

X-RAY TUBE

D-054

D-054S

D-054SB

Stationary Anode X-ray Tube

- ◆ Especially designed for dental radiography unit.
- ◆ Low target angle adaptive for dental tomography.
- ◆ Provided with an insulation cylinder (D-054S) and lead cylinder. (D-054SB)
- ◆ These tubes have 0.5 focus, and are available for maximum tube voltage 100 kV.
- ◆ Installed in the same enclosure with the high voltage transformer.

General Data

Electrical:

Circuit:

| | |
|-------------------------------------------------|-------------------------------------------|
| High Voltage Generator | Two-peak High-voltage Generator |
| | Constant Potential High-voltage Generator |
| Grounding | Center-grounded |
| Nominal X-ray Tube Voltage | 100 kV |
| Nominal Focal Spot Value | 0.5 |
| Nominal Anode Input Power (at 1.0s): | |
| Two-peak High-voltage Generator | 840 W |
| Constant Potential High-voltage Generator | 1750 W |
| Nominal Radiographic Anode Input Power: | |
| Two-peak High-voltage Generator | 840 W |
| Constant Potential High-voltage Generator | 1750 W |
| Exposure Duty Cycle | 1:60 or More |
| | (Exposure Time : Interval Time) |

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Mechanical:

Dimensions:

- Overall Length See Dimensional Outline
- Maximum Diameter See Dimensional Outline

Target:

- Anode Angle 5 degrees
- Material Tungsten
- Inherent Filtration At least 0.8 mm Al at 50 kV
- X-ray Coverage 75 × 380 mm at SID 550 mm

Weight:

- D-054 Approx. 320 g
- D-054S Approx. 460 g
- D-054SB Approx. 780 g

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

Tube Holding:

- D-054 Holding the glass envelope of the anode end and cathode end, or the screw of the anode shank.
- D-054S Holding the insulation cylinder
- D-054SB Holding the insulation cylinder or the lead cylinder

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

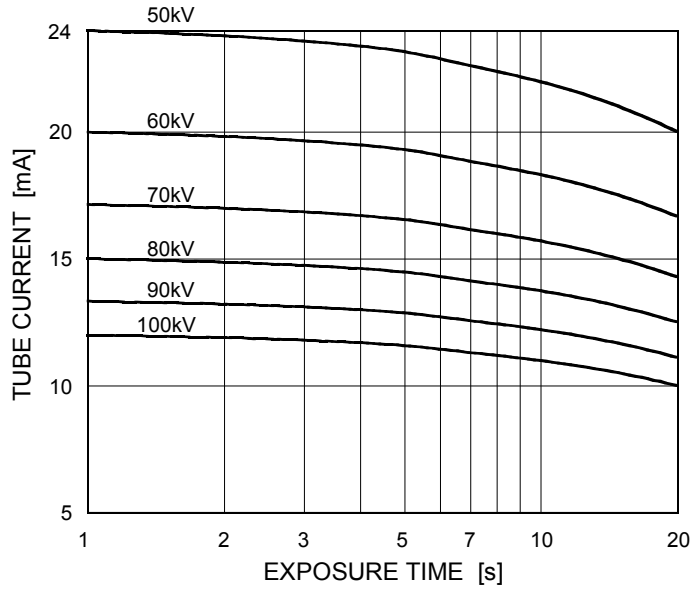
| | |
|-------------------------------------------------|---------------------------------|
| Maximum X-ray Tube Voltage | 100 kV |
| Between Anode (or Cathode) and Ground | 50 kV |
| Minimum X-ray Tube Voltage | 50 kV |
| Maximum X-ray Tube Current: (See Rating Charts) | |
| Two-peak High-voltage Generator | 24 mA |
| Constant Potential High-voltage Generator | 22 mA |
| Maximum Filament Current | 3.5 A |
| Maximum Filament Voltage | 4.2 V |
| Filament Frequency Limits | DC or AC (Sine Wave) 0 ~ 20 kHz |
| Thermal Characteristics: | |
| Anode Heat Content | 35 kJ |
| Maximum Anode Heat Dissipation | 250 W |
| Maximum Radiographic Exposure Time | 20 s |

Environmental Limits

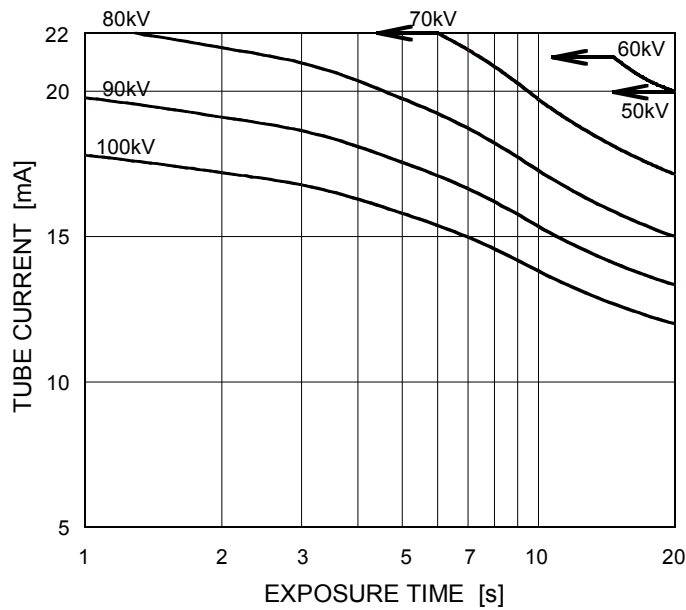
| | |
|---------------------------------------|-------------------|
| Operating Limits (In Dielectric Oil): | |
| Oil Temperature | 10 ~ 60 °C |
| Oil Pressure | 70 ~ 140 kPa |
| Shipping and Storage Limits: | |
| Temperature | -40 ~ 70 °C |
| Humidity | 10 ~ 90 % |
| | (No Condensation) |
| Atmospheric Pressure | 50 ~ 106 kPa |

Maximum Rating Charts (Absolute maximum rating charts)

Two-peak High-voltage Generator
Nominal Focal Spot Value: 0.5



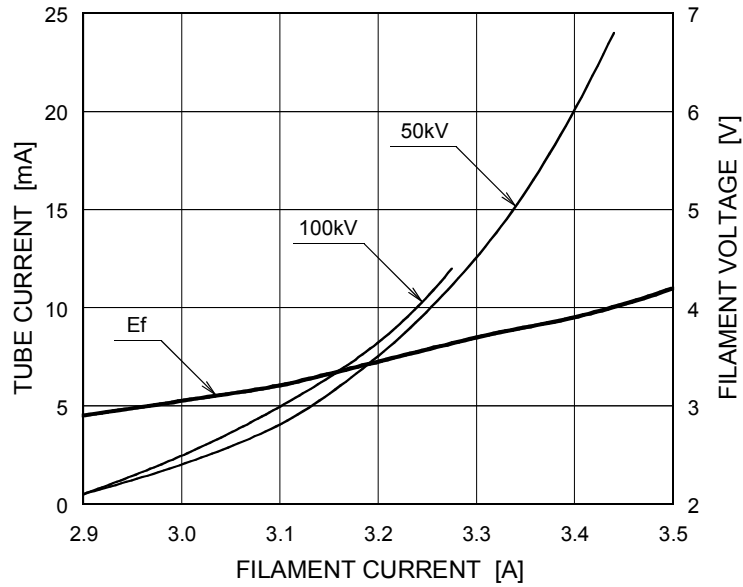
Constant Potential High-voltage Generator
Nominal Focal Spot Value: 0.5



Emission & Filament Characteristics

Two-peak High-voltage Generator

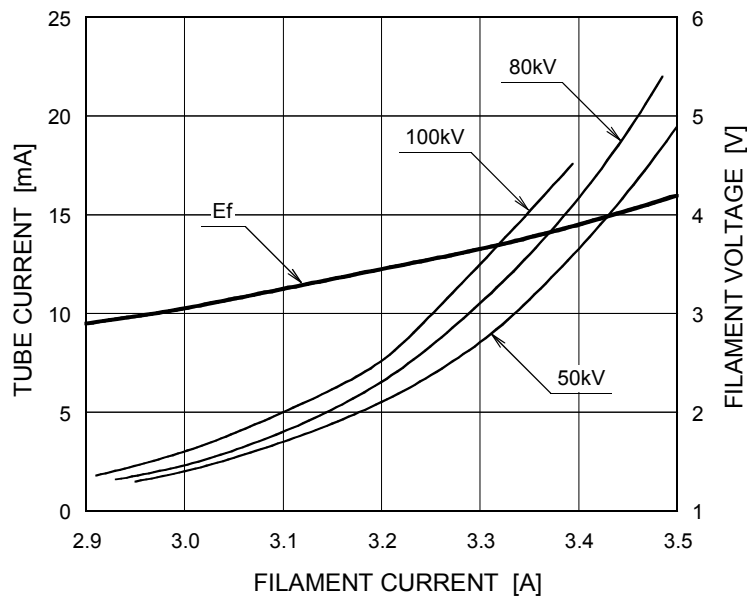
Nominal Focal Spot Value: 0.5



This graph indicates typical characteristics.

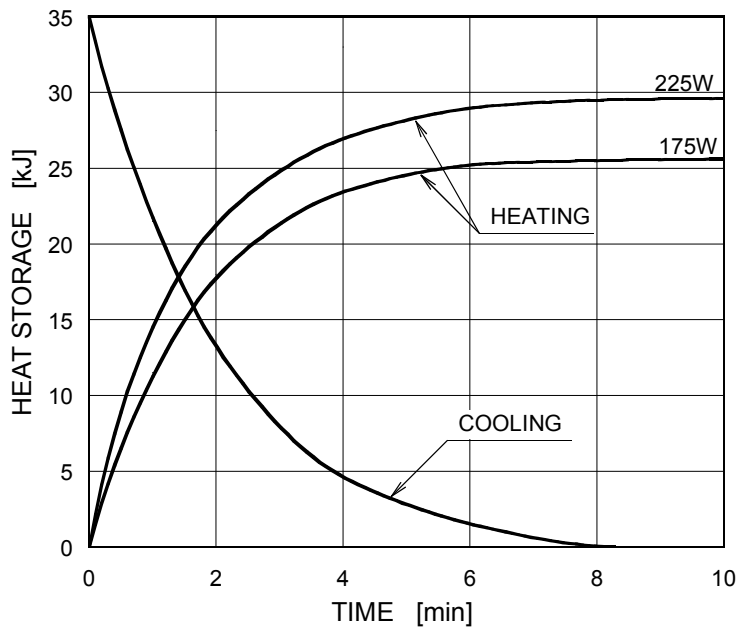
Constant Potential High-voltage Generator

Nominal Focal Spot Value: 0.5



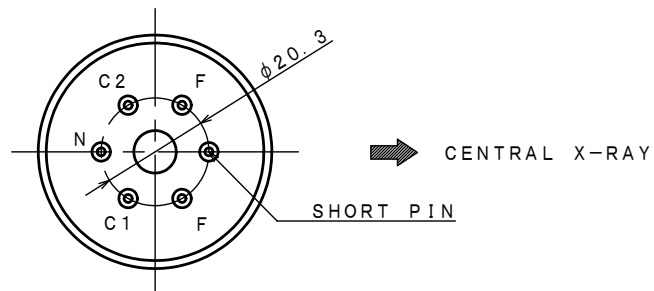
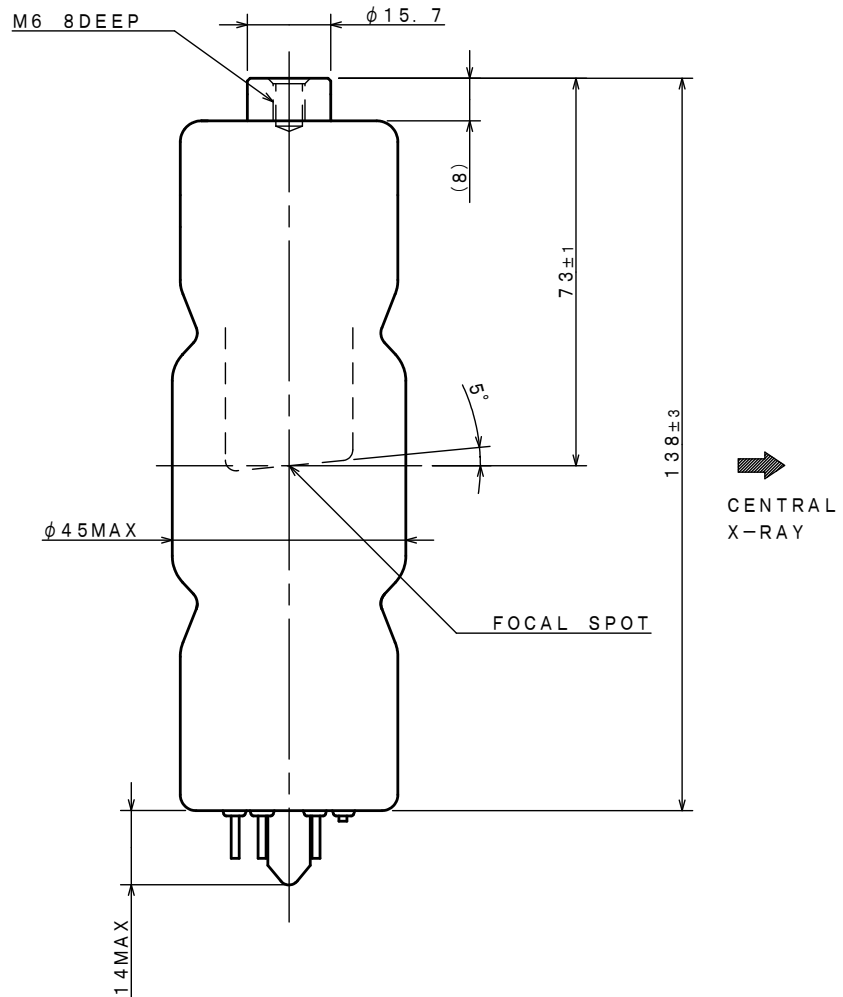
This graph indicates typical characteristics.

Anode Heating / Cooling Curve



Dimensional Outline of D-054

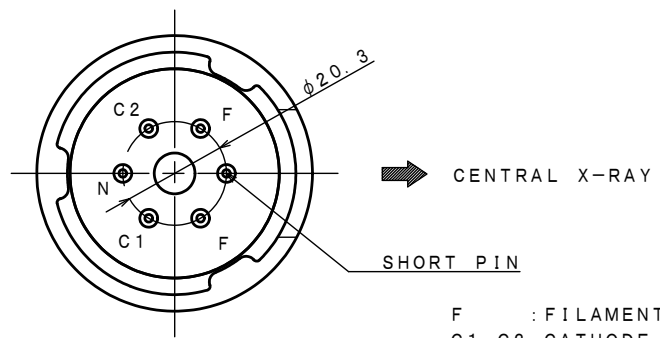
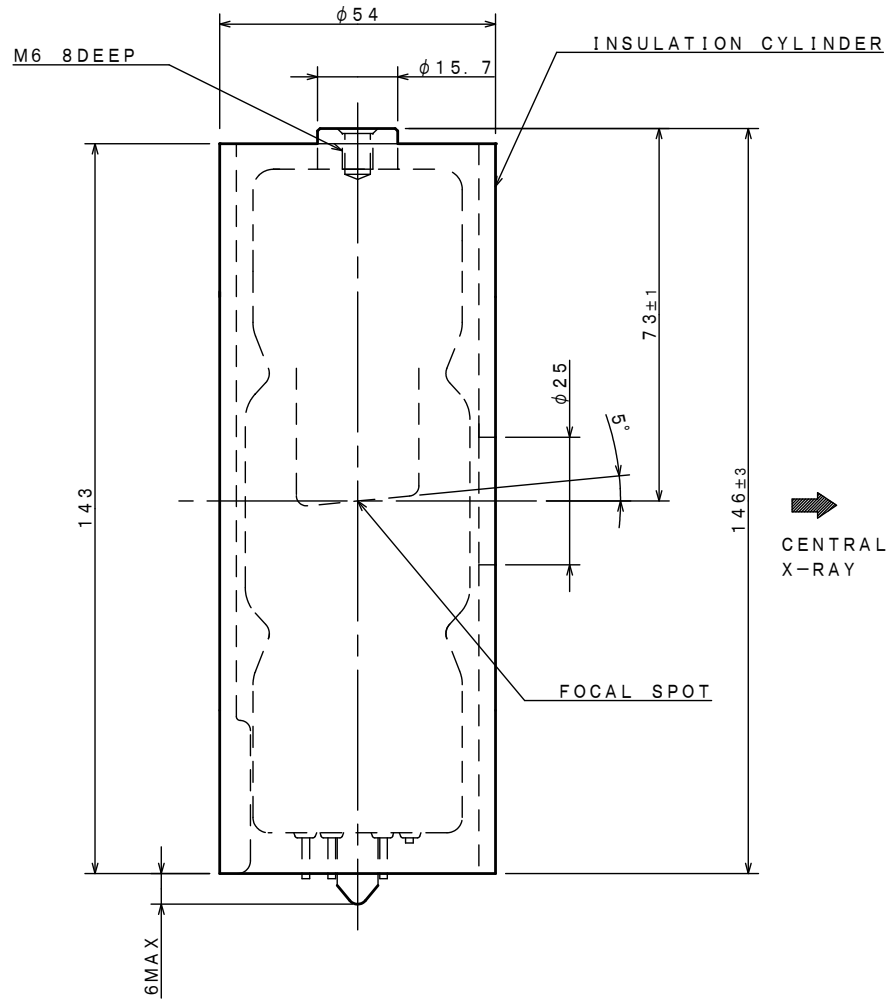
Unit: mm



F : FILAMENT
 C1, C2 : CATHODE
 N : NOT FOR USE

Dimensional Outline of D-054S

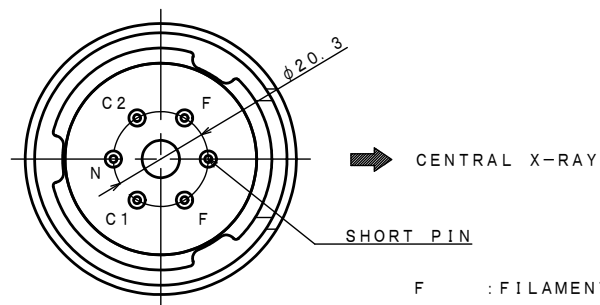
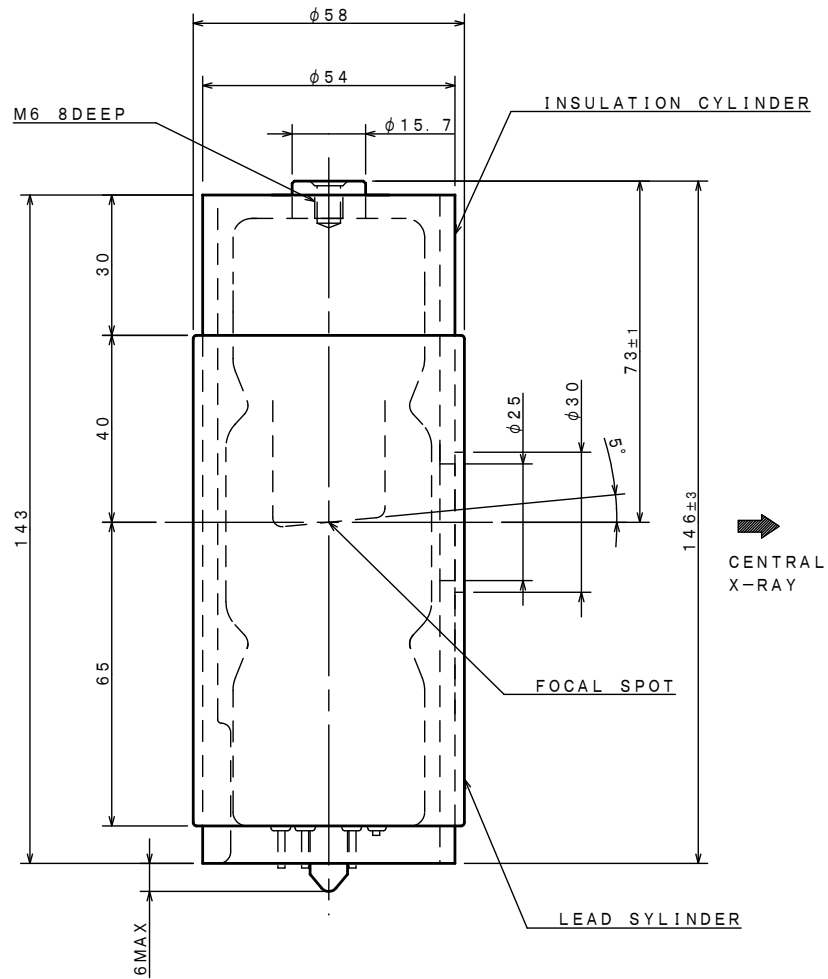
Unit: mm



- F : FILAMENT
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- N : NOT FOR USE

Dimensional Outline of D-054SB

Unit: mm



F : FILAMENT
 C1, C2 : CATHODE
 N : NOT FOR USE



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>

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Product scope is referred to the following URL. <https://etd.canon/eng/company/quality.htm>.