

HITACHI

Near-infrared Monochrome CCD Camera

KP-M2R



The KP-M2R is a black and white camera using a 1/2-inch image size CCD having sensitivity in the near-infrared spectrum.

The KP-M2R features high sensitivity, high resolution and high performance.

The KP-M2R is provided with various functions including multiple step electronic shutter, field-on-demand, integration mode switching, HD/VD pulse switching and non-interlaced scanning.

The KP-M2R is most suitable for use with a microscope or an image processing system.

The KP-M2R is compatible with the KP-M2.

Major features

- **Small size and lightweight** Though the KP-M2R is small in size and light in weight, it offers high performance. A video signal is obtained only by supplying 12V DC.
- **High resolution** The latest high grade CCD is used. The horizontal resolution is 570TVL (560TVL CCIR), and the vertical resolution is 485TVL(575TVL CCIR).
- **Multiple-step electronic shutter function** The multiple-step electronic shutter function is provided. The eight-step shutter speeds can be selected from 1/100(1/120 for CCIR) to 1/10000.
- **Internal or external synchronization, and interlaced or non-interlaced operation** The synchronization system and the scanning system are automatically switched by the kind of external sync signal.
- **Field-on-demand function** The image captured by an external trigger signal can be displayed instantly. The capture time can be adjusted by an external trigger signal and the shutter.
- **Frame or field integration mode** The CCD integration mode can be switched between field and frame modes. In combination with the selected scanning system and electronic shutter speed selection, the desired video output signal can be obtained.

Specifications

Imaging device	1/2 inch Interline CCD	Sensitivity	30lux, f4, 3200° K
No. of total pixels	EIA:811(H)X508(V) CCIR:759(H)X596(V)	Minimum illumination	0.3lux, fl.4, AGC:ON, GAMMA:ON
No. of effective pixels	EIA:768(H)X494(V) CCIR:752(H)X582(V)	Signal-to-noise ratio	56dB
Pixel size	EIA:8.4(H)X9.8(V) μm CCIR:8.6(H)X8.3(V) μm	Electronic shutter	1/10000, 1/4000, 1/2000, 1/1000, 1/500, 1/250, 1/125, 1/120(CCIR), 1/100(EIA), 1/60(EIA), 1/50(CCIR)sec OFF :Normal exposure Settable from external switch. Set to OFF at factory.
Sensing area	EIA :6.45X4.84mm CCIR:6.47X4.83mm	Integration mode	Field or frame (Settable by external switch.) Set to frame integration mode at factory.
TV format	EIA/CCIR	Gamma correction	Gamma = 1.0 or correction (Settable by internal switch.) Set to 1.0 at factory.
Lens mount	C-mount	AGC	Fixed or AGC (Settable by internal switch.) Set to fixed gain at factory.
Flange back distance	17.526mm(Not adjustable)	Field-on-demand	ON or OFF (Settable by internal switch.) Set to OFF at factory.
Hor. Scanning freq.	EIA:15.734kHz CCIR:15.625kHz	Restart · Reset	ON or OFF (Settable by chip components) Set to OFF at factory.
Vert. Scanning freq.	EIA:59.94Hz CCIR:50Hz	Supply voltage	12V±1V DC
Sync system	Internal / External (automatic switching)	Power consumption	180mA approx.
Internal sync (Scanning system)	2:1 interlaced No. of hor. lines : 525(625 CCIR) fv=2fH/525(625 CCIR)	Ambient conditions	Operating:-10 to 50°C, 90%RH or less Storage :-20 to 60°C, 70%RH or less
External sync input	HD/VD : 2 to 6Vp-p, negative Input impedance : 1kΩ Frequency deviation : ±1%	Vibration resistance	7G (10 to 60Hz, amplitude:0.98mm constant (60 to 200Hz amplitude, variable) (10 to 200Hz, sweep:1 min, XYZ,duration:30min.)
Number of horizontal lines within external sync range	2:1 interlaced EIA: 521 to 2047 lines /2FLD 1FLD; (61 to 15 Hz) CCIR: 621 to 2047 lines /2FLD 1FLD; (51 to 15Hz) Non-interlaced EIA: 260 to 1023 lines /1FLD 1FLD; (61 to 15Hz) CCIR: 310 to 1023 lines /1FLD 1FLD; (51 to 15Hz)	Dimensions	44(W)X29(H)X72(D)mm
Video output	1.0Vp-p/75Ω, unbalanced Video: 0.7Vp-p Sync : 0.3Vp-p, negative	Mass	120g approx.
Resolution	EIA : 570TVL(H)/485TVL(V) CCIR: 560TVL(H)/575TVL(V)		

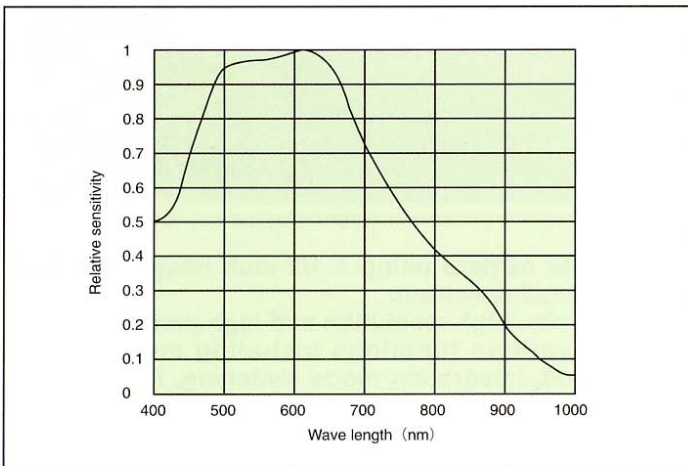
Composition

1. Camera(With dummy glass, AR coated)
2. Operation manual

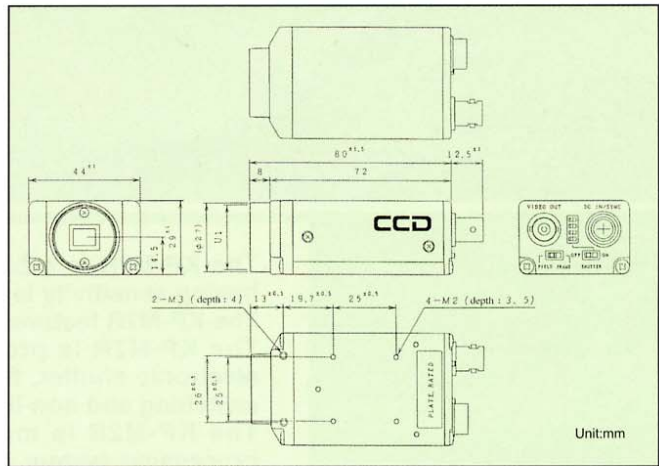
Optional accessories

- 1.Tripod adapter··········TA-M1
- 5.Camera cables····2m C-201KSM
- 2.12-pin plug······HR10A-10P-12S(01) 5m C-501KSM
- 3.AC adaptor··········AP-130 10m C-102KSM
- 4.Junction box··········JU-M1A

Spectral sensitivity response



Dimensions



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

These Specifications are subject to change without notice.

Hitachi Denshi, Ltd.

Head Office : 1-Banchi Kanda-izumi-cho, Chiyoda-ku, Tokyo 101-0024, Japan
Phone : (03)5821-5311, Fax: (03)5821-5394

Hitachi Denshi America, Ltd.

Head Office : 150 Crossways Park Drive, Woodbury, New York 11797, U.S.A.
Phone: (516)921-7200, Fax: (516)496-3718

Chicago Office : 450 East Devon Ave., Suite 110 Itasca, IL 60143-1261, U.S.A.
Phone: (630)250-8050, Fax: (630)250-8054

Los Angeles Office : 371 Van Ness Way, Suite 120 Torrance, California 90501, U.S.A.
Phone: (310)328-6116, Fax: (310)328-6252

Dallas Office : 2100 West N.W. Highway, Suite 1145 Grapevine, TX 76051, U.S.A.
Phone: (630)488-4528, Fax: (630)488-4714

Atlanta Office : 3039 Amwiler Road, Suite 118 Atlanta, Georgia 30360, U.S.A.
Phone: (770)242-3636, Fax: (770)263-8838

Parts Center : Phone: (516)921-7200

Hitachi Denshi Canada, Ltd.

Head Office : 1 Select Avenue Unit #14 Scarborough, Ontario CANADA M1V 5J3
Phone: (416)299-5900, Fax: (416)299-0450

Eastern Office : 5795 Chemin St.Francois St.Laurent, Quebec CANADA H4S 1B6
Phone: (514)332-6687, Fax: (514)335-1664

Ottawa Office : 9 Antares Drive Nepean, Ontario CANADA K2E 7V5
Phone: (613)727-3930, Fax: (613)825-4253

Hitachi Denshi (Europa) GmbH

Head Office : Weiskircher Straße 88, Jügesheim D-63110 Rodgau, Germany
Phone: 06106-6992-0, Fax: 06106-16906

Hitachi Denshi (U.K.) Ltd.

Head Office : 14 Garrick Industrial Centre, Irving Way Hendon, London NW9 6AQ, United Kingdom
Phone: (0181)202-4311, Fax: (0181)202-2451

Leeds Office : Brookfield House, Selby Road, Garforth Leeds, LS 25, 1NB, United Kingdom
Phone: 0113-2874400, Fax: 0113-2874260

Hitachi Denshi, Ltd.

Singapore Branch : 10 Anson Road #20-15 International Plaza Singapore 079903
Phone: (65)223-0030, Fax: (65)223-0206

Beijing Office : Beijing Fortune Building 5, Dong San Huan Bei-lu, Chao Yang District, Beijing, China
Phone: 6590-8755/8756, Fax: 6590-8757