

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
LVDS (C8484-15)	The C8484-15 transmits 12-bit parallel digital output data via an RS-644 (LVDS) interface.	
Camera Link (C8484-15C)	The C8484-15C camera outputs data is transmitted via a Camera Link interface. The camera transmits 12-bit digital output data. 	
IEEE-1394 (C8484-15G)	The C8484-15G camera outputs data is transmitted via an IEEE-1394 interface. 	

SPECIFICATIONS

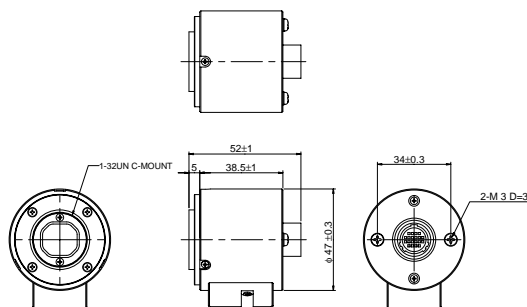
Imaging device	Progressive scan interline CCD with micro-lens		
Effective no. of pixels	1344 (H) X 1024 (V)		
Cell size	6.45 μm X 6.45 μm (square format)		
Effective area	8.67 mm X 6.60 mm (2/3-inch format)		
Pixel clock rate	-15, -15G : 14.7 MHz/pixel, -15C : 20 MHz/pixel		
Frame rate	-15 : 8.3 frame/sec	-15G : 8.9 frame/sec	-15C : 12.2 frame/sec
2 X 2 binning	-15 : 16 frame/sec	-15G : 16.3 frame/sec	-15C : 22.3 frame/sec
4 X 4 binning	-15 : 28 frame/sec	-15G : 27.8 frame/sec	-15C : 40.9 frame/sec
8 X 8 binning	-15 : 45 frame/sec	-15G : 43 frame/sec	-15C : 68 frame/sec
Readout noise (r.m.s.)	10 electrons r.m.s. (typ.)		
Full well capacity	18,000 electrons		
Dynamic range*	1,800 : 1		
Dark current	-		
A/D converter	12 bit		
Exposure time	C8484-15 : 150 μs to 1 s, C8484-15C : 20 μs to 1 s C8484-15G : 10 μs to 1 s		
Sub array	yes		
Contrast enhancement	High gain / Low gain		
External trigger	yes		
Lens mount	C-mount		
Digital output	C8484-15 : RS644(LVDS), C8484-15C : Camera Link, C8484-15G : IEEE1394-1995		
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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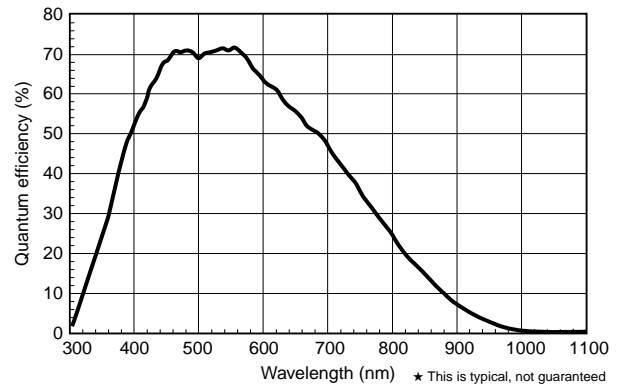
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SPECTRAL RESPONSE



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 of 1800 : 1
- Small readout noise of 10 electrons
- High frame rate of 45 frame / sec (8 X 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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