Canon

HD ELECTRONIC CINEMATOGRAPHY LENSES

From The Company That Knows Digital Imaging

HDEC

HD-EC Prime and Zoom Lenses

Anamorphic Converter

Electronic Cinematography's New Tool,

For 2004, Canon introduces a new line of EC Prime Lenses by improving the existing five lenses in both optical and mechanical performance and at the same time, adding one new lens, the FJs55. The 6 new lenses were especially improved in order to feature the film like feeling in both picture quality and tone of a color.

Responding to requests from the market, Canon has standardized the diameter of the front lens of all six FJs prime lenses at 95mm, which enables the same matte box or filters to be used with all of the lenses. Additionally, as with the previous prime series, the positions of the Zoom, Focus and Iris gear rings are unified to allow fast and accurate lens exchanges without changing the position of the control systems.

As you would expect, the quality exhibited in the predecessor series of primes carries over in the new FJs series, which exhibit high MTF as well as high resolution and high contrast from the center of the image to its extreme edges. Other features include significantly reduced flare, with an exceptionally sharp, flat picture and virtually no curvature of field; no apparent geometric distortion and dramatically reduced color aberration and minimized focus breathing.

New HD-EC FJs PRIME LENS

"Back Focus" Adjustment

Completely New

HD-EC FOCAL LENGTH COMPARISON

LENS	2/3inch HD-EC (11mm Diag.)	35mm ACADEMY (27.26mm Diag.)	SUPER 16 (14.55mm Diag.)
FJs5	5mm	12.4mm	6.6mm
FJs9	9mm	22.3mm	11.9mm
FJs14	14mm	34.7mm	18.5mm
FJs24	24mm	59.5mm	31.7mm
FJs35	35mm	86.7mm	46.3mm
FJs55	55mm	136.3mm	72.8mm
HJ8x 5.5B KLL-SC	5.5-44mm	13.6-109.0mm	7.3-58.2mm
HJ11x 4.7B KLL-SC	4.7-52mm	11.6-128.9mm	6.2-68.8mm
HJ21x 7.5B KLL-SC	7.5-157mm	18.6-391.6mm	9.9-209mm

Comparisons are based on the diagonal of the image formats shown above.

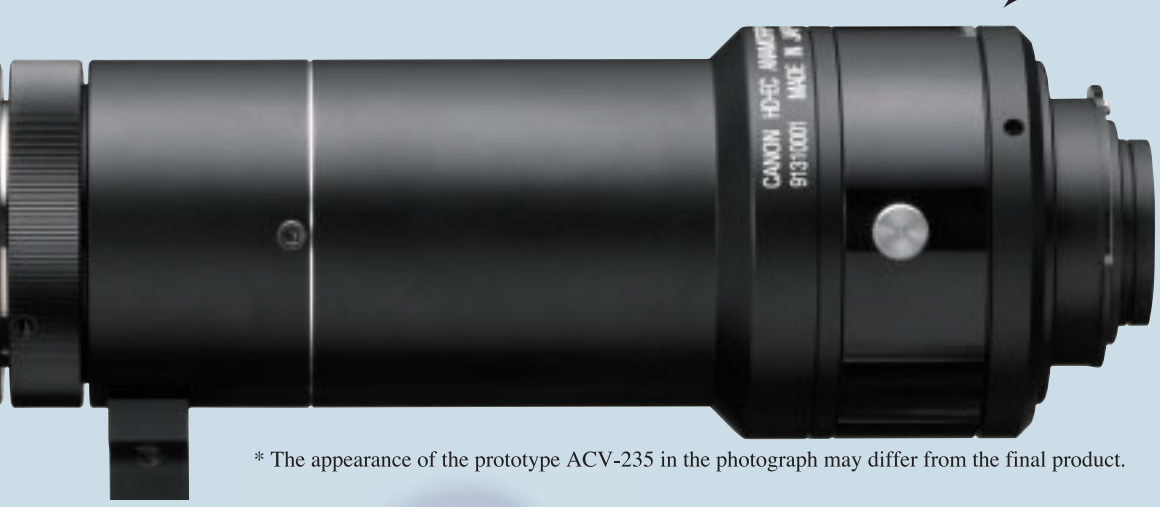
the Revolutionary "Anamorphic Converter".

The ACV-235 is the world's first Anamorphic converter developed for the 2/3" image size HDTV format. An Anamorphic converter optically compresses a CinemaScope© size image (2.35:1 aspect ratio) to the HD-EC 16:9 aspect ratio (1.78:1). This allows for a CinemaScope© (2.35:1) size image to be recorded by an HD Electronic Cinematography camera.
Until now, the only way to produce a CinemaScope© size image was to cut off the top and bottom portions of the original 16:9 recorded image. This method will decrease the resolution of the original 16:9 image, which becomes very apparent when projected on a large screen. However, the ACV-235 utilizes the whole CCD size producing 1.3 times more picture resolution when projected on a large screen compared to the previous conversion method discussed. The ACV-235 really shows off its high optical performance, especially when it is used in conjunction with Canon's HD-EC Lens Series.

The ACV-235 offers the following features due to adopting a Rear Converter System.
- Easy operation due to small size and weight.
- Compatible with HD-EC Primes and Zoom lenses.
- Needless to control the converter according to the focussing, it provides a stable picture.
- Regardless of the distance to the shooting object, the aspect ratio remains unvarying.

Features of Canon's New Optical System
- The converter keeps the quality of the the image from the master lens, perfectly.
- The converter can maintain the diagonal angular field of view from the master lens.
- The converter is free from the influences caused by the shading.

New ANAMORPHIC CONVERTER ACV-235

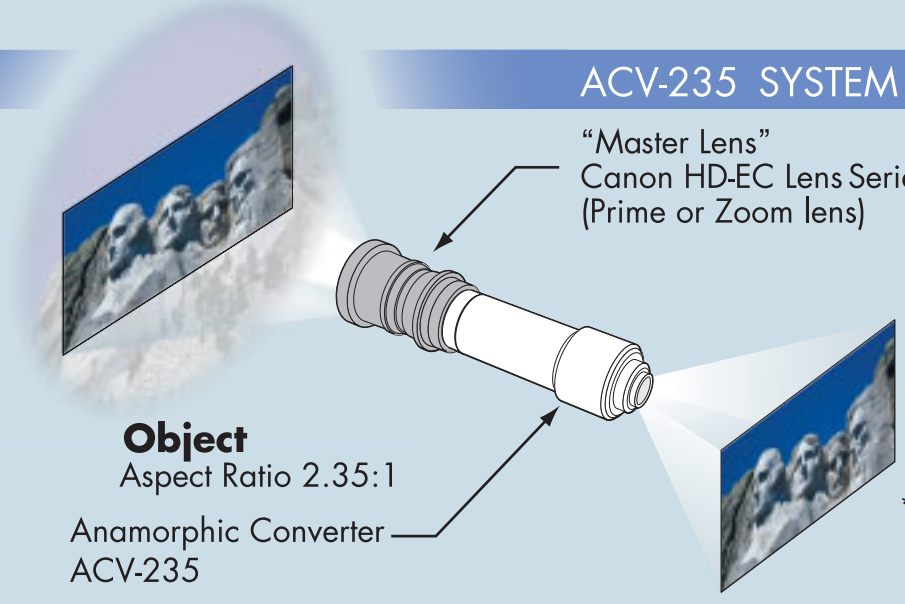


* The appearance of the prototype ACV-235 in the photograph may differ from the final product.

ACV-235 SPECIFICATIONS

Size (W x L)mm:	ø77x194.9mm
Weight (approx):	1.25kg(2.75lbs)

ACV-235 SYSTEM



*The image is projected upside down on the CCD, which can be corrected by corresponded cameras.

Canon HD-EC Lenses: Features At A Glance

1. From the ground up, uniform design concept, achieves a desirable "Canon look," and consistent color temperature between lenses.
2. Minimized focus breathing (the lowest of any comparable lens).
3. Working distance between the camera and subject does not affect optical perfomance.
4. All lenses feature Internal Focus technology.
   The HJ21x features three group Internal Focus to improve optical performance at longer distances at high zoom ratios.
5. HD Cine Prime lenses feature an eight-blade iris.
6. Shortest Minimum Object Distance (M.O.D.).
7. Position of zoom, focus and iris gears on all lenses, as measured from the mount, is idential, for consistent position of accessories between lenses.

20 years of motion picture lens productiom results in HD Electronic Cinematography "essential tools" that combine outstanding performance and greater function for DP's, Operators, and AC's.

IMAGE FORMAT: 9.6 x 5.4 mm (DIAG. 11.0 mm)

HD-EC ZOOM LENS SPECIFICATIONS

LENS	Zoom Ratio	Focal Length	T-Stop	Angular Field of View 16:9	Angular Field of View 2.35:1 with ACV-235	Minimum Object Distance from image plane (M.O.D.)	Object Dimensions at M.O.D. (16:9)	Object Dimensions at M.O.D. (2.35:1) with ACV-235	Size (W x L)	Weight (approx)	Focus Angle
HJ8x5.5B KLL-SC	8 x	5.5-44mm	T2.1-2.2	82.2° x 53.1° at 5.5mm 12.5° x 7.9° at 44mm	85.1° x 42.7° at 5.5mm 13.1° x 5.6° at 44mm	0.59m	59.7 x 33.6cm at 5.5mm 7.4 x 4.2cm at 44mm	69.3 x 29.5cm at 5.5mm 8.3 x 3.5cm at 44mm	ø95x245.2mm	2.0kg (4.4 lbs)	270°
HJ11x4.7B KLL-SC	11 x	11-52mm	T2.1-2.7	91.2° x 59.8° at 4.7mm 10.5° x 5.9° at 52mm	94.1° x 49.2° at 4.7mm 11.1° x 4.7° at 52mm	0.59m	71.4 x 40.2cm at 4.7mm 6.2 x 3.5cm at 52mm	74.3 x 31.6cm at 4.7mm 6.4 x 2.7cm at 52mm	ø95x242 mm	1.6kg (3.52 lbs)	270°
HJ21x7.5B KLL-SC	21 x	7.5-158mm	T2.1-2.9	65.2° x 39.6° at 7.5mm 3.5° x 2.0° at 158mm	67.9° x 32.0° at 7.5mm 3.7° x 1.6° at 158mm	1.16m	120.4 x 67.7cm at 7.5mm 5.6 x 3.2cm at 158mm	125.2 x 53.3cm at 7.5mm 5.8 x 2.5cm at 158mm	ø130x260mm	2.4kg (5.28 lbs)	270°

IMAGE FORMAT: 9.6 x 5.4 mm (DIAG. 11.0 mm)

HD-EC PRIME LENS SPECIFICATIONS

LENS	Focal Length	T-Stop	Angular Field of View 16:9	Angular Field of View 2.35:1 with ACV-235	Minimum Object Distance from image plane (M.O.D.)	Object Dimensions at M.O.D. (16:9)	Object Dimensions at M.O.D. (2.35:1) with ACV-235	Size (W x L)	Weight (approx)	Focus Rotation Angle (approx)
FJs5	5mm	T1.7	87.7° x 56.7°	90.6° x 46.5°	0.5m	59.8x33.6cm	61.9x26.3cm	ø95x177.0mm	1.5kg(3.3lbs)	280°
FJs9	9mm	T1.5	56.1° x 33.4°	58.6° x 26.9°	0.45m	32.5x18.3cm	33.7x14.3cm	ø95x134.5mm	1.1kg(2.42lbs)	280°
FJs14	14mm	T1.5	37.8° x 21.8°	39.7° x 17.5°	0.4m	18.9x10.6cm	19.6x8.3cm	ø95x134.5mm	1.1kg(2.42lbs)	280°
FJs24	24mm	T1.5	22.6° x 12.8°	23.8° x 10.2°	0.45m	13.6x7.7cm	14.1x6.0cm	ø95x134.5mm	1.1kg(2.42lbs)	280°
FJs35	35mm	T1.5	15.6° x 8.8°	16.4° x 7.0°	0.5m	10.8x6.1cm	11.2x4.8cm	ø95x134.5mm	1.1kg(2.42lbs)	280°
FJs55	55mm	T1.5	10.0° x 5.6°	10.5° x 4.5°	0.5m	6.8x3.8cm	7.0x3.0cm	ø95x134.5mm	1.1kg(2.42lbs)	280°

Canon's HD-EC Lens series, constantly evolving.

Now, Canon adds a new HD-EC zoom lens to the series by proudly introducing our latest wide-angle lens, the HJ8x5.5B KLL-SC.

Not only has this spectacular new lens diminished distortions and focus breathing to zero levels while maintaining the traditional film style feel of the picture, the lens also offers exceptional affordability.

One of the remarkable features of Canon's HD-EC zoom lenses are, the surprisingly small amount of focus breathing, making the lenses ideal for HD-EC production. The HJ21 has up to 3 times less focus breathing than any other comparable lens, and the HJ11 has an additional 50% less focus breathing. Plus, a maximum relative aperture (T Stop) of 2.1 makes these three lenses faster than ever and the best in the field.

Not only the lens realized to diminish the distortions and the focus breathing into zero level while maintaining the traditional film style feel of the picture, the lens also offers high affordability which will surely lead you to a perfect satisfaction.
Canon's HD-EC line now includes the HJ21x7.5B KLL-SC, HJ11x4.7B KLL-SC and HJ8x5.5B KLL-SC zooms and the FJs5, FJs9, FJs14, FJs24, FJs35 and FJs55 primes.
Both utilize Hi-UD (High Index, Ultra Low Dispersion) glass and Fluorite, to achieve lower aberrations, while exhibiting very high MTF.

The best optical tools in electronic cinematography, HD-EC zoom lenses have been refined using Canon's exclusive Power Optical System featuring the X-Element, a unique high definition system that combines exceptional performance with enhanced specifications.

All Canon HD-EC lenses have traditional film style feel and operation. Zoom, Focus and Iris indications are engraved with dual large luminous scales(focus distance marked in feet), which have been vastly improved. Gear rings are compatible with studio focus rigs,manual fluid zoom drives and motorized control systems used for film lenses.

New

HJ8x 5.5B KLL-SC

HJ11x 4.7B KLL-SC

HJ21x 7.5B KLL-SC

Maximize Your 24p Camera's Performance.

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- The size and weight of all lenses within this brochure may vary according to the applicable camera models.
- Specifications subject to change without notice

PUB NO.0043W862 0404SZ4.5 PRINTED IN JAPAN