

High sensitivity color camera

KP-DE500

High sensitivity black and white camera

KP-E500



High sensitivity color camera KP-DE500

100 Times More Sensitive Than A Normal Camera

- A new 1/2 inch EM-CCD with electron multiplication is used to achieve exceptional sensitivity.

Color in full motion mode	0.0009 lx
Color accumulation mode	0.000015 lx
Monochrome in full motion mode	0.00005 lx
Monochrome accumulation mode	0.0000008 lx

Hitachi Technology Enables Superior Image Reproduction In Low Light Levels

- Thermoelectric cooling used on the EM-CCD to reduce the effects of dark current noise along with a new digital signal processor (DSP) that provides digital noise reduction of the luminous signal yields sharp clear pictures with a high S/N ratio.

High sensitivity monochrome camera KP-E500

For Even Greater Sensitivity A Monochrome Version of the Camera is Available Allowing Use in Even Lower Light Levels

- In the normal mode of operation the camera provides higher sensitivity as compared to a normal camera. In the accumulation mode unmatched sensitivity is achieved allowing use in extremely low light situations.

Monochrome in full motion mode	0.00003 lx
Monochrome accumulation mode	0.0000005 lx

Electron Multiplication used in the EM-CCD Improves Performance While Reducing Technical Issues

- Typical high sensitivity cameras use an Image Intensifier Tube that is subject to burn in, afterimage (lag) and short life span. These problems are eliminated with the use of the EM-CCD.

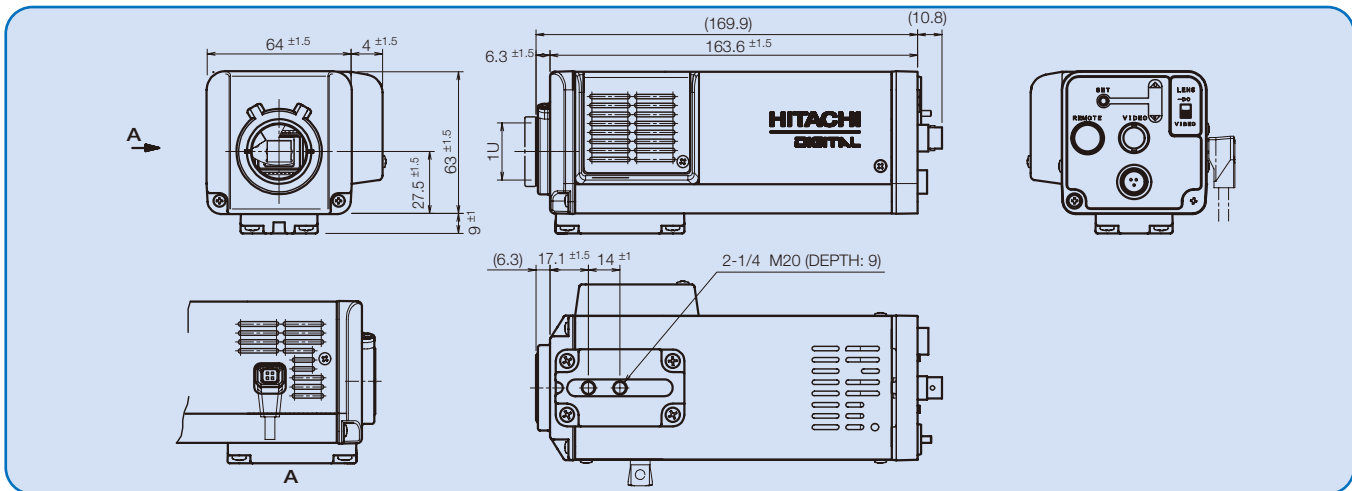


Main Specifications

Imaging device	1/2-inch interline EM-CCD
Total pixels	680(H) x 500(V)
Effective pixels	658(H) x 489(V)
Imaging area	6.58(H) x 4.89(V) mm
Pixel pitch	10.0(H) x 10.0(V) μ m (Square pixel)
Scanning system	2 : 1 Interlace
Scanning frequency	Horizontal 15.734 kHz Vertical 59.94 Hz
Synchronization	Internal
Video output	
VBS output	Video 0.7 Vp-p Plus terminal nature
Sync	0.3 Vp-p Negative polarity
Burst	0.3 Vp-p, More than 8 cycles
Impedance	75 Ω Un-balancing.
Signal-processing system	Digital processing (Input 10 bit)
Signal to noise ratio (S/N)	50 dB or more (luminosity signal, Gamma OFF, minimum gain, without detail boost)
Resolution	Horizontal: 480 lines Vertical: 350 lines (In the central part)
Minimum photographic subject illumination KP-DE500	0.0009 lx (Color in full motion, maximum sensitivity setup, F1.2, 50 IRE) 0.00005 lx (Monochrome in full motion, maximum sensitivity setup, F1.2, 50 IRE) 0.000015 lx (Color 64 time accumulation, maximum sensitivity setup, F1.2, 50 IRE) 0.0000008 lx (Monochrome 64 time accumulation, maximum sensitivity setup, F1.2, 50 IRE)
Minimum photographic subject illumination KP-E500	0.00003 lx (Monochrome in full motion, maximum sensitivity setup, F1.2, 50 IRE) 0.0000005 lx (Monochrome 64 time accumulation, maximum sensitivity setup, F1.2, 50 IRE)
Sensitivity (Gain) setup	Auto or a manual (factory set-AUTO)
Electronic shutter	Shutter: 7 steps /AES (factory set-OFF) OFF(1/60), 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 sec
Accumulation magnification setup	Auto or a fixed change is possible. (factory set-OFF) 2, 4, 6, 8, 10, 16, 32, 64 times
Backlight compensation	An ON/OFF change is possible (factory set-OFF) Light-measurement area: Nine area to selection is possible.

The output for auto iris lenses	(Square shape 4 pin, JEITA conformity) A galvanometer system/video signal
White balance control	From the following three modes to selection (factory set-ATW) *Only KP-DE500 (color) ATW: The mode which follows automatically AWC: The mode which holds a white balance after an automatic setup MANUAL: They are red and the mode which carries out blue gain adjustment and unites a white with manual operation
Camera title character display	A display is possible to 22 characters in an alphanumeric character and a sign A setup to either of two upper and lower sides of a screen is possible in the position of a character.
B/W Mode	OFF: The mode of fixation on a color image
*Only KP-DE500 (color)	On: In high sensitivity monochrome image mode AUTO: With luminous intensity OFF of high sensitivity monochrome image, the mode where ON changes automatically In addition, it changes, as for luminous intensity from 3 stages of the HI, the MID and the LOW selective possibility
Picture quality adjustment menu	Following to the menu indication of the picture, various picture quality adjustments and mode selection are possible
DNR	Change of AUTO / MANU (8 steps) (factory set-AUTO)
Power supply voltage	DC 12V \pm 1 V
Current consumption	Approximately 1.5 A (excluding lens load)
Lens mount	The C / CS mount (flange back adjustment mechanism it is attached)
Ambient, operating	- 10 $^{\circ}$ C - + 50 $^{\circ}$ C / 30 - 80% RH *when in order for you to use with the efficiency which long time is stabilized, it continues uses by all means +40 $^{\circ}$ C please use at below.
Ambient, storage	Retention: 20 $^{\circ}$ C - + 60 $^{\circ}$ C / 20 - 90% RH
Vibration endurance	24.5 m/s ² (10 - 200Hz XYZ direction each 30 minute) *Please do not add the strong vibration over long time.
External dimensions	78(W) x 63(H) x 170(D) mm (The lens and the projection section are excluded)
Mass	Approximately 610g (The lens is excluded)

Dimensions



CAUTION: To ensure safe operation, please read the instruction manual before using this product.

These Specifications are subject to change without notice.

Hitachi Kokusai Electric Inc.

Head Office : 14-1, Sotokanda 4-chome, Chiyoda-ku, Tokyo 101-8980, Japan
Phone : +81(0) 3-6734-9432, Fax : +81(0) 3-5209-5942
URL : <http://www.hk-kokusai.com>

Hitachi Kokusai Electric (Shanghai) Co., Ltd. Beijing Branch
Room 1413, Beijing Fortune Building, 5 Dong San Huan Bei-Lu, Chao Yang District, Beijing
Phone : +86(0) 10-6590-8755/8756, Fax : +86(0) 10-6590-8757

Hitachi Kokusai Electric America, Ltd. URL : <http://hitachikokusai.us>
Headquarters and Northeast Office : 150 Crossways Park Drive, Woodbury, New York 11797, U. S. A.
Phone : (+1) 516-921-7200, Fax : (+1) 516-496-3718
West Office : 371 Van Ness Way, Suite 120 Torrance, CA, 90501, U. S. A.
Phone : (+1) 310-328-6116, Fax : (+1) 310-328-6252

Midwest Sales : Phone : (+1) 330-334-4115, Fax : (+1) 516-496-3718
Service (+1) 989-345-5379

South Sales : Service (+1) 256-774-3777
Parts Center : Phone : (+1) 516-682-4435, Fax : (+1) 516-921-0993
Latin Sales : Phone : (+1) 516-682-4420, Fax : (+1) 516-496-3718

Hitachi Kokusai Electric Canada, Ltd. URL : www.hitachikokusai.ca
Head Office : 1 Select Avenue Unit#11 Scarborough, Ontario M1V 5J3, Canada
Phone : (+1) 416-299-5900, Fax : (+1) 416-299-0450
Eastern Office : 5795 Chemin St. Francois St. Laurent, Quebec H4S 1B6, Canada
Phone : (+1) 514-332-6687, Fax : (+1) 514-335-1664

Hitachi Kokusai Electric Europe GmbH

Head Office : Weiskircher Straße 88, Jügesheim D-63110 Rodgau, Germany
Phone : +49(0) 6106-69920, Fax : +49(0) 6106-16906
URL : www.hitachi-ke-eu.com
General email address : info@hitachi-ke-eu.com

Hitachi Kokusai Electric U.K. Ltd.

Head Office : Windsor House, Britannia Road, Waltham Cross, Hertfordshire EN8 7NX, United Kingdom
Phone : +44(0) 845-121-2177, Fax : +44(0) 845-121-2180



CERTIFICATE No.
JMI-0062
ISO 9001/BS 5750Pt1
EN 29001/JIS Z9901