X-RAY SOURCE

110 kV MICROFOCUS X-RAY SOURCE L9631

Optimum for In-line X-ray Inspection System

FEATURES

●High Output: 800 μA (50 W)
It allows continuous maximum output.

●High Stability

●Serial Port Control (RS-232C)
One package of a sealed type X-ray tube, a high-voltage power supply and a control function.

●Easy Handling
Fully operable from an external PC.

APPLICATIONS

●Non-destructive Inspection
●In-line X-ray Inspection
●X-ray CT

[Applicable Objects]
- •Electronic component
- •Printed circuit board
- •Plastic component
- •Metal component
- •Food
- •Beverage
- •Medicine & drug
- •Bioproduct

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SPECIFICATIONS

GENERAL

Parameter	Description / Value	Unit
Input Voltage (AC)	100 to 240 (100 V / 200V Automatic Selection), 50 Hz / 60 Hz	V
Power Consumption (Max.)	240	W
Operating Ambient Temperature	+10 to +40	°C
Storage Temperature	0 to +50	°C
Operating and Storage Humidity	Below 85 (No Condensation)	%
Weight	Approx. 10	kg
Conformance Standards	CE [EMC: IEC 61326-1, Group1, Class A Safety: IEC 61010-1]	—
Operation	Continuous	—
High Voltage Power Supply	Built-in	—

X-RAY TUBE

Parameter	Description / Value	Unit
X-ray Tube	Sealed Type	—
X-ray Tube Cooling Method	Convection Cooling	—
X-ray Tube Window Material / Thickness	Beryllium / 200	µm
Target Material	Tungsten	—
Tube Voltage Operational Range	40 to 110	kV
Tube Current Operational Range ①	10 to 800 (50 W Max.)	µA
Maximum Output	50	W
X-ray Focal Spot Size	15 to 80	µm
X-ray Beam Angle (Max.)	62	degrees
Focus to Object Distance (FOD)	16.8	mm

X-RAY CONTROL PART

Parameter	Description	Unit
Function	Tube Voltage and Tube Current Preset / Auto Warm-up	—
Protection	Interlock	—
External Control	RS-232C	—
Applicable OS	Windows® 2000 Professional, XP Professional	—
Computer Operating Conditions	CPU: Intel Pentium or Higher, Memory: 64 MB or More	—

NOTE: ①See the graph of the tube current operational range.

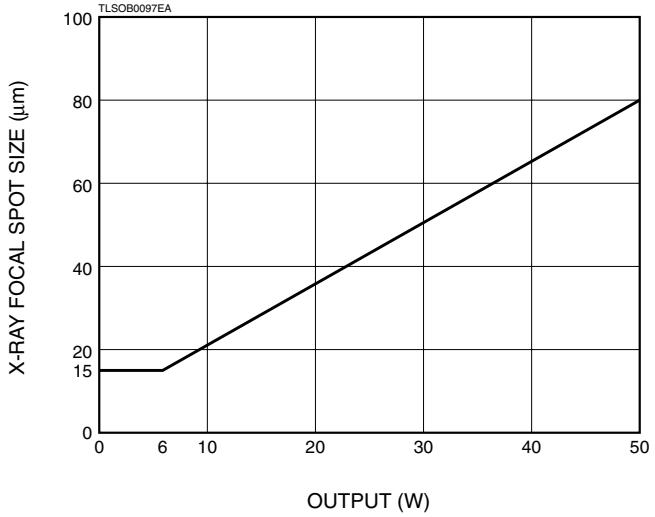
⚠ PRE-CAUTION TO USE

1. X-ray emitted from this device is harmful for human body. And it should be necessary for the operator to protect himself/herself from it.
2. During an operation, the X-ray tube unit should be installed in the X-ray shielded facility or area in order to avoid any X-ray leakage. Also the interlock system in X-ray control unit should be always used in order to avoid any misoperation.

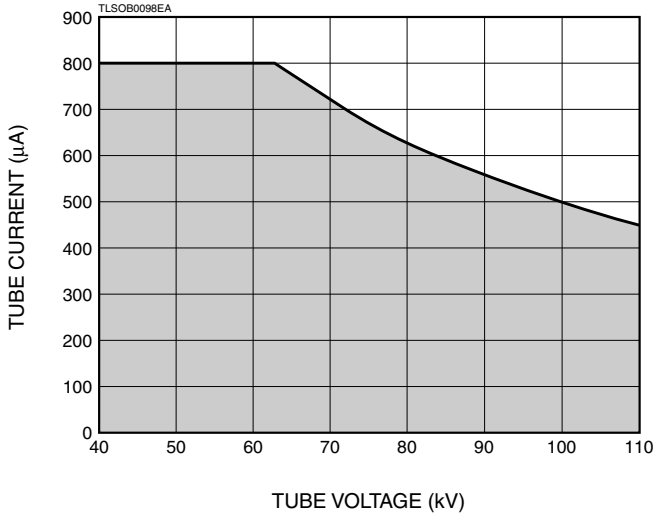
OPERATIONAL CAUTION

The product may be subject to governmental occupational radiation hazardous regulation therefore the necessary application must be field according to the local regulation.

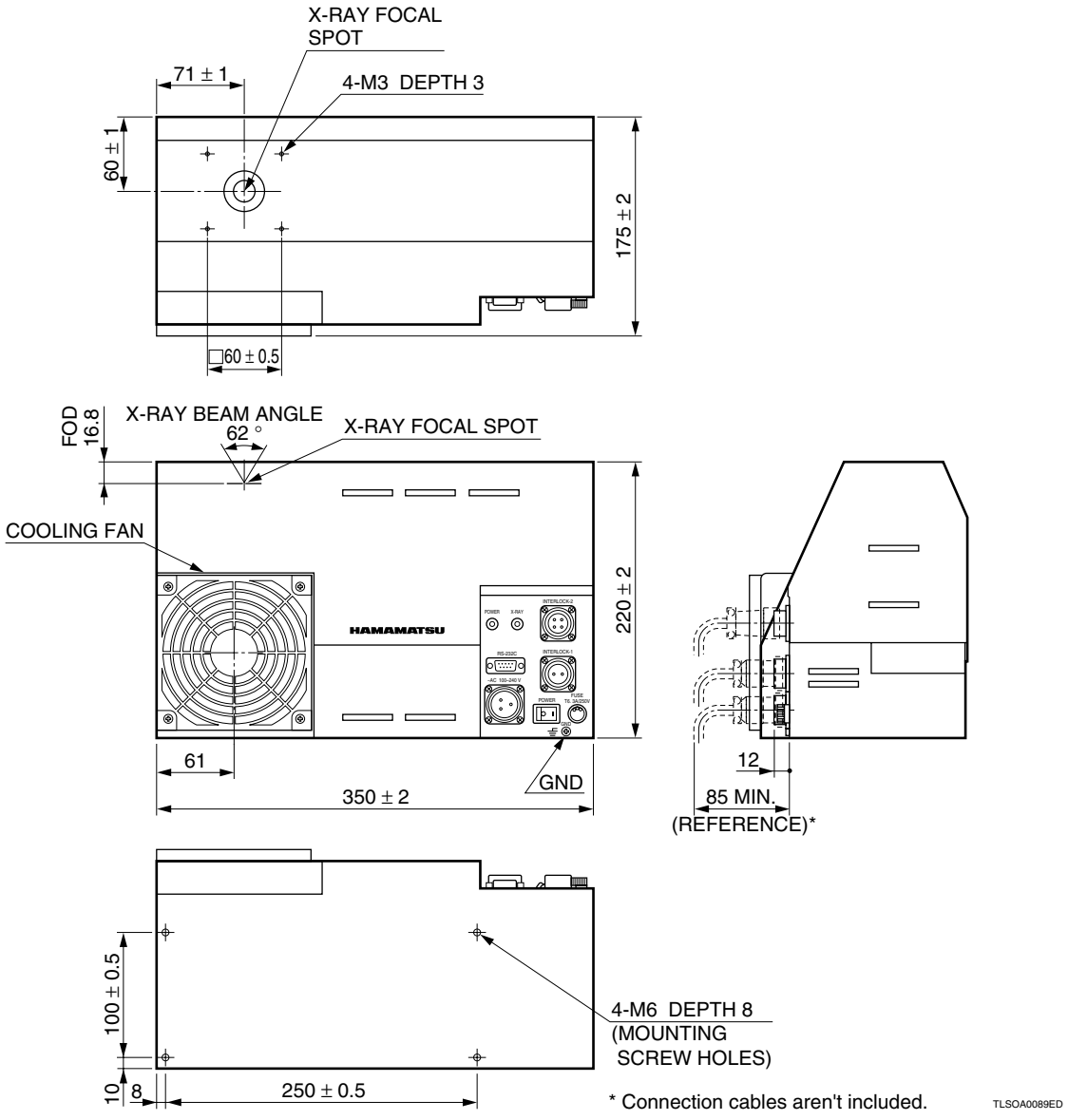
X-RAY FOCAL SPOT SIZE vs. OUTPUT



TUBE CURRENT OPERATIONAL RANGE



DIMENSIONAL OUTLINE (Unit: mm)



* Connection cables aren't included.

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RELATED PRODUCTS

X-RAY IMAGE INTENSIFIER CAMERA UNIT (4-inch Beryllium Window) C7876, C7876-10

The C7876 is an X-ray image intensifier camera unit ideal for non-destructive inspection of light-element materials and radiation imaging at low energy X-ray levels.
The C7876 remarkably improves X-ray transmittance at low energy X-ray levels by using a beryllium window instead of an aluminum window currently used for most X-ray image intensifiers.
The results are sharp and clear, high contrast images taken in real time even at low energy X-ray levels down to a few keV.
An Aluminum window type is also available.

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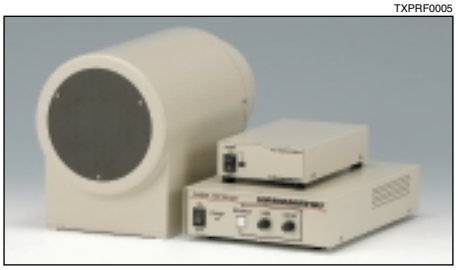

X-RAY IMAGE INTENSIFIER DIGITAL CAMERA UNIT C7336-03

The C7336-03 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.

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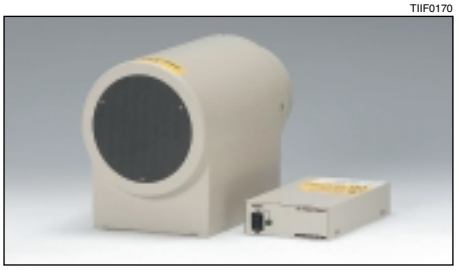

X-CUBE™ (COMPACT X-RAY CCD CAMERA) H8480, H8953, H8481

X-CUBE™ is a compact X-ray CCD camera designed for non-destructive inspection. Using a general-purpose CCD chip mounted in a rugged but lightweight camera head, X-CUBE™ makes X-ray imaging as easy as an ordinary CCD camera in handling.

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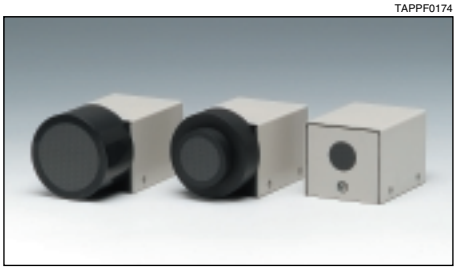
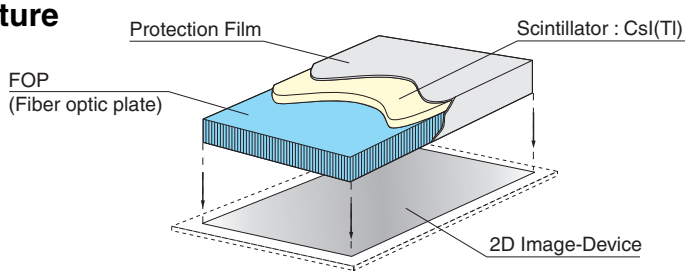


Left: H8480 Center: H8953 Right: H8481

FOS (Fiber optic plate coated with X-ray scintillator)

The FOS is an optical device for X-ray imaging, fabricated by coating an X-ray scintillator material over a fiber optic plate consisting of more than tens of million glass fibers each a few micrometers in diameter. The FOS provides higher sensitivity and resolution than currently used sensitized paper films and also allows real-time digital radiography when directly coupled to a commercially available CCD. The fiber optic plate used in the FOS has excellent X-ray absorption characteristics, so that X-rays penetrating the X-ray scintillator and directly entering the CCD are minimized to less than 1 %. This protects the CCD from the deterioration and increased noise caused by X-ray irradiation, assuring a long service life and maintaining high image quality.
Various sizes and shapes of FOS are available to meet your particular needs, including tapered FOP types.

■Structure



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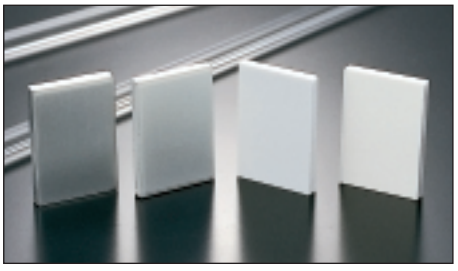

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