HAMAMATSU

DATA SHEET

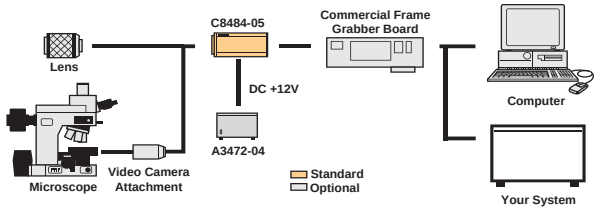
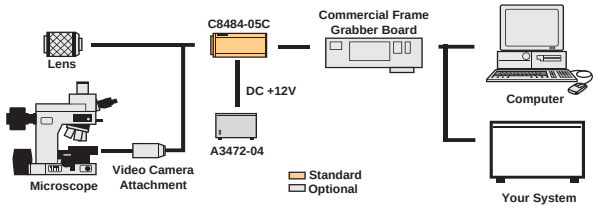
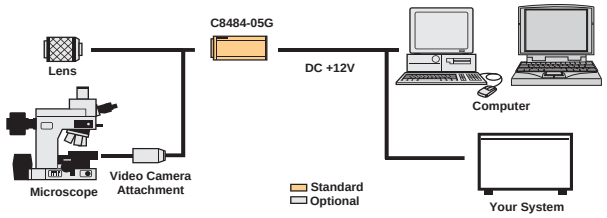
Digital CCD Camera C8484-05 Series

For Machine Vision, Industrial Inspection and Biomedical Systems

The C8484-05 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.

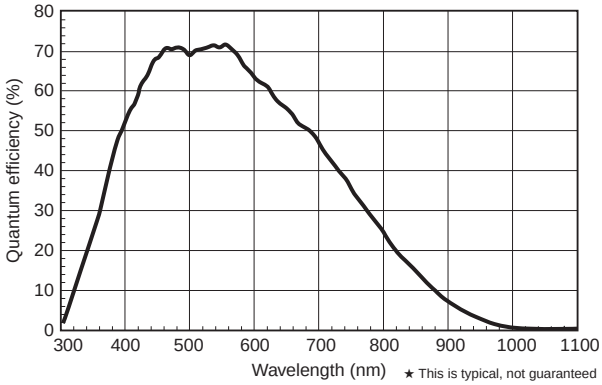
Model (Type. No)	Digital output interface	System configuration
LVDS (C8484-05)	**The C8484-05 transmits 12-bit parallel digital output data via an RS-644 (LVDS) interface.**	
Camera Link (C8484-05C)	**The C8484-05C camera outputs data is transmited via a Camera Link interface. The camera transmits 12-bit digital output data.** CAMERA Link	
IEEE-1394 (C8484-05G)	**The C8484-05G camera outputs data is transmited via an IEEE-1394 interface.** 1394 TRADE ASSOCIATION THE MULTIMEDIA CONNECTION	

SPECIFICATIONS

Imaging device	Progressive scan interline CCD with micro-lens		
Effective no.of pixels	1344 (H) × 1024 (V)		
Cell size	6.45 µm × 6.45 µm (square format)		
Effective area	8.67 mm × 6.60 mm (2/3-inch format)		
Pixel clock rate	-05, -05G : 14.7 MHz/pixel, -05C : 20 MHz/pixel		
Frame rate	-05 : 8.3 frame/sec	-05G : 8.9 frame/sec	-05C : 12.2 frame/sec
2 × 2 binning	-05 : 16 frame/sec	-05G : 16.3 frame /sec	-05C : 22.3 frame/sec
4 × 4 binning	-05 : 28 frame/sec	-05G : 27.8 frame/sec	-05C : 40.9 frame/sec
8 × 8 binning	-05 : 45 frame/sec	-05G : 43 frame/sec	-05C : 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	C8484-05 : 150 µs to 1 s, C8484-05C : 20 µs to 1 s C8484-05G: 10 µs to 1 s		
Sub array	yes		
Contrast enhancement	High gain / Low gain		
External trigger	yes		
Lens mount	C-mount		
Digital output	C8484-05 : RS644(LVDS), C8484-05C : Camera Link, C8484-05G : IEEE1394-1995		
External control	C8484-05,-05C : RS-232C standard, C8484-05G : 1394-Based Digital Camera Specification Ver.1.30		
Power requirements	DC +12V		
Power comsumption	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

SPECTRAL RESPONSE



★ This is typical, not guaranteed

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 × 8 binning)**

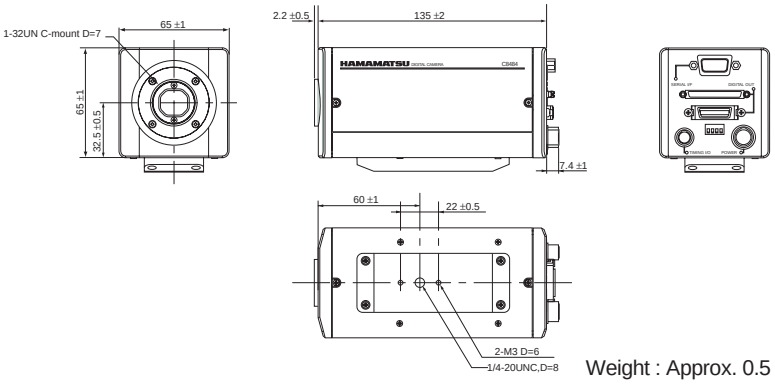
APPLICATIONS

- **Machine vision**
- **Metallurgical microscopy**
- **Semiconductor inspection**
- **X-ray scintillator readout**
- **DNA chip reader**
- **High throughput screening reader**
- **Dual image aquisition (PIV) < 200ns (C8484-05C only)**

SOFTWARE

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

DIMENSIONAL OUTLINE (Unit : mm)



Weight : Approx. 0.5 kg

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**

TÜV CERT ISO 9001 Certificate: 09 105 79045

HAMAMATSU

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Cat. No. SICS1105E02
JUL/2002 HPK
Created in Japan (PDF)