

Canon

KH13x4.5 KRS

HDGC



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.

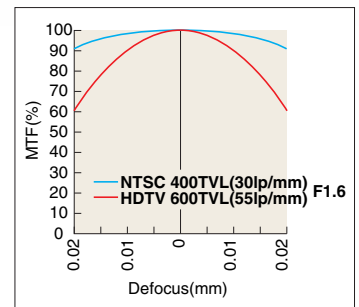
Optical Performance of HDgc Series

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.

Special Optical Elements

With the goal of minimizing chromatic aberration, the HDgc series lenses utilizes special elements including an artificially re-crystallized 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".



< Graph 1 >



Hi-UD Glass

Other Features of KH13x4.5 KRS

Shuttle Shot Function

Shuttle Shot is a Canon Exclusive Technology that enhances production capabilities. At the touch of a button, this feature allows the operator to zoom back and forth instantly between any two positions. It can be used to zoom to the telephoto position to check focus and then return instantly to the original position or you can "shuttle" between any two zoom positions at any time.

SHUTTLE SHOT



Compact Design

The KH13x is smaller in size and lighter in weight compared to the traditional BCTV lenses, which allows ease of use when carried on a shoulder.

Advanced Drive Unit

The new ergonomically designed drive unit achieves an ideal balance and comfort by having it tilt to an ideal angle. In addition, the size of the unit has been minimized to comfortably fit in the palm of one's hand. Overall, it improves the feeling of unity between the user and the lens. Moreover, the drive unit is equipped with a Shuttle Shot Function while offering a maximum zoom speed of 1.2sec from wide end to tele end.

New Ergonomic Drive Unit

The new ergonomically designed drive unit achieves an ideal balance and comfort by having it tilt to an angle. In addition, the size of the unit has been minimized to comfortably fit in the palm of one's hand. Overall, it improves the feeling of unity between the user and the lens.



Ecological Design

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

New HDgc Logo
HDGC



HDTV Optical Performance

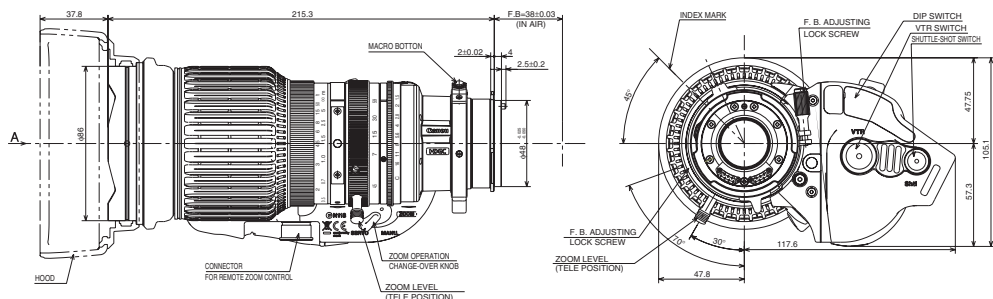
- Reduced Chromatic Aberrations
- High and Flat MTF
- Countermeasures Against Ghosting and Flares

SPECIFICATIONS

KH13x4.5 KRS

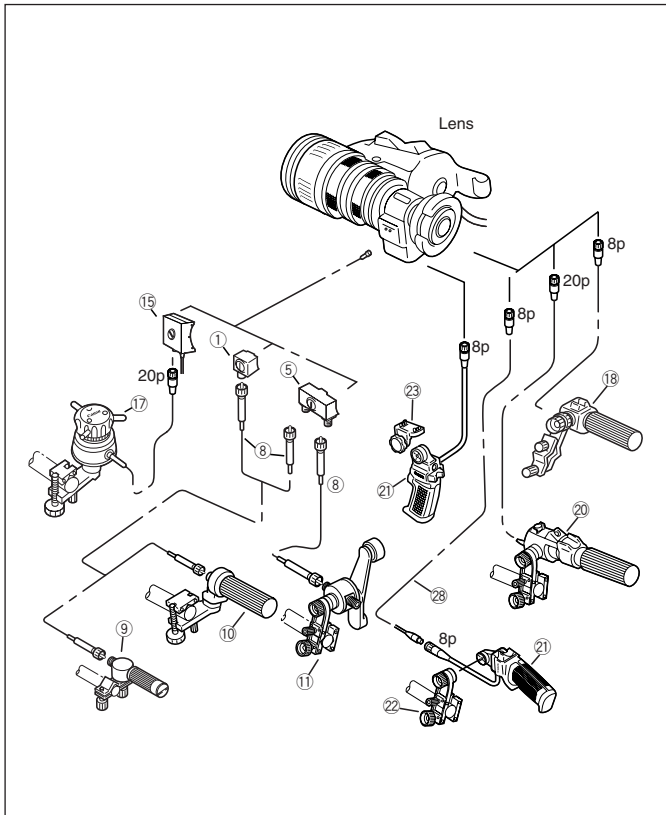
	16:9
Zoom Ratio	13x
Range of Focal Length	4.5 – 59mm
Maximum Relative Aperture	1:1.5 at 4.5 – 44mm 1:2.0 at 59mm
Angular Field of View	$75.7^\circ \times 46.9^\circ$ $6.8^\circ \times 3.8^\circ$
Minimum object Distance (M.O.D.)	0.4m (10mm with Macro)
Object Dimensions at M.O.D.	73.4 x 41.3cm at 4.5mm 5.4 x 3.0cm at 59mm
Approx. Size	W x H x L = 165.4 x 105.1 x 215.3 mm
Approx. Mass	1.59kg

DIMENSIONS



KH13x4.5 KRS (Unit:mm)

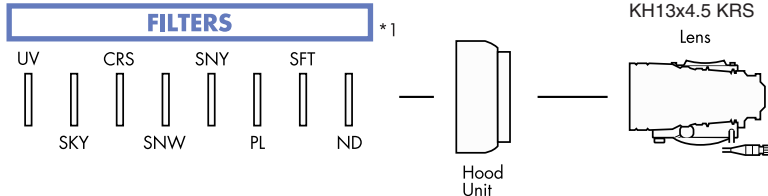
LENS CONTROLLERS



#	Unit	Description	CODE
①	FM-12	Flex Focus Module	1824A012
⑤	FM-70	Flex Dual Module	0002T071
⑧	FC-40	Flex Cable	1824A010
⑨	FFC-15	Flex Focus Controller	1824A024
⑩	FFC-200	Flex Focus Controller	1824A014
⑪	FZC-100	Flex Zoom Controller	1824A021
⑮	FPM-77	Focus Positional Servo Module	1824A020
⑰	FPD-400D	Focus Positional Demand	1824A124
⑱	ZSD-15M II	Zoom Demand	1824A071
⑳	ZSD-300D	Zoom Demand	1824A123
㉑	ZSG-200M	Zoom Servo Grip	1824A069
㉒	CR-10	Clamper	1824A007
㉓	GA-70	Grip Adapter	0018T531
㉔	EC-80	Zoom Extension Cable (8P)	1824A009
㉕	CC-0620	Conv. Cable (6pM-20pF)	1824A128
㉖	CC-0820	Conv. Cable (8pM-20pF)	1824A127

(※1) ㉕ CC-0620 conversion cable is necessary to connect between FPM-77 and FPD-400D.
 (※2) ㉖ CC-0820 conversion cable is necessary to connect between Analog Drive Lens and ZSD-300D.

OPTICAL ACCESSORIES



TYPE	MODEL	CODE
Ultra Violet	UV/105P1	1823A022
Sky Light	SKY/105P1	1823A023
Cross Screen	CRS/105P1	1823A024
Snow Cross	SNW/105P1	1823A047
Sunny Cross	SNY/105P1	1823A025
Polarized Light	PL/105P1	1823A028
Softon	SFT/105P1	1824A027
ND8 (12.5% Transmittance)	ND8/105P1	1823A026

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

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Specifications subject to change without notice