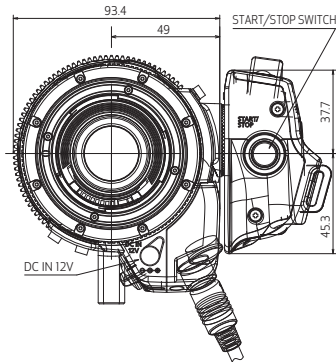
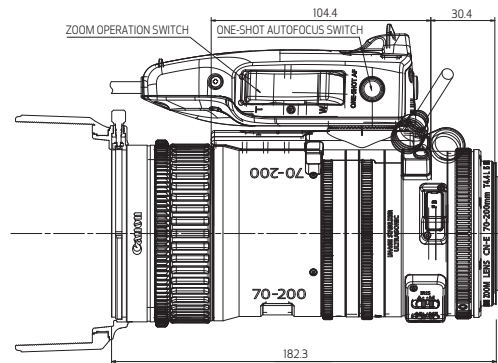
		COMPACT-SERVO 18-80mm T4.4 EF	COMPACT-SERVO 70-200mm T4.4 EF
Model Name		CN-E18-80mm T4.4 L IS KAS S	CN-E70-200mm T4.4 L IS KAS S
Mount		EF	EF
Image Coverage		Super 35	Super 35
Focal Length		18-80mm	70-200mm
Zoom Ratio		4.4x	2.8x
Maximum Relative Aperture		T4.4 (F4) at 18-80mm	T4.4 (F4) at 70-200mm
Iris Blades		9	9
Angular Field of View	Aspect Ratio 1.78:1, Dimensions 24.6 x 13.8mm	68.7° x 41.9° at 18mm / 17.5° x 9.9° at 80mm	19.9° x 11.3° at 70mm / 7.0° x 4.0° at 200mm
	Aspect Ratio 1.9:1, Dimensions 26.2 x 13.8mm	72.1° x 41.9° at 18mm / 18.6° x 9.9° at 80mm	21.2° x 11.3° at 70mm / 7.5° x 4.0° at 200mm
Minimum Object Distance from Image Sensor		0.5m (1.7 ft.)	1.2m (4.0 ft.)
Object Dimensions at M.O.D.	Aspect Ratio 1.78:1, Dimensions 24.6 x 13.8mm	43.4 x 24.3cm at 18mm / 9.5 x 5.3cm at 80mm	31.3 x 17.5cm at 70mm / 11.5 x 6.4cm at 200mm
	Aspect Ratio 1.9:1, Dimensions 26.2 x 13.8mm	46.2 x 24.3cm at 18mm / 10.1 x 5.3cm at 80mm	33.3 x 17.5cm at 70mm / 12.2 x 6.4cm at 200mm
Front Diameter		ø84mm	ø84mm
Filter Size		ø77mm	ø77mm
Approx. Dimensions (W x H x L)		93.4 x 107.2 x 182.3mm	93.4 x 107.2 x 182.3mm
Approx. Weight		1.2kg (2.65 lbs.)	1.25kg (2.76 lbs.)

## DIMENSIONS

COMPACT-SERVO 18-80mm T4.4 EF  
with Optional ZSG-C10 Grip



COMPACT-SERVO 70-200mm T4.4 EF  
with Optional ZSG-C10 Grip



\* As of April 20th, 2017, at time of printing, the COMPACT-SERVO 70-200mm T4.4 EF lens has not been authorized as required by the rules of the Federal Communications Commission. This device is not, and may not be offered for sale or lease, or sold or leased, until authorization is obtained.

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