X-RAY TUBE
DF-061
DF-061SB

Stationary Anode X-ray Tube

- Especially designed for dental radiography unit.
- Provided with an insulation cylinder and lead cylinder.
- These tubes have focus 0.6 and 0.3 foci and are available for maximum tube voltage 110 kV.
- Installed in the same enclosure with the high voltage transformer.

General Data

Electrical:

Circuit:
- High Voltage Generator ..... Constant Potential High-Voltage Generator
- Grounding ..... Center-Grounded

Nominal X-ray Tube Voltage ..... 110 kV

Nominal Focal Spot Value:
- Large Focus 0.6
- Small Focus 0.3

Nominal Anode Input Power (at 1.0s):
- Large Focus ..... 1200 W
- Small Focus ..... 600 W

Nominal Radiographic Anode Input Power:
- Large Focus ..... 1200 W
- Small Focus ..... 600 W

Exposure Duty Cycle 1:60

(Exposure Time : Interval time)

.

Mechanical:

Dimensions:
- Overall Length ..... See dimensional outline
- Maximum Diameter ..... See dimensional outline

Target:
- Anode Angle ..... 12 degrees
- Material ..... Tungsten

Inherent Filtration ..... At least 0.8 mm Al at 75 kV

X-ray Coverage ..... 170 × 170 mm at SID 680 mm

Weight:
- DF-061 ..... Approx. 430 g
- DF-061SB ..... Approx. 1100 g

Cooling Method ..... Oil immersed (60℃ Max.) and convection oil cooling.

Tube Holding:
- DF-061 ..... Holding the glass envelope of the anode end and cathode end, or the screw of the anode shank.
- DF-061SB ..... Holding the insulation cylinder or the lead cylinder.

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

Maximum X-ray Tube Voltage ..... 110 kV
Between Anode (or Cathode) and Ground ..... 55 kV
Minimum X-ray Tube Voltage ..... 50 kV
Maximum X-ray Tube Current:
- Large Focus ..... 20 mA
- Small Focus ..... 10 mA

Maximum Filament Current:
- Large Focus ..... 3.5 A
- Small Focus ..... 3.1 A

Filament Voltage:
- Large Focus (At Maximum Filament Current 3.5A) ..... 3.3 ~ 4.6 V
- Small Focus (At Maximum Filament Current 3.1A)..... 3.3 ~ 4.6 V

Filament Frequency Limits ..... DC or AC (Sine Wave) 0 ~ 20 kHz
Thermal Characteristics:
- Anode Heat Content ..... 28 kJ
- Maximum Anode Heat Dissipation Rate ..... 265 W

Maximum Radiographic Exposure Time ..... 30 s

Environmental Limits

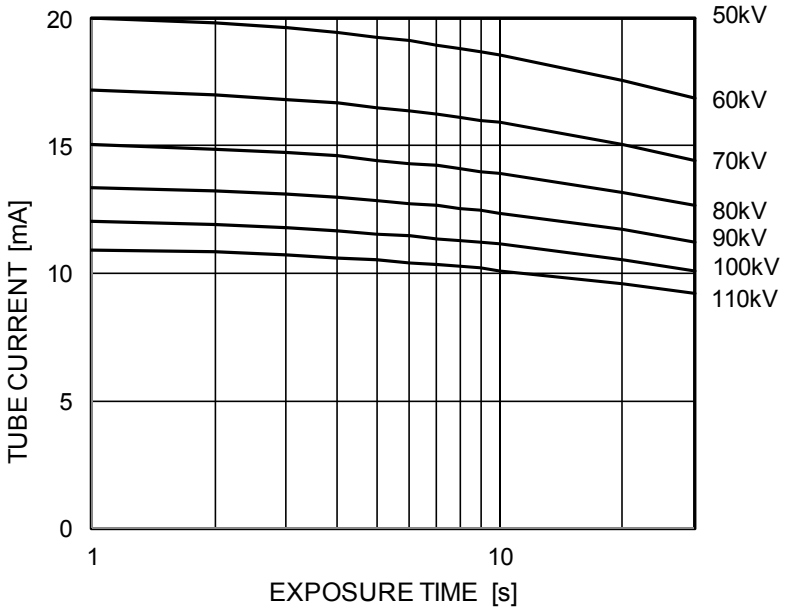
Operating Limits (in dielectric oil):
- Oil Temperature ..... 10 ~ 60℃
- Oil Pressure ..... 70 ~ 140 kPa

Shipping and Storage Limits:
- Temperature ..... -40 ~ 70℃
- Humidity ..... 10 ~ 90 % (No condensation)
- Atmospheric Pressure ..... 50 ~ 106 kPa

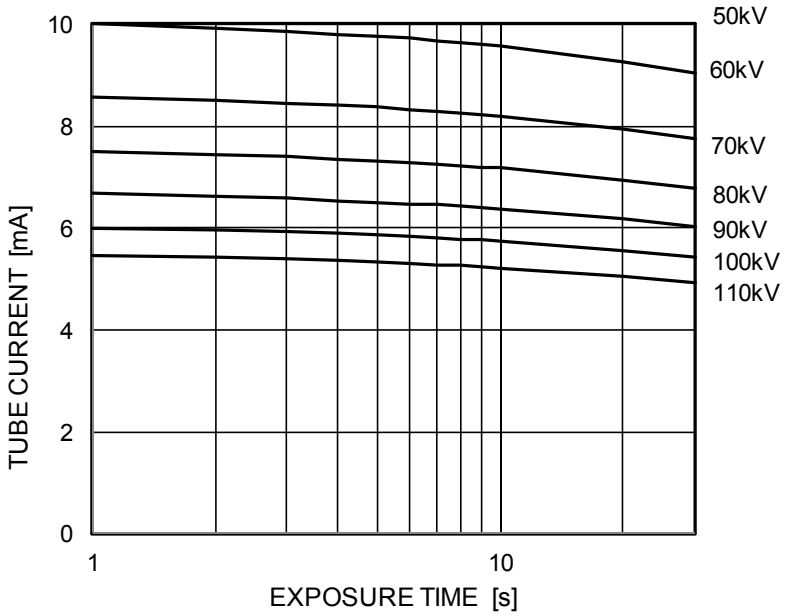
Maximum Rating Charts
(Absolute maximum rating charts)

Constant Potential High-Voltage Generator

Nominal Focal Spot Value: 0.6 ■



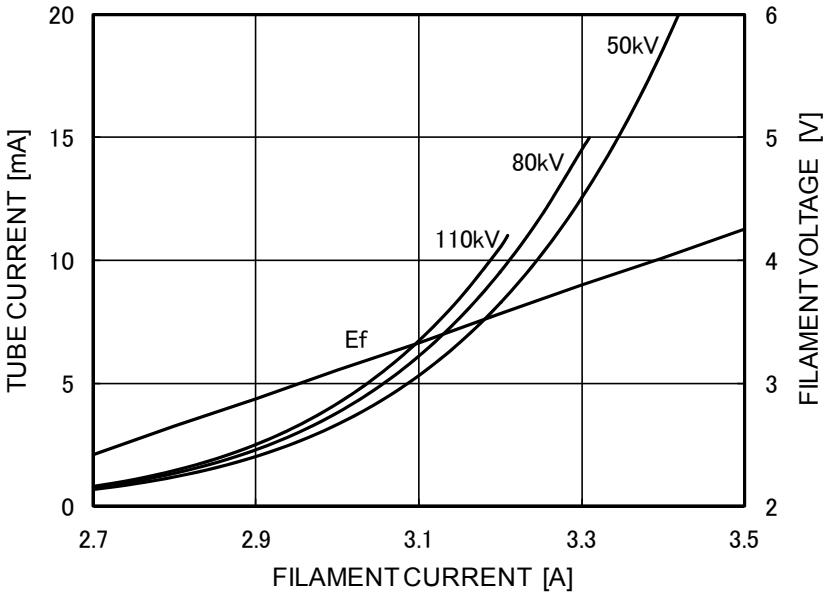
Nominal Focal Spot Value: 0.3 ▣



Emission & Filament Characteristics

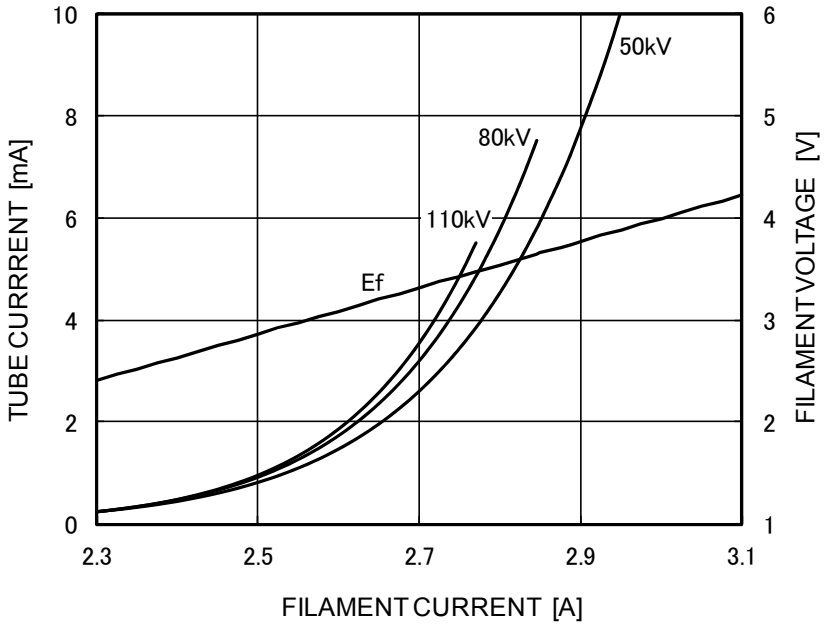
Constant Potential High-Voltage Generator

Nominal Focal Spot Value: 0.6 ■



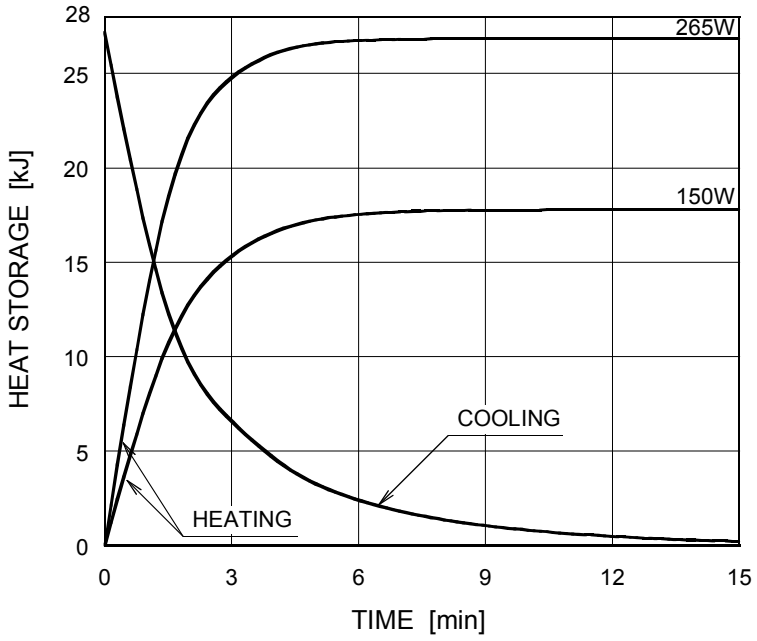
This graph indicates typical characteristics.

Nominal Focal Spot Value: 0.3 ▣



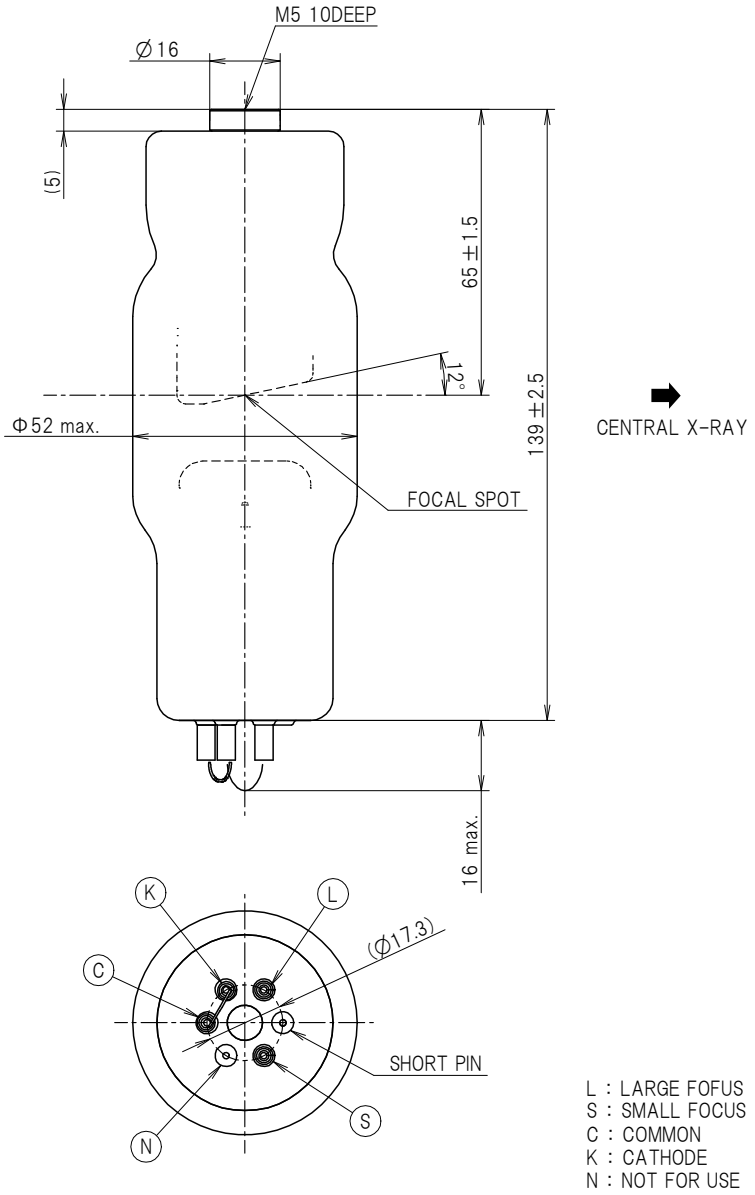
This graph indicates typical characteristics.

Anode Heating / Cooling Curve



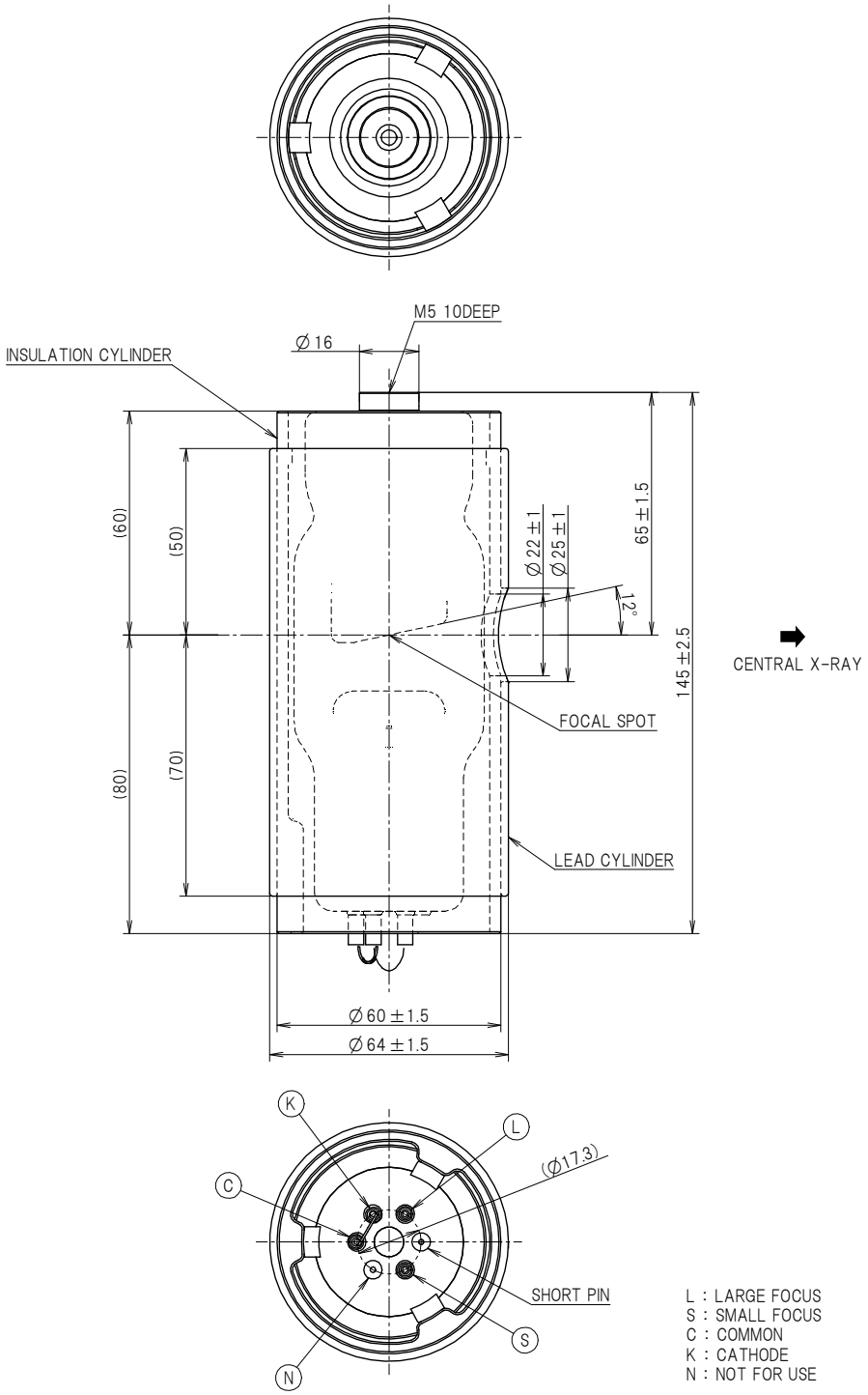
Dimensional Outline of DF-061

Unit: mm



Dimensional Outline of DF-061SB

Unit: mm



CANON ELECTRON TUBES & DEVICES CO., LTD.
Marketing Engineering Group, Sales Department
1385, Shimoishigami, Otawara-shi, Tochigi 324-8550, Japan
Tel: +81-287-26-6666 Fax: +81-287-26-6060
https://etd.canon