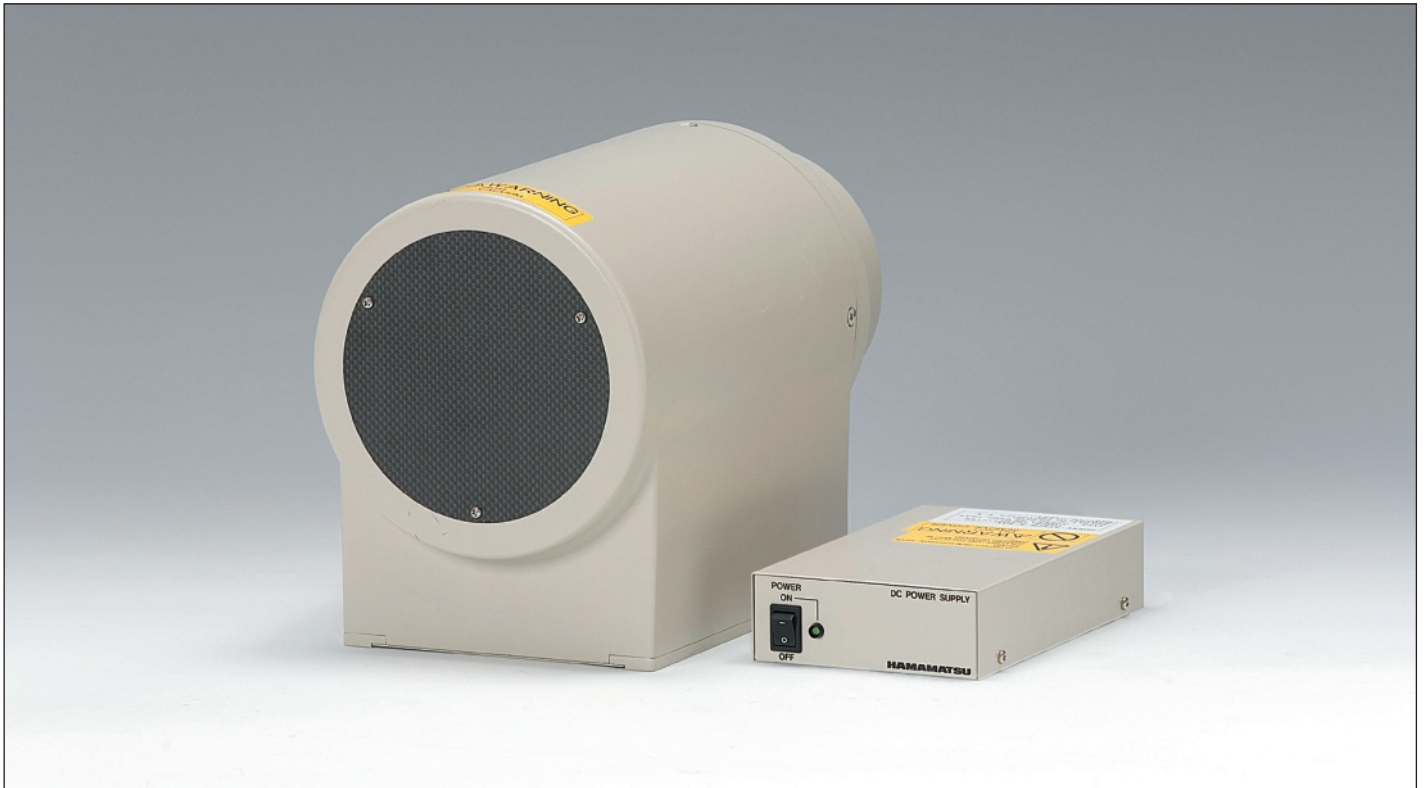


**NEW**

# X-RAY I.I. DIGITAL CAMERA UNIT SERIES

## C7336-03/-04



## OVERVIEW

The C7336-03/04 consist of a high resolution, high contrast 4-inch X-ray image intensifier (X-ray I.I.) and a 1.45 megapixel digital CCD camera.

The X-ray I.I. used has a fixed field-of-view of 100 mm diameter and an input window made of thin aluminum which is excellent in X-ray transmission and causes less scattering of X-rays. These features allow real-time detection at X-ray energy levels from about 20 keV.

The 1.45 megapixel digital CCD camera captures high-quality images which are clearer than those taken with conventional analog cameras. Its video output is compliant to Camera Link specifications, allowing direct image input to a commercially available Camera Link board.

## FEATURES

- **Digital output: Camera Link compliance**
- **High resolution, High contrast**
- **Low distortion**

## APPLICATIONS

- **X-ray imaging**
- **Industrial X-ray CT**
- **In-line X-ray inspection**

[Applicable samples]

- Electronic part
- Printed circuit board
- Resin part
- Metallic part
- Food
- Beverage
- Medicine&Drug

**HAMAMATSU**

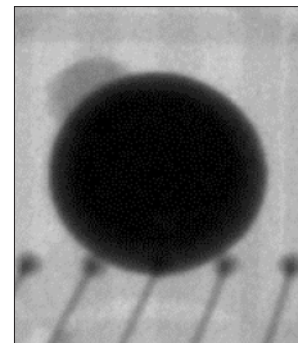
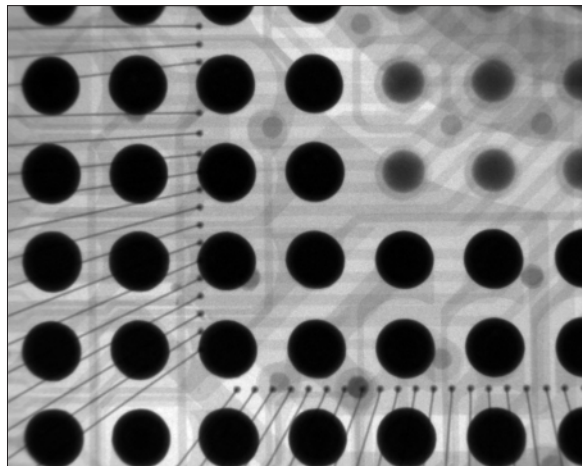
# SPECIFICATIONS

Parameters		C7336-03	C7336-04	Unit
Input Window Material / Thickness		Aluminum / 0.5 mm		—
Input Phosphor		CsI		—
Output Phosphor		P43 or equivalent		—
Imaging Area (H × V) (on Input Surface) Typ.		73 × 55	66 × 50	mm
Resolution (on Input Surface) Typ.		70		LP/cm
Digital CCD Camera	Imaging Device	2/3 progressive scan interline CCD	1/2 progressive scan interline CCD	—
	Effective Number of Pixels (H × V)	1380 × 1030	1344 × 1024	—
	Pixel Size (H × V)	6.45 × 6.45	4.65 × 4.65	μm
	Frame Rate	24	12	frames/sec.
	Video Output	10 bit CameraLink	12 bit CameraLink	—
	Power Consumption	DC12 V / 0.5 A	DC12 V / 0.3 A	—
Input Voltage (Power Supply)		AC100 V to 240 V (50 Hz / 60 Hz)		—
Power Consumption		10		VA
Operating Ambient Temperature		0 to +40		°C
Storage Temperature		-10 to +45		°C
Operating and Storage Humidity		Below 85 % (no condensation)		—
Weight	Head	Approx. 8		kg
	Power Supply	Approx. 0.6		kg

## IMAGING EXAMPLES (Sample: BGA)

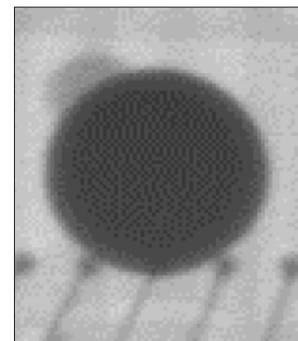
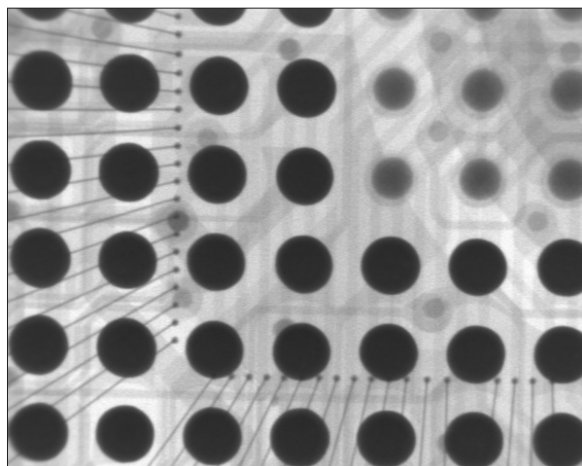
### ● Digital type C7336-03

X-ray tube voltage: 80 kV



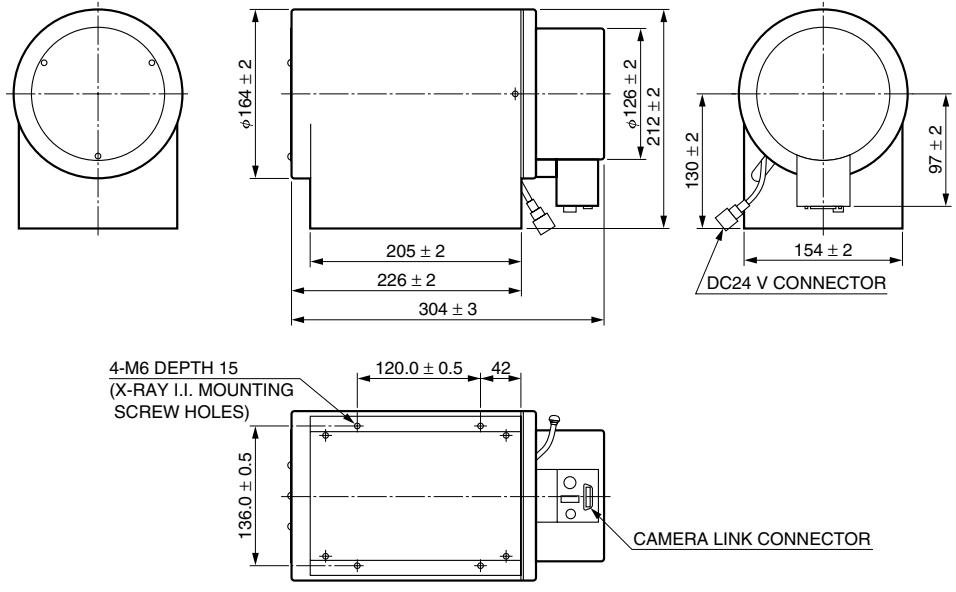
### ● Analog type

X-ray tube voltage: 80 kV



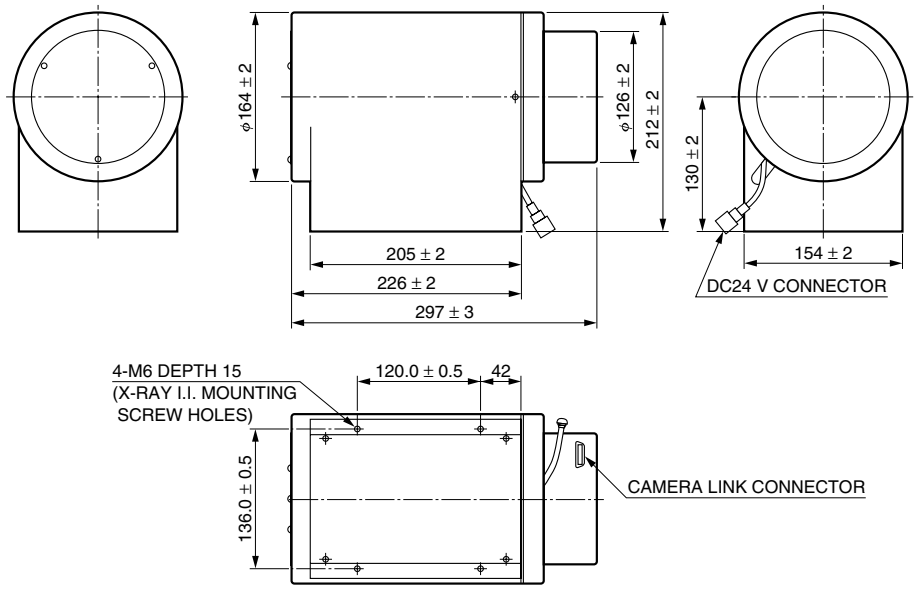
# DIMENSIONAL OUTLINES (Unit: mm)

## C7336-03 Head



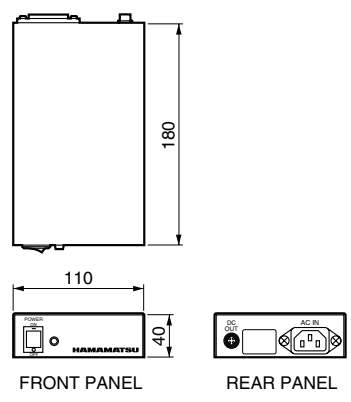
TII A0066EA

## C7336-04 Head



TII A0067EA

## DC 24 V Power Supply Common to C7336-03/-04

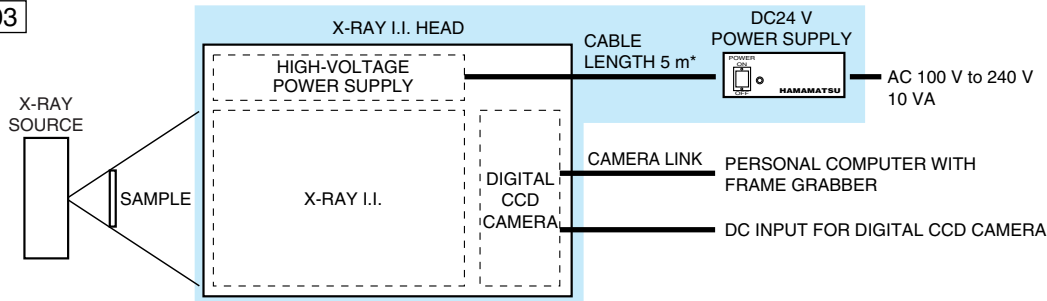


TII A0068EA

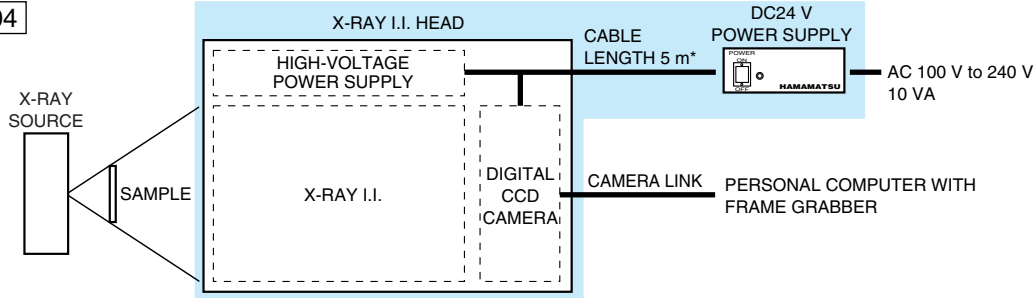
# CONFIGURATION

Unit Configuration: **X-ray I.I. Head** **DC24 V Power Supply for X-ray I.I.**

C7336-03



C7336-04



\*10 m cable is also available.

CONFIGURATION

TII C0069EA

## RELATED PRODUCTS (Analog type X-ray image intensifier camera units)

### C7876 (4-inch beryllium input window)

The C7876 is the ideal choice for non-destructive inspection of light-element materials in the low-energy X-ray region and for radiation imaging.

The image intensifier input window utilizes beryllium instead of aluminum (Al) which is mostly used. Using a beryllium window drastically improves X-ray transmittance in the low-energy X-ray region for better imaging.

The internal structure of materials like thin plastic and aluminum can now be seen in real-time with a high contrast that was impossible up till now.

Aluminum (Al) input windows are also available.



### C7716 (3-inch/1.8-inch dual mode)

The C7716 makes efficient use of X-ray in the low-energy region.

By reducing aluminum (Al) used in the image intensifier input window to an extremely thin 0.3 mm, the X-ray transmittance is improved and the scattering is suppressed.

The C7716 also acquires images in low energy regions around 10 keV to 20 keV where X-rays transmit through plastic (plastic bottles, etc.)



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