ROTANODE™
XRR-1231

Rotating Anode X-ray Tube

- Rotating anode X-ray tube for the purpose of general diagnostic X-ray procedures.
- Specially processed Rhenium-tungsten faced molybdenum target of 62 mm diameter.
- This tube has foci 1.3 and 0.6, and is available for a maximum tube voltage 130 kV.

General Data

Application ..... **General Radiography**

Electrical:

Circuit:

High Voltage Generator ..... Constant Potential High-Voltage Generator

Grounding ..... Center-Grounded

Nominal X-ray Tube Voltage:

Radiographic ..... 130 kV

Nominal Focal Spot Value:

Large Focus 1.3

Small Focus 0.6

Nominal Anode Input Power (at 0.1s) ..... See rating charts

Large Focus ..... 32 kW

Small Focus ..... 11 kW

Nominal Radiographic Anode Input Power:

Large Focus ..... 29 kW

Small Focus ..... 10 kW

Anode Speed:

50 Hz ..... Minimum 2700 min^{-1}

Mode of Operation ..... Intermittent

Mechanical:

Dimensions ..... See dimensional outline
- Overall Length ..... 205 mm
- Maximum Diameter ..... 81 mm

Target:
- Anode Angle ..... 15 degrees
- Diameter ..... 62 mm
- Construction ..... Rhenium-Tungsten faced Molybdenum

Inherent Filtration..... At least 0.7 mm Al at 75 kV
Weight (Approx.) ..... 1.15 kg
Cooling Method ..... Oil immersed (80℃ Max.) and convection oil cooling

Absolute Maximum and Minimum Ratings
(At any time, these values must not be exceeded.)

Maximum X-ray Tube Voltage:
- Radiographic ..... 130 kV

Between Anode (or Cathode) and Ground ..... 65 kV
Minimum X-ray Tube Voltage ..... 50 kV
Maximum X-ray Tube Current ..... See rating charts
- Large Focus ..... 640 mA
- Small Focus ..... 220 mA

Maximum Filament Current:
- Large Focus ..... 5.6 A
- Small Focus ..... 4.9 A

Filament Voltage:
- Large Focus (At maximum filament current 5.6 A) ..... 7.36 ~ 9.96 V
- Small Focus (At maximum filament current 4.9 A) ..... 4.80 ~ 6.50 V

Filament Frequency Limits ..... 0 ~ 25 kHz
Continuous Anode Input Power ..... 120 W (165 HU/s)
Thermal Characteristics:
- Anode Heat Content ..... 80 kJ (110 kHU)
- Maximum Anode Heat Dissipation ..... 320 W (450 HU/s)

Environmental Limits

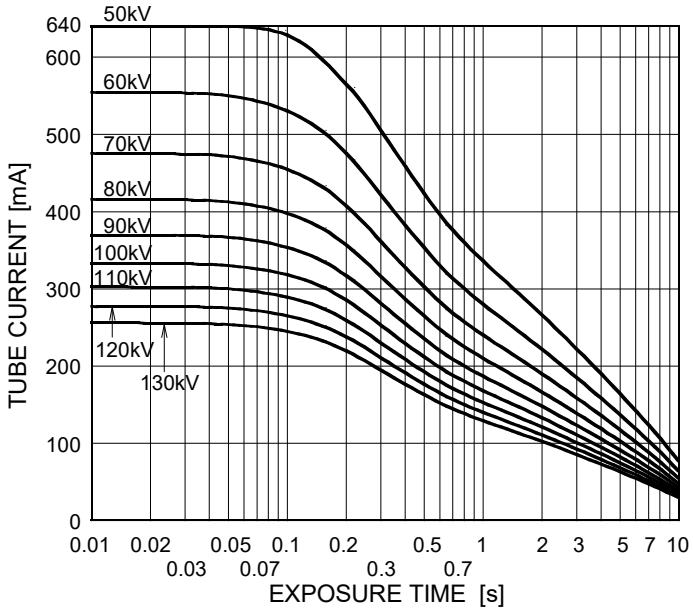
Operating Limits (in dielectric oil):
- Oil Temperature ..... 10 ~ 80 ℃
- Oil Pressure ..... 70 ~ 140 kPa

Shipping and Storages Limits:
- Temperature ..... -20 ~ 70 ℃
- Humidity ..... 20 ~ 90 % (No condensation)
- Atmospheric Pressure ..... 50 ~ 106 kPa

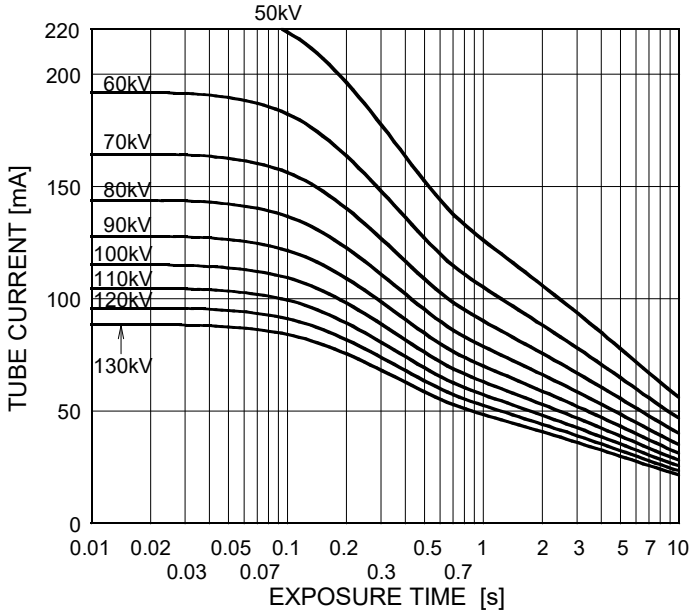
Maximum Rating Charts
(Absolute Maximum Rating Charts)

Conditions: Tube Voltage
Constant Potential High-Voltage Generator
Stator Power Frequency 50 Hz

Nominal Focal Spot Value: 1.3 ■



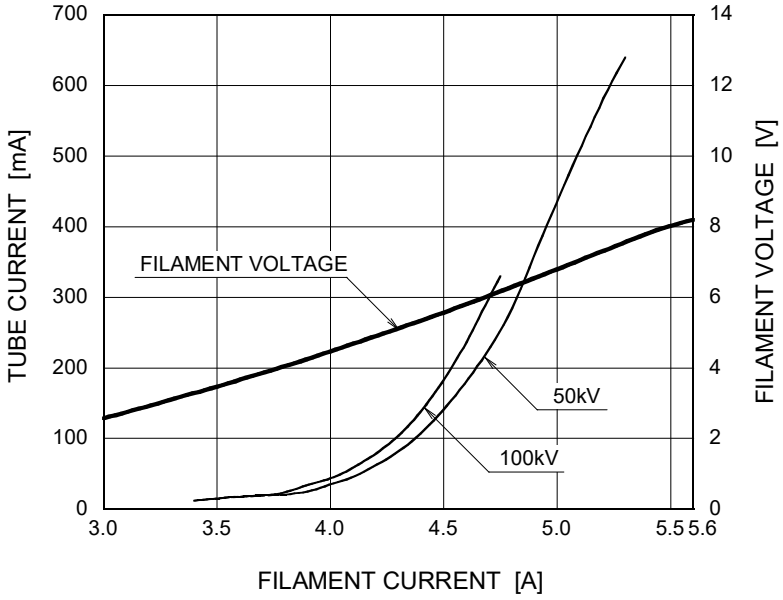
Nominal Focal Spot Value: 0.6 ▣



Emission & Filament Characteristics

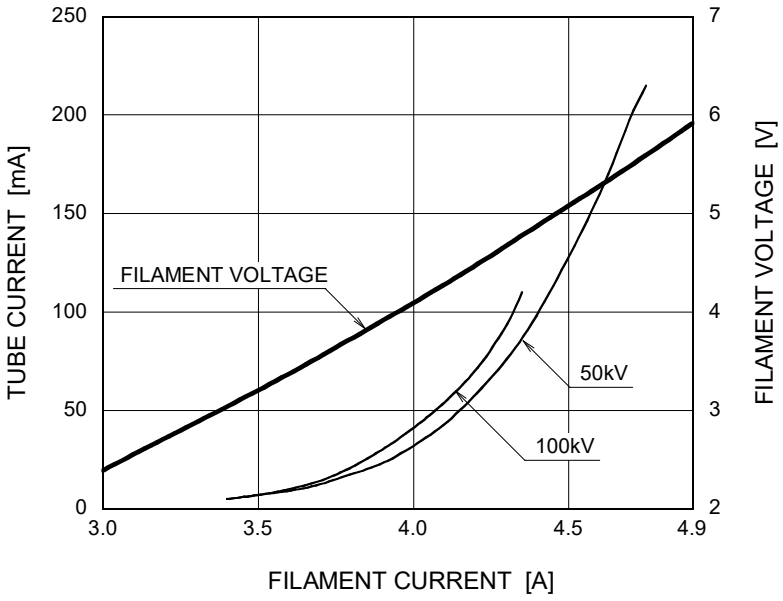
Constant Potential High-Voltage Generator

Nominal Focal Spot Value: 1.3 ■



For Reference Only

Nominal Focal Spot Value: 0.6 ▣



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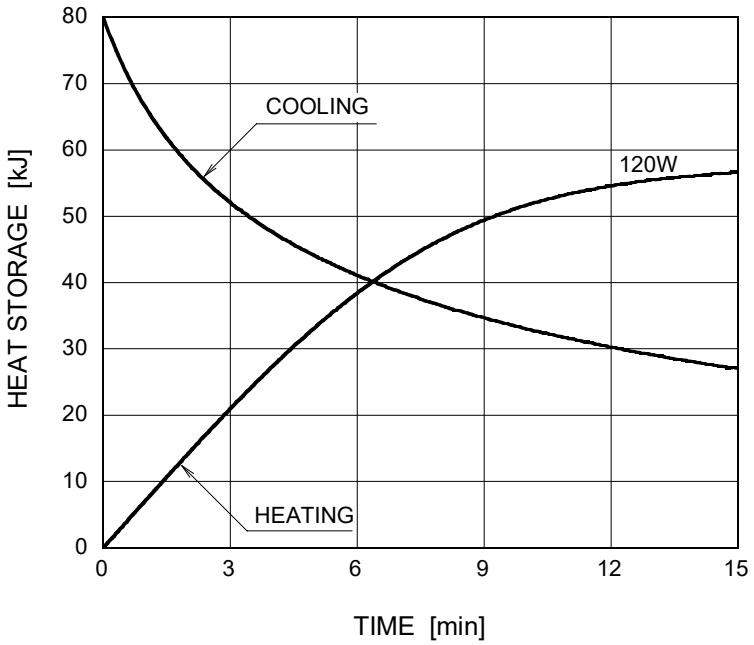
Thermal Characteristics

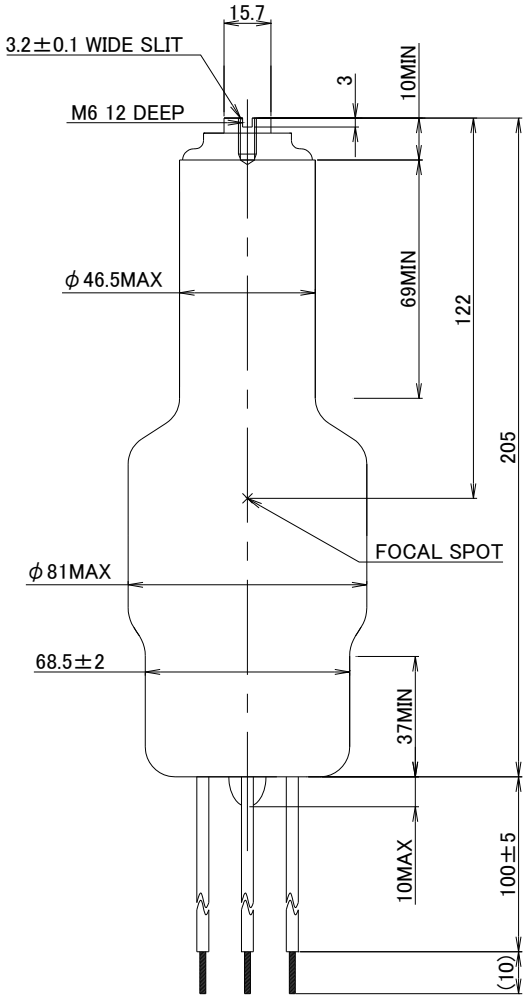
Anode Heating / Cooling Curve

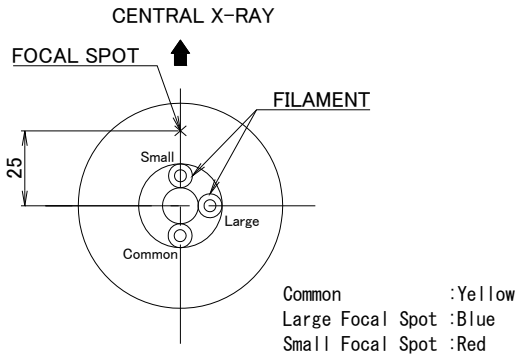


The heating curves are showing examples of average input power to anode in operation.

Dimensional Outline

Unit mm





Note: Each cathode lead wire is insulated with colored vinyl pipe.

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