

HITACHI
Inspire the Next

VK-S454R_(NTSC)/VK-S454E_(PAL)

Wide-Dynamic High-Sensitivity Color Zoom Camera

- *Lead-free*
- *Wide Dynamic Range (WDR)*
- *Progressive Scan*
- *Digital Slow Shutter*
- *High Durability*
x23 Optical Power Zoom Lens
- *Digital Image Flip*
- *Privacy Zone Masking*
- *Internal/External Sync.*
(AC-Line Pulse Signal)
- *Motion Detect*

Lead-free



WIDE
DYNAMIC RANGE
PROGRESSIVE SCAN

DIGITAL
SLOW
SHUTTER

x23
OPTICAL
ZOOM

I₂R
FILTER ON/OFF

D.S.P
Digital Signal Processor

PRIVACY
ZONE
MASKING

MOTION
DETECT

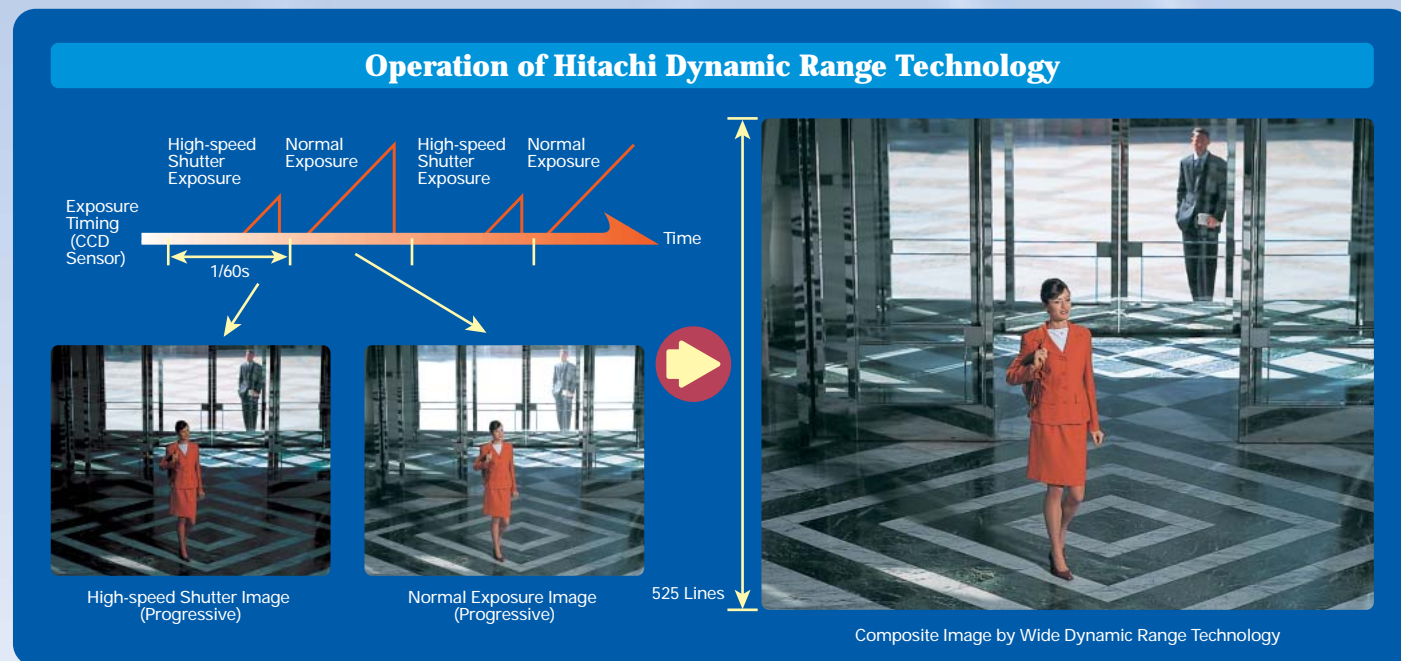
Made in Japan

Lead-free VK-S454R/VK-S454ER: Wide Dynamic Range Color Zoom Camera with Progressive Scan, Digital Slow Shutter, Digital Image Flip, Privacy Zone Masking, Removable IR Cut Filter and Motion Detect

The Hitachi VK-S454R/S454ER is a lead-free compact chassis-type camera designed for surveillance of various sites under a wide range of light conditions. Even high-contrast scenes can be captured without glare or loss of detail thanks to the Wide Dynamic Range design. The Digital Slow Shutter and Removable IR Cut Filter function make the camera particularly suitable for monitoring sites at nighttime or dark locations.

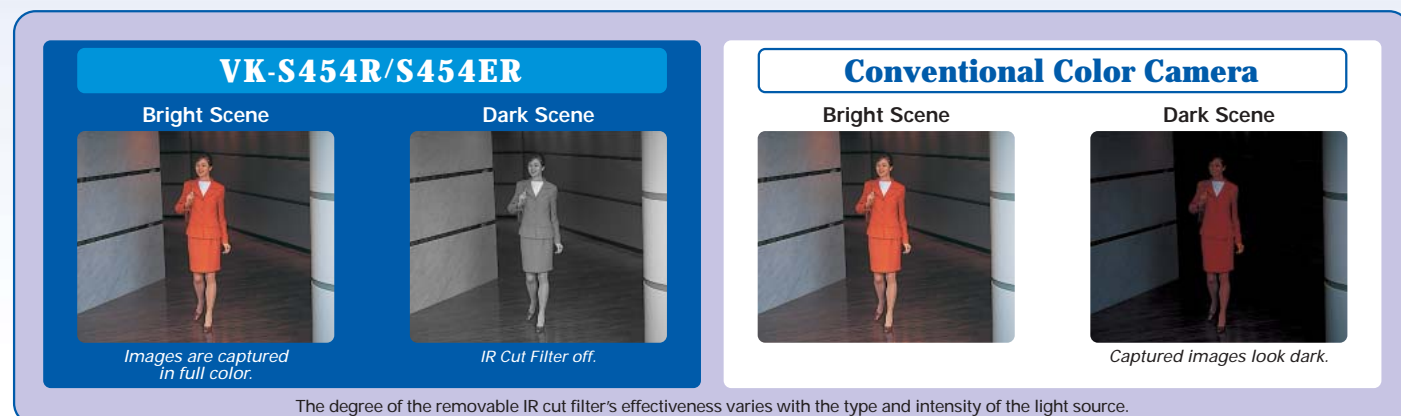
Wide Dynamic Range (WDR)

Hitachi's Wide Dynamic Range Technology uses two shutter speeds in alternative video fields—high and normal—every 60th (or 50th) of a second and combines two fields into one progressive scan frame. It allows every detail to be captured accurately even if one portion of an image is very bright while other portions are dark. Whether at the high shutter speed or normal shutter speed, the progressive scan CCD provides a horizontal resolution of 470 lines. As a result, combined fields yield a frame of high-quality images.



Removable IR Cut Filter

Ordinary color cameras feature a fixed IR cut filter for clear color images in daylight conditions. The VK-S454R/S454ER, however, is equipped with a removable IR cut filter. Under very low light conditions, the IR cut filter is automatically turned off to deliver brighter images than other color video cameras do.



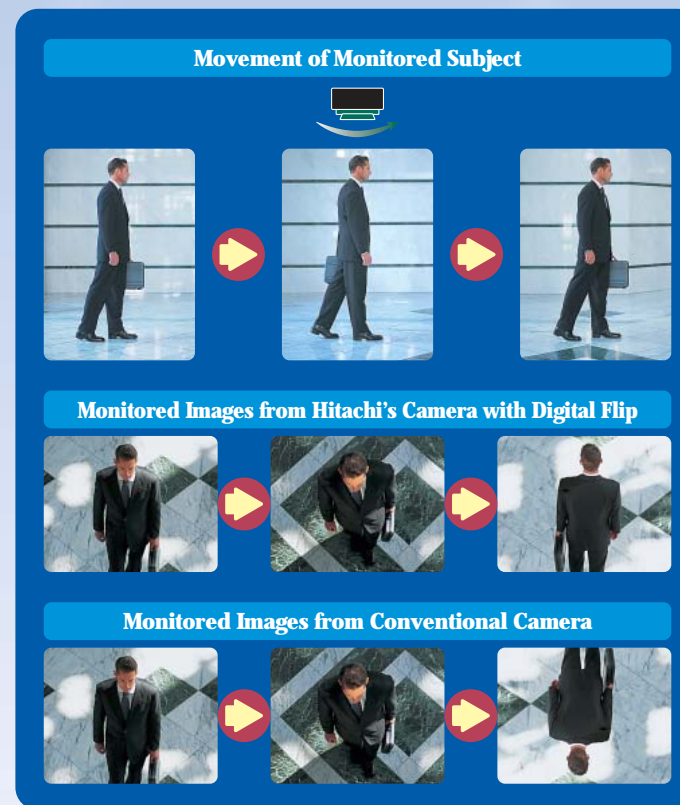
The degree of the removable IR cut filter's effectiveness varies with the type and intensity of the light source.

Digital Slow Shutter (D.S.S.)

The Digital Slow Shutter allows the camera a long exposure time of 1/2 (1/1.5) second. This translates into a higher sensitivity and minimum illumination of only 0.1 lx (IR cut filter on), 0.02 lx (IR cut filter off) or 0 lx with the IR illuminator.

Digital Image Flip

When the camera scans more than a certain amount of degrees while tracking a moving object, it digitally flips the object's image upside-down on the monitor. This means you can track an object moving underneath the camera in a continuous shot.



Internal/External Sync

The camera may operate by its own internal sync or under control of an external source like a sync generator. Internal/external sync capability expands the range of the camera's applications.

Environmentally Friendly

With these new lead-free models, make your organization environmentally conscious. The VK-S454R/S454ER cameras enable you to not only monitor your environment but also help preserve it.

Privacy Zone Masking Function

When there are windows, entrances and other objects within the camera's vision that are not subject to surveillance, they can be masked on the monitor for protection of privacy. This makes the VK-S454R/VK-S454ER particularly suitable for outdoor surveillance.



Built-In Optical Power Zoom Lens

A reliable built-in x23 optical zoom lens allows the user to monitor a scene from any angle. Combined with x12 digital zoom, the total zoom ratio is x276.

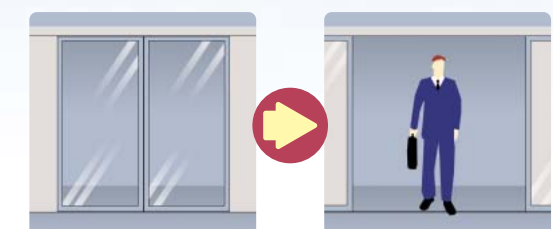


D.S.P. for Intelligent Control

A.I. auto iris keeps video output constant, compensating for variations in illumination. A.I. auto white balance allows natural color reproduction under any ambient lighting.

Motion Detect Function

For the ultimate in remote monitoring the VK-S454R/S454ER comes with full motion detect functionality. Save time when this camera shoots what you need—when you need it.

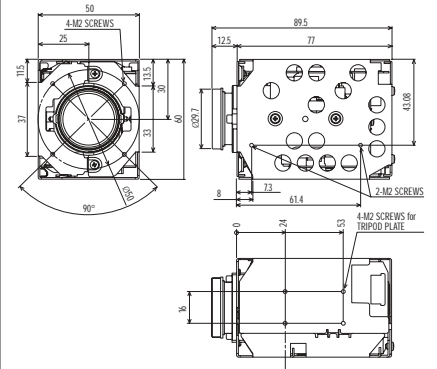


*All images are for illustration only.

Specifications

	VK-S454R (NTSC) Lead free	VK-S454ER (PAL) Lead free
CCD Image Sensor		
Image Size	4.5mm Dia. (1/4-inch)	
Total Pixels	380k (758 x 504)	450k (758 x 592)
Effective Pixels	360k (724 x 494)	420k (724 x 582)
Practical Pixels	360k (724 x 494)	420k (724 x 582)
Progressive Scan	Yes	
Lens Optical		
Zoom Magnification	23x (f=3.6 - 82.8mm)	
Practical f-value	f=3.6 - 82.8mm	
Practical Horiz. Angle	54°(w) - 2.5°(t)	
F-value	F1.6(w)* - F3.7(t)	
Zoom Speed (Manual)	4.2s*/5.8s (soft)	
(In Preset : Trace / No-)	2.9s/1.5s (soft)	
Focus		
Auto	VAF	
Manual (Far/Near)	Provided (soft)	
Focal Range	infinity - 1m(t) - 0.01m(w)* (soft)	
IR Cut Filter Removable		
Auto	Pro. AER+* (OFF - ON - 1/4* - 1/4k)	Pro. AER+* (OFF - ON - 1/3* - 1/4k)
Manual (ON/OFF)	Provided (soft)	
Durability		
Zoom/Focus/Iris	500k cycles	
IR Removable	50k cycles	
DSP Functions	DSP-6	
Digital Slow Shutter	Yes (SDRAM I/F) w/o WDR	
Progressive Scan	Yes	
Wide Dynamic Range	OFF* / ON (Auto* [offset] /Manual) (soft)	
Image Reverse	OFF* / ON (soft) w/o WDR	
Mirror	OFF* / ON (soft) w/o WDR	
Scene Memory (Freeze)	OFF* / ON (soft)	
Privacy Zone Masking	OFF / ON * [2 zone 2-D / 8 zone 3-D] (soft)	
Motion Detect	OFF* / ON (soft)	
Various Customizable Settings	Yes [Preset store (max.111), WB tuning]	
Digital Zoom (Zoom Magnification)	OFF* / ON (12x* [soft: max.12x])	
Electrical Shutter		
Auto	Pro. AE (1/60 - 1/4ks)	Pro. AE (1/50 - 1/4ks)
Auto (+DS Shutter)	Pro.AE+ (1/2 - 1/4* - 1/4ks : Seamless)	Pro.AE+ (1/1.5 - 1/3* - 1/4ks : Seamless)
Manual	Shutter priority w/o WDR 1/2 - 1/30ks: soft Exposure priority w/o WDR F1.6 - F34: soft AGC priority w/o WDR 0 - 30dB: soft	Shutter priority w/o WDR 1/1.5 - 1/30ks: soft Exposure priority w/o WDR F1.6 - F34: soft AGC priority w/o WDR 0 - 30dB: soft
Manual (Sensitivity)	32x, 16x, 8x, 4x, 2x (soft)	
Iris	Auto*/(offset: soft) w/o WDR	
White Balance	Auto*/(manu: soft)	
Horizontal Resolution		
Normal (1/60s, 1/50s)	470/(400) TVL	470/(550) TVL
DSS (1/4s, 1/3s)	470/(400) TVL	470/(550) TVL
Luminance S/N Ratio	More than 50 dB	
Min. Sensitivity		
IR-cut ON (1/60s, 1/50s)	3 lx (Color) (Typical)	
IR-cut ON (1/4s, 1/3s)	0.2 lx (Color)	
(1/2s, 1/1.5s)	0.1 lx (Color)	
IR-cut OFF (1/4s, 1/3s)	0.02* lx (B/W*)	
w/ IR illuminator (Option)	(0 lx [B/W*])	
In 3m Condition	(F1.6(w), 300mV)	
Sync System	Internal/Line-Lock (60Hz)	Internal/Line-Lock (50Hz)
Power		
Supplied Voltage	9-12V DC	
Supplied Current	310mA w/ WDR	
Max.	540mA w/ WDR	
Consumption	2.9W (4.7W) w/ WDR	
Dimension (W x H x D)	50 x 60 x 89.5mm (w/ M-case)	
Weight	225g (w/ M-case)	
No. of Connectors	1 (9 pin)	
Operating Temperature	(Recommended) 0 ~ 60°C (0 ~ 40°C)	

Outer Dimensions



Unit: mm
Front, Side and Bottom Views

Design and specifications are subject to change without notice.

WDR=Wide Dynamic Range.

* Default mode.

When Image Freeze function is ON, the camera status is not changed.
Combined performance of both Image Freeze function and Mirror function is not possible.

Combined performance of Privacy Masking function and Motion Detect function is not possible.

HITACHI
Hitachi, Ltd. Tokyo Japan

Hitachi, America, Ltd.
900 Hitachi Way, Chula Vista, CA 91914-3556
Tel: 800-981-2588 Fax: 800-438-7098
Tel: +1-619-591-5200 Fax: +1-619-591-5201
www.hitachi.com

Hitachi Europe Ltd.
Whitebrook Park, Lower Cookham Road, Maidenhead,
Berkshire SL6 8YA
Tel: +44 (0)1628 585 000 Fax: +44 (0)1628 643 404
www.hitachidigitalmedia.com

Hitachi Home Electronics Asia (S) Pte. Ltd.
438A Alexandra Road #01-01/02/03,
Alexandra Technopark,
Singapore 119967
Tel: +65-6536-2520 Fax: +65-6536-2521
www.hitachimultimedia.com.sg

Hitachi Sales Corporation of Taiwan
2nd F1., No. 65 Nanking E Rd.,
Sec. 3 Taipei, 104 Taiwan
Tel: +866 (02) 2516 0500 Fax: +866 (02) 2516 0512