KJ10ex4.5B IRSE

Canon's Philosophy :

Canon has always developed new technology with four basic philosophies, "High Quality of Picture", "Ease of Operation", "High Specification" and "Minimize Environmental Impact". Canon's HDTV lenses are, so to speak, a compilation of our basic philosophies. Now, Canon adds a new concept to the HDTV lenses by launching the new HDgc Series.

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Canon's New HDgc Series HDGC

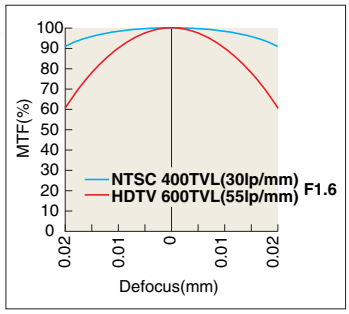
Concept of HDgc Series

Corresponding to the popularity of digital High Definition broadcasting and diversity of HDTV equipment, Canon has added a new series to its HDTV lens line up, the HDgc series. The new HDgc series supports the emergence of an important new generation of cost-effective HD acquisition systems. Adopting the advantages created by Canon's unique technology, the new HDgc lenses exhibit high MTF, high resolution and high contrast from the center of the image to its extreme edges, meanwhile maintaining its compact size and weight.
Another important policy of Canon's is not to pollute the earth and the HDgc series succeeded in excluding harmful substances such as cadmium, PBBS, PBDPE or mercury from the mechanical parts, and at the same time incorporating lead free glass and reducing the amount of hazardous substances used in electrical parts.
Meet Canon's new HDgc series lenses, a compilation of Canon's advanced technologies.

Optical Performance of HDgc Series

Aberration Correction for HDgc Lenses

In the HDTV system the pixel size is about half. Therefore, the spread of a point image caused by a spherical aberration, coma etc. should be diminished to about half. The MTF varies as the focus changes and even if the image is slightly out of focus, the MTF is greatly influenced as shown in Graph 1. HDgc greatly contributes to correcting and minimizing these aberrations at the same time maintaining high MTF throughout the edge of the picture.



<Graph 1>

Special Optical Elements

With the goal of minimizing chromatic aberration, the HDgc series lenses utilizes special elements including an artificially re-crystalized element, "Fluorite", with extraordinary dispersion characteristics and the newly developed "Hi-UD" (high index ultra low dispersion) glass. Canon has succeeded in the practical use of special elements along with advanced design techniques like "separate achromatism".

Hi-UD Glass

Enhanced Digital Drive

The KJ10ex4.5B carries Canon's original Enhanced Digital Drive, a drive unit equipped with an information display and a digital function selector so that the user can customize the enhanced digital functions much more easily and precisely. The new design enables the user to fully bring out the digital functions.

Main Features

(Display Image)

Shuttle Shot : By memorizing any two focal lengths, the digital drive can automatically "shuttle" between the two points, moving in either direction.

Framing Preset : An angle of view can be preset in either of two memories and the lens will zoom to that position by pushing a simple button. During a performance, framing preset will reproduce the zoom position decided upon at the rehearsal. It is easy to repeat the same zoom as often as you like at the highest speed or in a preset zoom speed.

Speed Preset : A specific zoom speed can be preset in memory and it is possible to repeat the zoom speed as often as you like by pushing a simple button.

Enhanced Digital Drive Unit

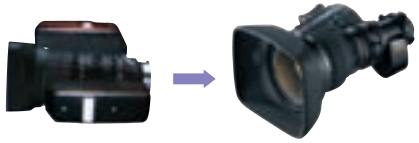
Ecological Design

HDTV Optical Performance

- Reduced Chromatic Aberrations
- High and Flat MTF
- Countermeasures Against Ghosting and Flares

Rotary Encoder

The KJ10ex4.5B is equipped with an enhanced digital drive unit. Conventional potentiometers are analog positional sensors capable of only 8-10 bit equivalent resolution. Thus virtual portable studio systems called for an optional Encoder Unit to be put on the zoom and focus ring of the lens. With the introduction of 16 bit resolution Rotary Encoder Devices built into the new enhanced digital drive unit, the lens can simply be integrated into a virtual digital studio system without any additions. The encoders also enable superior precise control. The zoom servo provides a dynamic range of 0.5 sec. to over a 5 min. super slow zoom. Repeatability in focus and iris control are also much more precise. Canon's unique technology has made the encoder device surprisingly small to be installed in the existing drive unit without changes in size or weight.



Lens with Optional Encoder Unit

Lens with Encoder Devices included in the Drive Unit

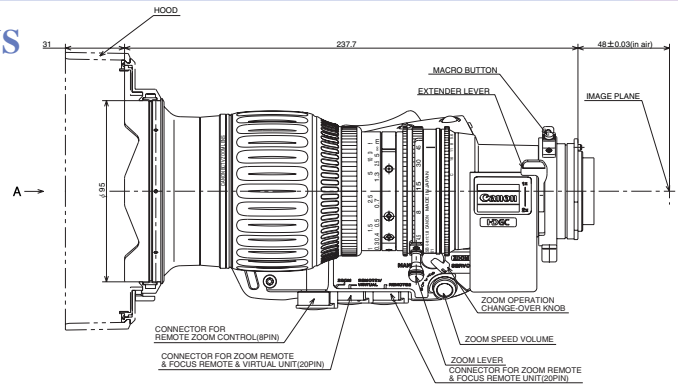
Ecological Design

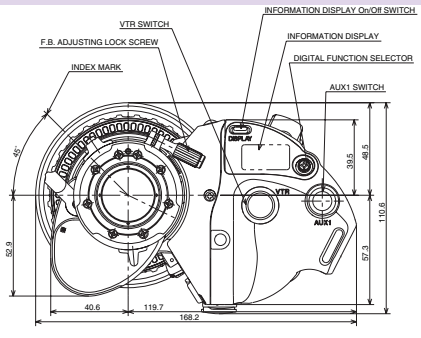
The HDgc series has succeeded in reducing the use of harmful and hazardous substances that could pollute the environment.

SPECIFICATIONS

KJ10ex4.5B IRSE		
Image Format Covered	16:9	
	2/3 inch	
Built-in extender	1.0x	2.0x
Zoom Ratio	10x	
Range of Focal Length	4.5 – 45mm	9 –90mm
Maximum Relative Aperture	1:1.8 at 4.5 – 34.5mm 1:2.35 at 45mm	1:3.6 at 9 – 68.9mm 1:4.7 at 90mm
Angular Field of View	93.7° x 61.9° 12.2° x 6.9°	56.1° x 33.4° 6.1° x 3.4°
Minimum Object Distance(M.O.D.)	0.3m (10mm with Macro)	
Object Demensions at M.O.D.	74.1 x 41.7cm at 4.5mm 6.4 x 3.6cm at 45mm	37.0 x 20.8cm at 9mm 3.2 x 1.8cm at 90mm
Approx. Size	W x H x L = 168.2 x 110.6 x 237.7 mm	
Approx. Mass	1.83kg	

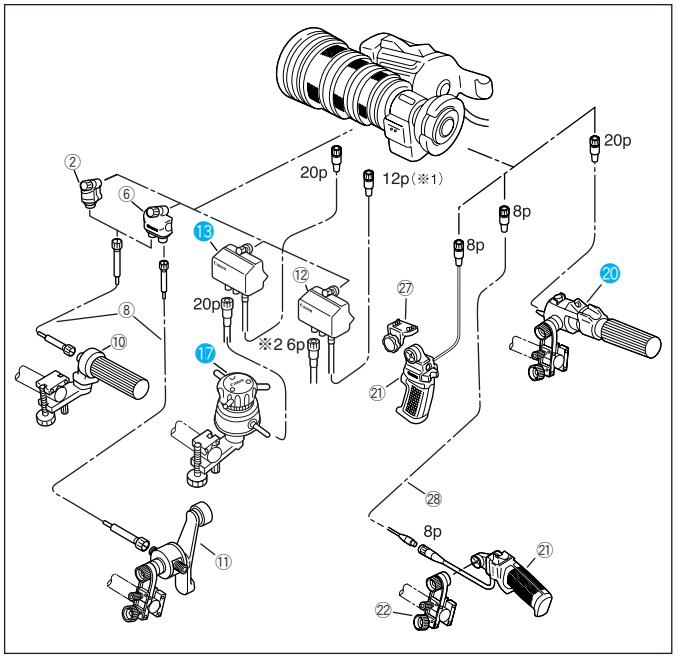
DIMENSIONS





KJ10ex4.5B IRSE (Unit:mm)

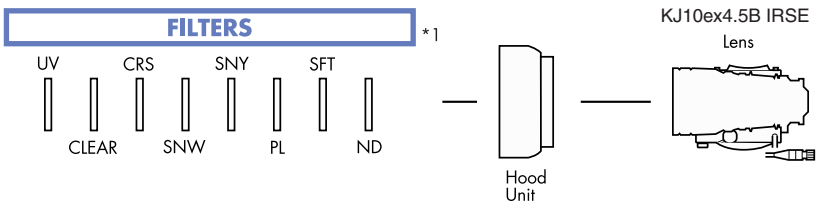
LENS CONTROLLERS



#	Unit	Description	CODE
②	FFM-100	Flex Focus Module	1824A015
⑥	FFM-200	Flex Dual Module	1824A013
⑧	FC-40	Flex Cable	1824A010
⑩	FFC-200	Flex Focus Controller	1824A014
⑪	FZC-100	Flex Zoom Controller	1824A021
⑫	FPM-420	Focus Positional Servo Module	1824A026
⑬	FPM-420D	Focus Positional Servo Module	1824A129
⑰	FPD-400D	Focus Positional Demand	1824A124
⑳	ZSD-300D	Zoom Demand	1824A123
㉑	ZSG-200M	Zoom Servo Grip	1824A069
㉒	CR-10	Clamper	1824A007
㉗	ZGA-500	Grip Adapter	0043T088
㉘	EC-80	Zoom Extension Cable (8P)	1824A009
㉙	CC-0620	Conv. Cable (6pM-20pF)	1824A128
㉝	CC-2012	Conv. Cable (20pM-12pF)	1824A126

(※1) ㉝CC-2012 conversion cable is necessary to connect between IRSE Digital Drive Lens and FPM-420.
(※2) ㉙CC-0620 conversion cable is necessary to connect between FPM-420, FPM-500 or IAS Analog Drive Lens and FPD-400D.

OPTICAL ACCESSORIES



TYPE	MODEL	CODE
Ultra Violet	UV/127P0.75	1823A083
Clear	CL/127P0.75	1823A093
Cross Screen	CRS/127P0.75	1823A085
Snow Cross	SNW/127P0.75	1823A087
Sunny Cross	SNY/127P0.75	1823A088
Polarized Light	PL/127P0.75	1823A090
Softon	SFT/127P0.75	1823A089
ND8(12.5%Transmittance)	ND8/127P0.75	1823A086

*1 The filters are to be attached to the threaded hood unit.

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Specifications subject to change without notice

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