

## Digital CCD Camera C8484-15 Series (CCD separation model)

For Machine Vision, Industrial Inspection and Biomedical Systems



The C8484-15 is a high-resolution digital camera using a progressive scan interline CCD chip with no mechanical shutter. In addition to a high resolution of 1.37 million pixels, a wide dynamic range of 12 bit digital output and high sensitivity in the VIS-NIR region offers a wide application range down to low light level imaging.

Easy integration using the HAMAMATSU SDK (DCAM-API) and Various Interfaces

● LVDS, Camera Link, and IEEE-1394 models are available.

Model (Type. No)	Digital output interface	System configuration
<b>LVDS (C8484-15)</b>	The C8484-15 transmits 12-bit parallel digital output data via an RS-644 (LVDS) interface.	
<b>Camera Link (C8484-15C)</b>	The C8484-15C camera outputs data is transmitted via a Camera Link interface. The camera transmits 12-bit digital output data. 	
<b>IEEE-1394 (C8484-15G)</b>	The C8484-15G camera outputs data is transmitted via an IEEE-1394 interface. 	

## SPECIFICATIONS

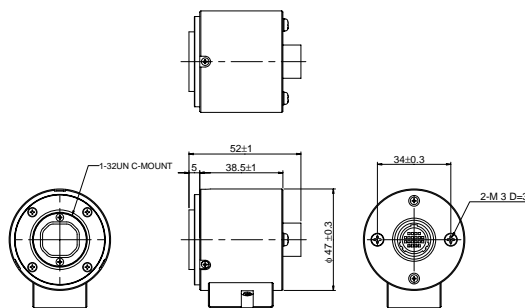
Type number	C8484-15	C8484-15G	C8484-15C		
Imaging device	Progressive scan interline CCD with micro-lens				
Effective no. of pixels	1344 (H) × 1024 (V)				
Cell size	6.45 μm (H) × 6.45 μm (V)				
Effective area	8.67 mm (H) × 6.60 mm (V)				
Pixel clock rate	14.7 MHz/pixel		20 MHz/pixel		
Frame rate	binning	1 × 1	8.3 frame/s	8.9 frame/s	12.2 frame/s
		2 × 2	16 frame/s	16.3 frame/s	22.3 frame/s
		4 × 4	28 frame/s	27.8 frame/s	40.9 frame/s
		8 × 8	45 frame/s	43 frame/s	68 frame/s
Readout noise (r.m.s.) typ.	10 electrons				
Full well capacity typ.	18 000 electrons	22 000 electrons	20 000 electrons		
Dynamic range*	1 800 : 1	2 200 : 1	2 000 : 1		
Dark current	-				
A/D converter	12 bit				
Exposure time	150 μs to 1 s	10 μs to 1 s	20 μs to 1 s		
Sub array	yes				
Contrast enhancement	High gain / Low gain				
External trigger	yes				
Lens mount	C-mount				
Digital output	RS644(LVDS)	IEEE1394-1995	Camera Link		
External control	C8484-15,-15C : RS-232C standard, C8484-15G : 1394-Based Digital Camera Specification Ver.1.30				
Power requirements	DC +12V				
Power consumption	8 W				
Ambient storage temperature	-10 °C to +50 °C				
Ambient operating temperature	0 °C to +40 °C				
Ambient storage/operating humidity	70% max. (no condensation)				

\*Calculated from the ratio of the full well capacity and the readout noise

## SOFTWARE

- Software Development Kit : DCAM-API
- Operating system : Windows 98, 2000 or NT

## DIMENSIONAL OUTLINE (Unit : mm)



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  - Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office.
  - Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions.
- Specifications and external appearance are subject to change without notice.

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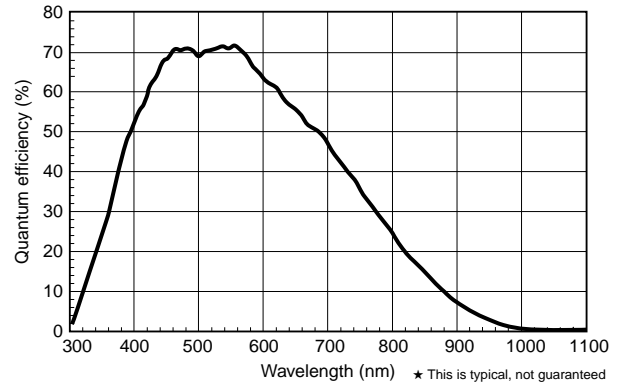
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## SPECTRAL RESPONSE



## FEATURES

- High resolution of 1.37 million pixels
- High sensitivity in VIS-NIR region
- Progressive scan interline CCD chip with no mechanical shutter
- Anti-blooming function
- Wide dynamic range
- Small readout noise of 10 electrons
- High frame rate of 45 frame / sec (8 × 8 binning)

## APPLICATIONS

- Machine vision
- Metallurgical microscopy
- Semiconductor inspection
- X-ray scintillator readout
- DNA chip reader
- High throughput screening reader
- Dual image acquisition (PIV) < 200ns (C8484-15 only)

## OPTIONAL

- Power supply unit : A3472-04
- Line voltage : 100 to 240V AC input
- Output voltage : +12V
- Power cable : 12 pin connector cable
- A3194-00 : 2 m
- A3194-01 : 5 m
- A3194-02 : 10 m
- A3194-03 : 25 m



Homepage Address <http://www.hamamatsu.com>

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