

# NEW

# 130 kV MICROFOCUS X-RAY SOURCE L6622-01



## FEATURES

- **Focal Spot Size: 10  $\mu\text{m}$**   
Providing 10  $\mu\text{m}$  focal spot size, for the sealed-off type X-ray source with built-in power supply. It gives a clear clairvoyance image despite higher magnification ratio.
- **Easy Handling**  
Convenient handling (with no high voltage wiring) since the air cooled X-ray source and the high voltage power supply are in one package.
- **Continuous Operation**  
It allows continuous maximum output, 130 kV and 300  $\mu\text{A}$ , operation (Large focal spot operation).
- **Built-in External Control Function**  
It is automatically operable from external control since it has a built-in RS-232C interface.

## APPLICATIONS

- **X-ray Non-destructive Test**
  - Printed Circuits
  - Semiconductor Devices
  - Soldered Parts
  - Combined Materials
  - New Materials
  - Electronic Components
  - Ceramics
  - Rubbers
  - Plastics
  - Die casting
- **Multilayer Printed Circuit Board X-ray Inspection**
- **Drilling Instrument**
- **Industrial On-line Process Control and Measurement**
- **Industrial X-ray Computer Tomography System**

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# SPECIFICATIONS

## ●GENERAL

Parameter		Value/Description	Unit
Target Voltage		20 to 130	kV
Target Current <sup>Ⓐ</sup>	Small Focal Spot	40 to 100 kV	0 to 250 <sup>Ⓑ</sup>
	Large Focal Spot	100 to 130 kV	0 to 100
Maximum Output Power	Small Focal Spot	0 to 300	μA
	Large Focal Spot	13	W
Focal Spot Size	Small Focal Spot	39	W
	Large Focal Spot	10	μm
Beam Angle	Small Focal Spot	40	μm
	Large Focal Spot	43	degree
Minimum Distance Focus / Object		18	mm
Environmental X-ray Dose Leakage		3	mSv/h Max.
Operation		Continuous	—

NOTE: Ⓐ Refer to Figure 1

Ⓑ In the range of output (= Tube voltage × Tube current) less than 10 W

## ■X-RAY TUBE UNIT

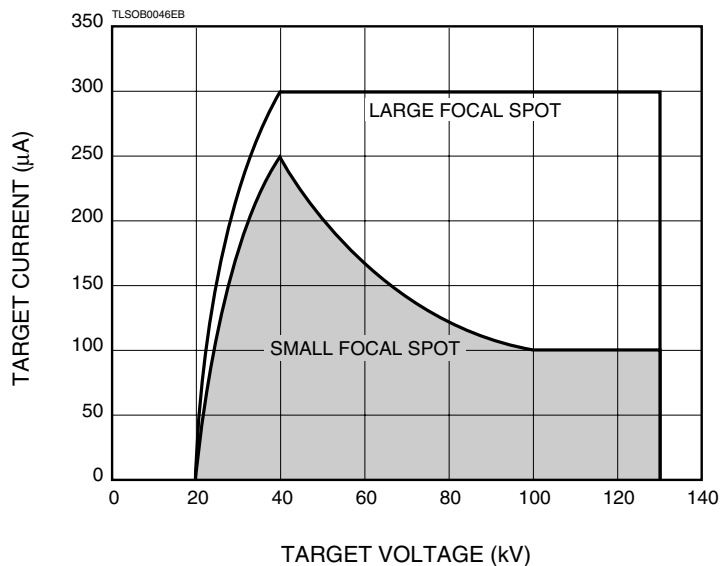
Parameter	Description
X-ray Tube	Sealed Type
Cooling Method	Forced Air Cooling
Window Material	Beryllium (200 μmt)
Target Material	Tungsten
Cathode Material	Dispenser Cathode
Window Position	End-window
High Voltage Power Supply	Built-in Type
Operation / Storage Temperature	+10 to +40 °C / 0 to +50 °C
Operation / Storage Humidity	85 % RH Max. <sup>Ⓐ</sup>
Weight	Approx. 12.5 kg

NOTE: Ⓐ Without moisture condensation.

## ■X-RAY CONTROL UNIT

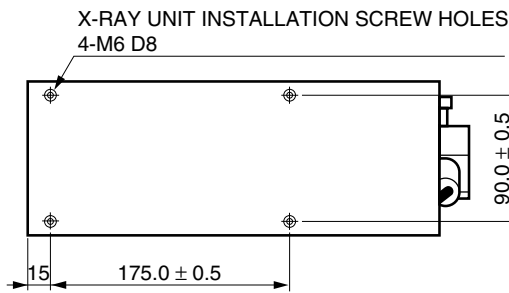
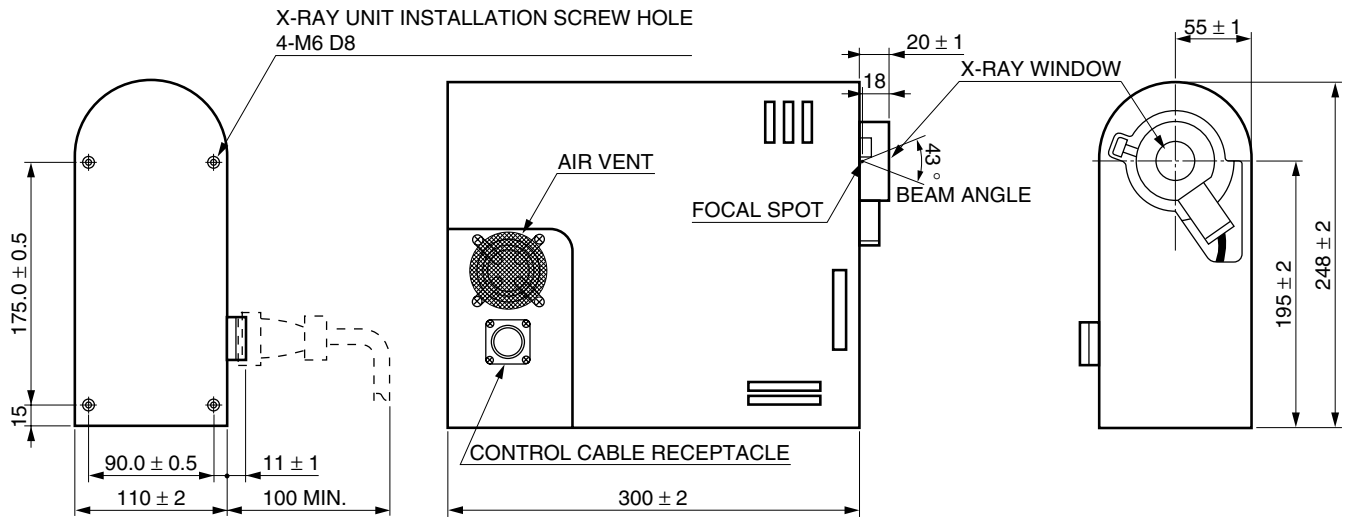
Parameter	Description
Function	Target Voltage/Current Pre-set, Auto Warm-up
Protection	Safety Interlock
External Control	RS-232C
Operation / Storage Temperature	0 to +40 °C
Operation / Storage Humidity	85 % RH Max. <sup>Ⓐ</sup>
Power Consumption	200 W Max.
Inter Voltage	24 V dc
Installation Method	Designed for both bench-top and rack mounting
Weight	Approx. 6 kg

Figure 1: X-ray Tube Operational Range



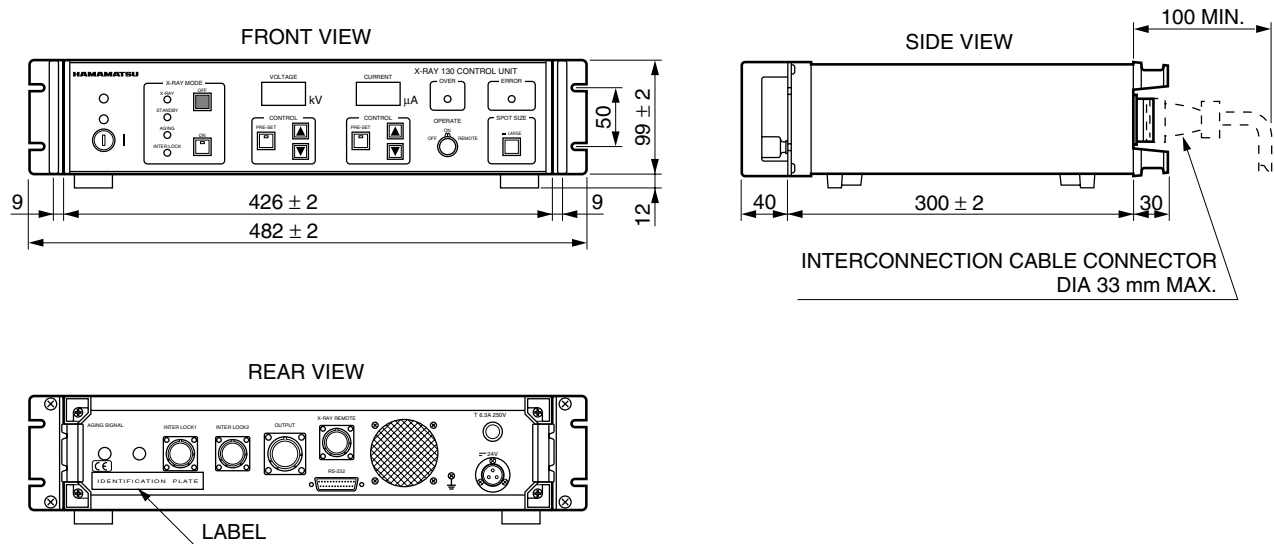
# DIMENSIONAL OUTLINE (Unit: mm)

## X-RAY TUBE UNIT



TL50A0046EB

## X-RAY CONTROL UNIT



TL50A0047ED

# RELATED PRODUCTS

## X-RAY IMAGE INTENSIFIER CAMERA UNIT C7716, C7716-10

The C7716 series X-ray image intensifier (I. I.) camera unit now offers greatly improved X-ray detection efficiency even at low energy levels. This improvement stems primarily from a built-in X-ray image intensifier having an extremely thin aluminum input window. Its thickness is only 0.3mm or less, virtually at the limit of present technology providing excellent X-ray transmittance and low scattering.

The results are sharp, clear, high-quality images taken at low energy X-ray levels down to several keV which penetrate plastic (PET) materials.



## X-RAY IMAGE INTENSIFIER CAMERA UNIT 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 the aluminum window currently used for most X-ray image intensifiers.

The result is a sharp and clear, high-contrast image taken in real time even at low energy X-ray levels down to a few keV.



### **⚠ 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 cabinet in order to avoid any X-ray leakage. Also the safety interlock system in X-ray control unit should be always used in order to avoid any misoperation.

### **# WARRANTY PERIOD**

This device is guaranteed for one and a half years from data of purchase or 5000 hours of operation, whichever comes first. The warranty extends only to replacement of the products. The warranty does not cover damage due to misuse or natural calamity.

\* **CE** This product(s) conforms to the EMC directive (89/336/EEC) of the European Union.

\* To meet FDA standards, the Interlock-1 circuit incorporates a relay that shuts off the X-ray generation power supply circuit if the circuit is open.

Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult with our sales office. Information furnished by HAMAMATSU is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. No patent rights are granted to any of the circuits described herein. ©2001 Hamamatsu Photonics K.K

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