

InGaAs camera C12741-11



The C12741-11 is a near-infrared camera which employs a 640×512 pixel InGaAs sensor. $-70\text{ }^{\circ}\text{C}$ peltier cooling significantly reduces dark current which leads to improved image quality and allows imaging with long exposure time.

Unlike CCD or CMOS cameras, the C12741-11 can detect weak IR light with a high signal to noise ratio. This makes it suitable for semiconductor wafer inspection, solar cell evaluation and optical communication device analysis.

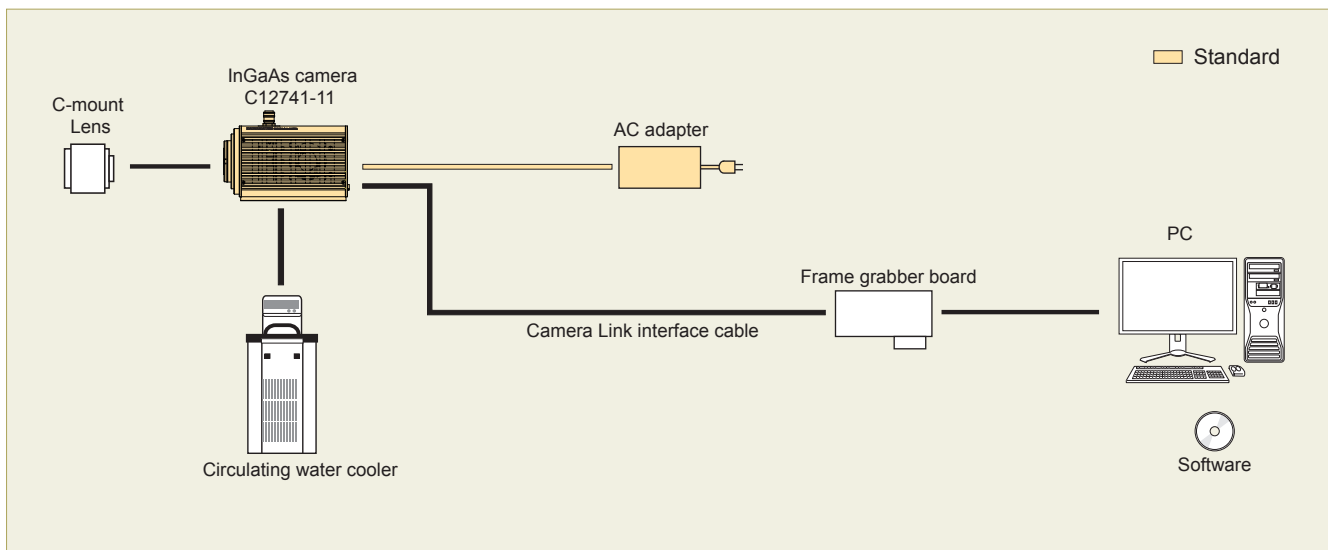
FEATURES

- High sensitivity in near-infrared region
- Resolution: 640×512 pixels
- Low dark current with $-70\text{ }^{\circ}\text{C}$ peltier cooling (water cooling)
- Interchangeable between air/water cooling

APPLICATIONS

- Solar cell evaluation
- Semiconductor failure analysis
- LED failure analysis
- EL/PL image acquisition
- Optical communication device analysis
- Non-invasive in-vivo imaging

SYSTEM CONFIGURATION

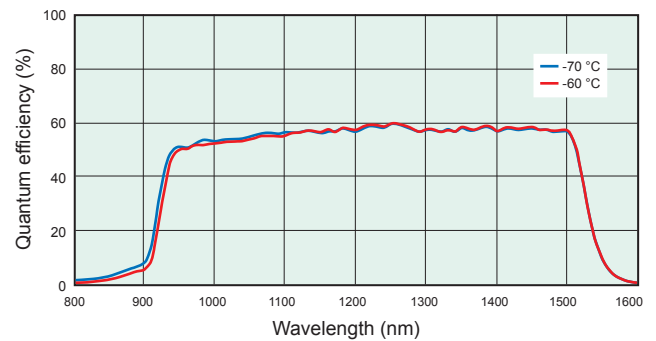


SPECIFICATIONS

Type number	C12741-11	
Imaging device	InGaAs sensor	
Effective number of pixels	640 (H) × 512 (V)	
Cell size	20 μm (H) × 20 μm (V)	
Effective area	12.8 mm (H) × 10.24 mm (V)	
Full well capacity Typ.	300 000 electrons	
Cooling method	Forced-air cooled / Water cooled	
Cooling temperature	Forced-air cooled	- 60 °C
	Water cooled (water temperature: +25°C)	- 70 °C
Frame rate	7.2 frames/s	
Readout noise (rms) Typ.	500 electrons	
Dark current	Air cooled (cooling temperature: -60 °C) Typ.	300 electrons/pixel/s
	Water cooled (cooling temperature: -70 °C) Typ.	130 electrons/pixel/s
Digital output	16 bit	
Exposure time *1	Internal trigger mode	138.5 ms to 10 s (at Rolling shutter mode)
		100 μs to 10 s (at Global shutter mode)
External trigger input mode	Edge trigger, Level trigger, Start trigger	
Trigger delay function	0 to 10 s (in 10 μs steps)	
Trigger input connector	SMA / CameraLink I/F	
Trigger output	3ch programmable timing outputs, Trigger ready output, Global exposure timing output	
Trigger output connector	SMA	
Binning	2 × 2, 4 × 4	
Interface	CameraLink base configuration	
Lens mount	C-mount	
Connector	Mini-Camera Link	
Power supply	AC 100 V to AC 240 V, 50 Hz/60 Hz	
Power consumption	Approx. 150 VA	
Ambient operating temperature *1	0 °C to +40 °C	
Ambient operating humidity	30 % to 80 % (Forced-air cooled with no condensation)	
Performance guaranteed temperature	0 °C to +40 °C	
Ambient storage temperature	-10 °C to +50 °C	
Ambient storage humidity	90 % max. (with no condensation)	

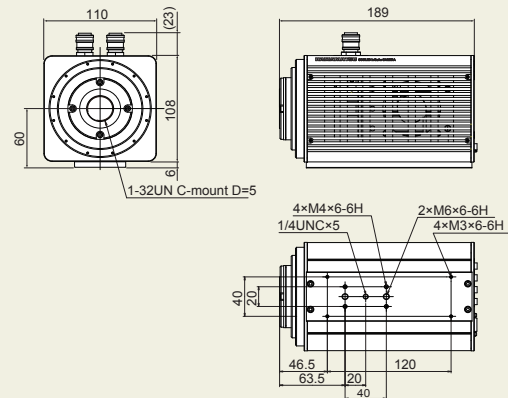
*1: Depend on the exposure time or ambient temperature, brighter or darker pixels than surrounding area or uneven pattern may appear in the image.
It comes from the characteristics of InGaAs sensor and not the defects or failure of the camera.

SPECTRAL RESPONSE



DIMENSIONAL OUTLINES (Unit : mm)

- Camera (Approx. 3.4 kg)



OPTIONS

- External trigger cable SMA-BNC 5 m: A12106-05
- External trigger cable SMA-SMA 5 m: A12107-05

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HAMAMATSU PHOTONICS K.K., Systems Division

812 Joko-cho, Higashi-ku, Hamamatsu City, 431-3196, Japan, Telephone: (81)53-431-0124, Fax: (81)53-435-1574, E-mail: export@sys.hpk.co.jp

U.S.A.: Hamamatsu Corporation: 360 Foothill Road, Bridgewater, NJ 08807, U.S.A., Telephone: (1)908-231-0960, Fax: (1)908-231-1218 E-mail: usa@hamamatsu.com

Germany: Hamamatsu Photonics Deutschland GmbH.: Arzbergerstr. 10, D-82211 Herrsching am Ammersee, Germany, Telephone: (49)8152-375-0, Fax: (49)8152-265-8 E-mail: info@hamamatsu.de

France: Hamamatsu Photonics France S.A.R.L.: 19, Rue du Saule Trapu, Parc du Moulin de Massy, 91882 Massy Cedex, France, Telephone: (33)1 69 53 71 00, Fax: (33)1 69 53 71 10 E-mail: infos@hamamatsu.fr

United Kingdom: Hamamatsu Photonics UK Limited: 2 Howard Court, 10 Tewin Road, Welwyn Garden City, Hertfordshire AL7 1BW, UK, Telephone: (44)1707-294888, Fax: (44)1707-325777 E-mail: info@hamamatsu.co.uk

North Europe: Hamamatsu Photonics Norden AB: Torshamnsgatan 35 16440 Kista, Sweden, Telephone: (46)8-509-031-00, Fax: (46)8-509-031-01 E-mail: info@hamamatsu.se

Italy: Hamamatsu Photonics Italia S.r.l.: Strada della Moia, 1 int. 6, 20020 Arese (Milano), Italy, Telephone: (39)02-935-81-733, Fax: (39)02-935-81-741 E-mail: info@hamamatsu.it

China: Hamamatsu Photonics (China) Co., Ltd.: 1201 Tower B, Jiaming Center, 27 Dongsanhuan Beilu, Chaoyang District, 100020 Beijing, China, Telephone: (86)10-6586-6006, Fax: (86)10-6586-2866 E-mail: hpc@hamamatsu.com.cn

Taiwan: Hamamatsu Photonics Taiwan Co., Ltd.: 8F-3, No.158, Section2, Gongdao 5th Road, East District, Hsinchu, 300, Taiwan R.O.C. Telephone: (886)03-659-0080, Fax: (886)07-811-7238 E-mail: info@tw.hpk.co.jp

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