

X-RAY TUBE

D-0711
D-0711S
D-0711SB

Stationary Anode X-ray Tube

- ◆ Especially designed for dental X-ray unit.
- ◆ Provided with an insulation cylinder (D-0711S) and lead cylinder (D-0711SB).
- ◆ These tubes have focus 0.7, and are available for maximum tube voltage 70 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	70 kV
Nominal Focal Spot Value	0.7
Nominal Anode Input Power (at 1.0s)	940 W
Nominal Radiographic Anode Input Power	980 W
Exposure Duty Cycle	1:60 or More
	(Exposure Time : Interval Time)

Mechanical:

Dimensions:

Overall Length	See Dimensional Outline
Maximum Diameter	See Dimensional Outline

Target:

Anode Angle	16 degrees
Material	Tungsten
Inherent Filtration	At least 1.0 mm Al at 70 kV

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X-ray Coverage	ϕ 107 mm at SID 200 mm
Weight (Approx.):	
D-0711	100 g
D-0711S	140 g
D-0711SB	260 g
Cooling Method	Oil immersed (60°C Max.) and convection oil cooling.
Tube Holding:	
D-0711	Holding the glass envelope of the anode end and cathode end, or the screw of the anode shank.
D-0711S	Holding the insulation cylinder.
D-0711SB	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	70 kV
Between Anode (or Cathode) and Ground	35 kV
Minimum X-ray Tube Voltage	50 kV
Maximum X-ray Tube Current	19.9 mA
	(See Rating Charts)
Maximum Filament Current	3.0 A
Filament Voltage:	
At Maximum Filament Current (3.0 A)	3.0 ~ 3.7 V
Filament Frequency Limits	DC or AC (Sine Wave) 0 ~ 20 kHz
Thermal Characteristics:	
Anode Heat Content	7 kJ (10 KHU)
Maximum Anode Heat Dissipation	210 W (300 HU/s)

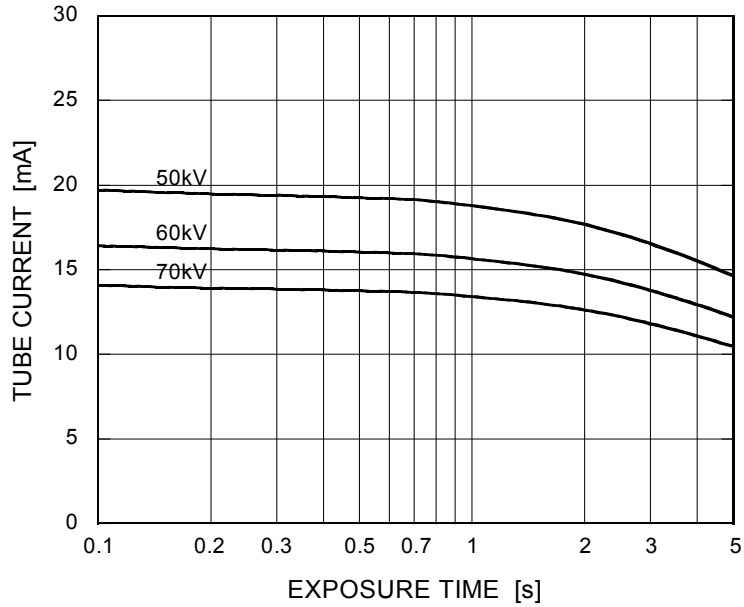
Environmental Limits

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)

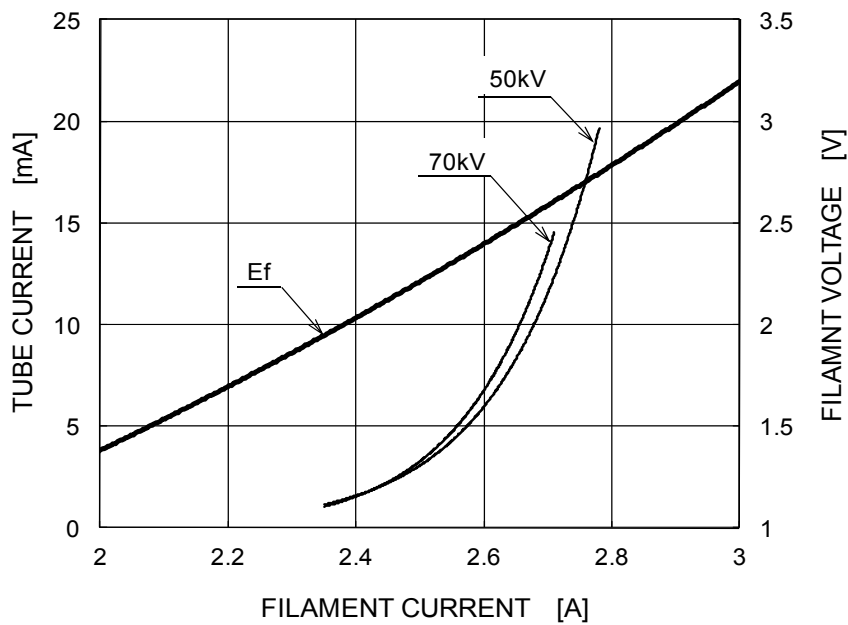
Constant Potential High-voltage Generator

Nominal Focal Spot Value: 0.7



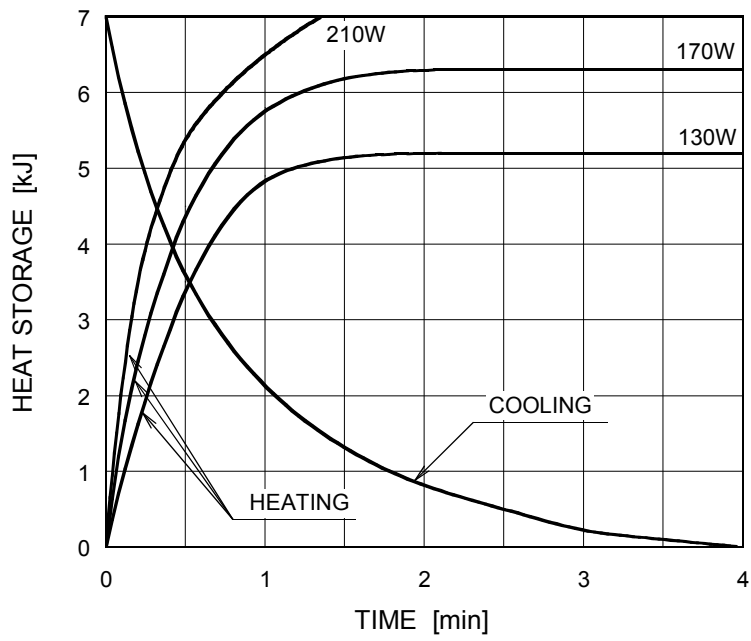
Emission & Filament Characteristics

Constant Potential High-voltage Generator



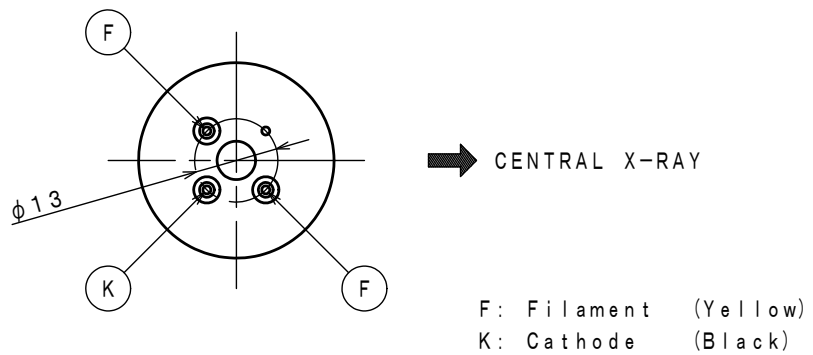
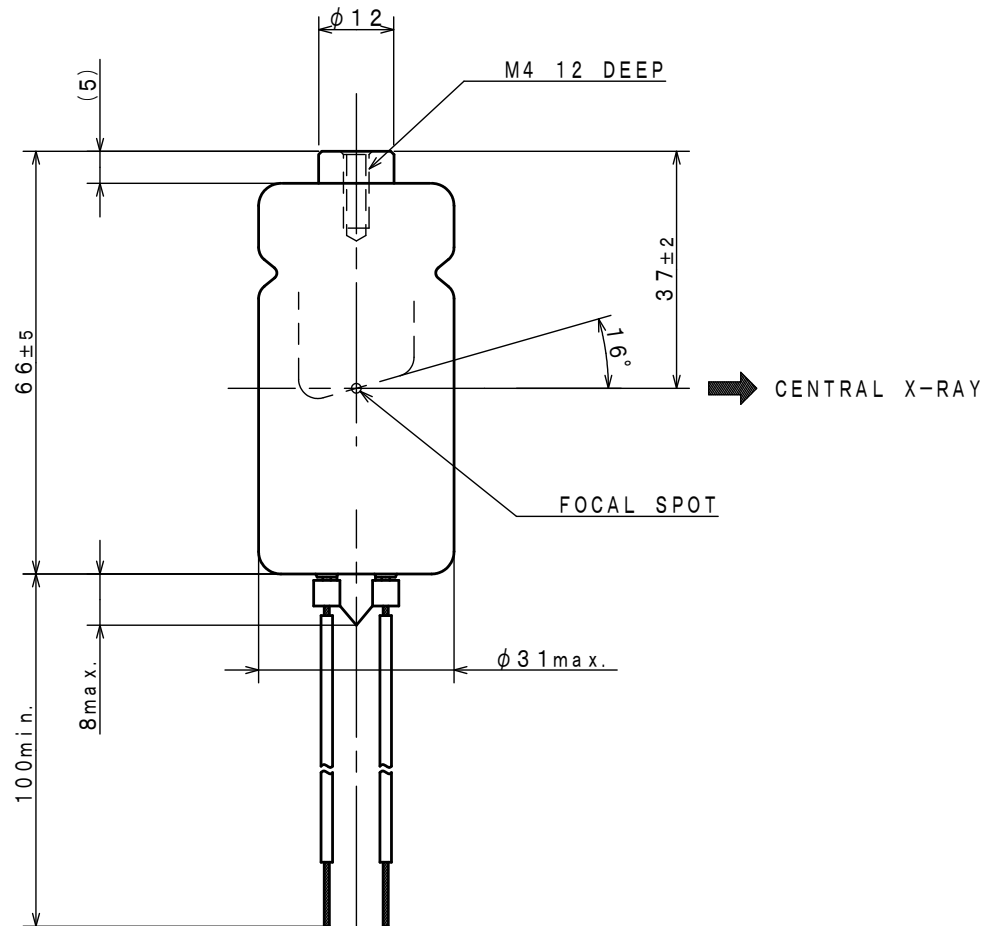
This graph indicates typical characteristics.

Anode Heating / Cooling Curve



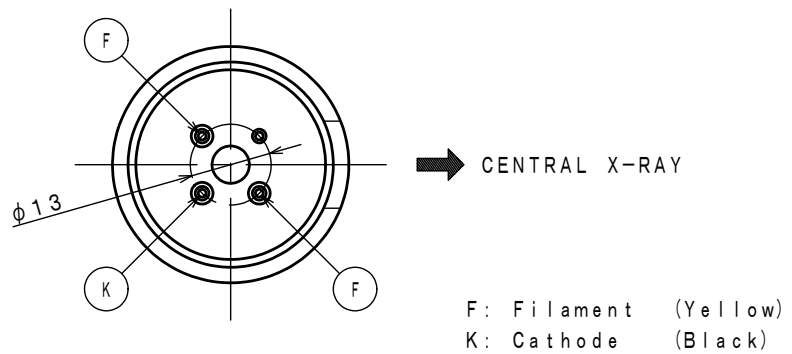
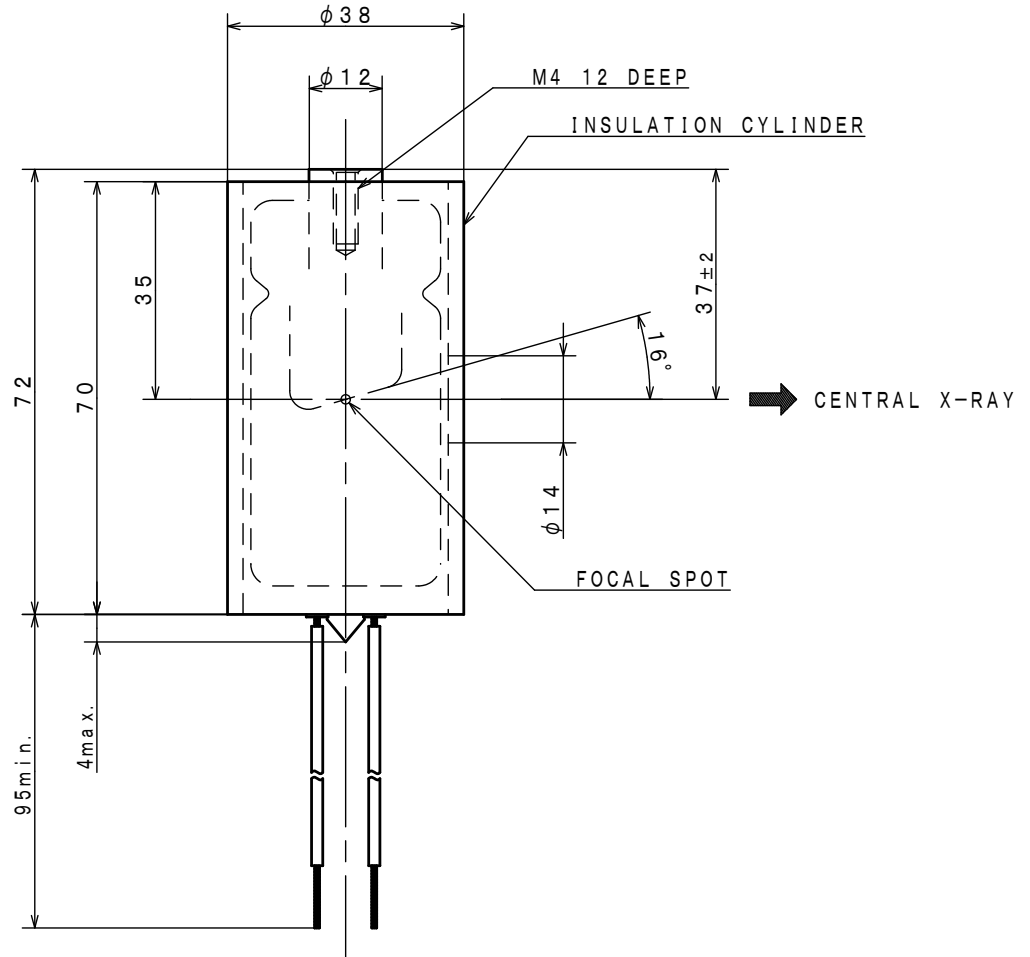
Dimensional Outline of D-0711

Unit: mm



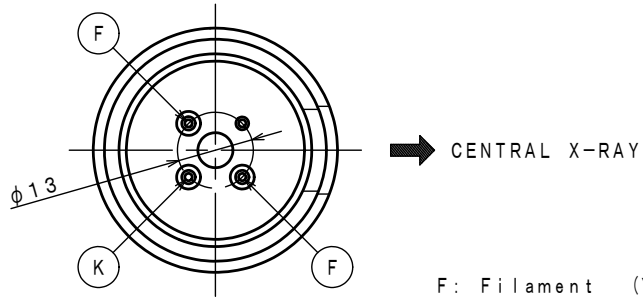
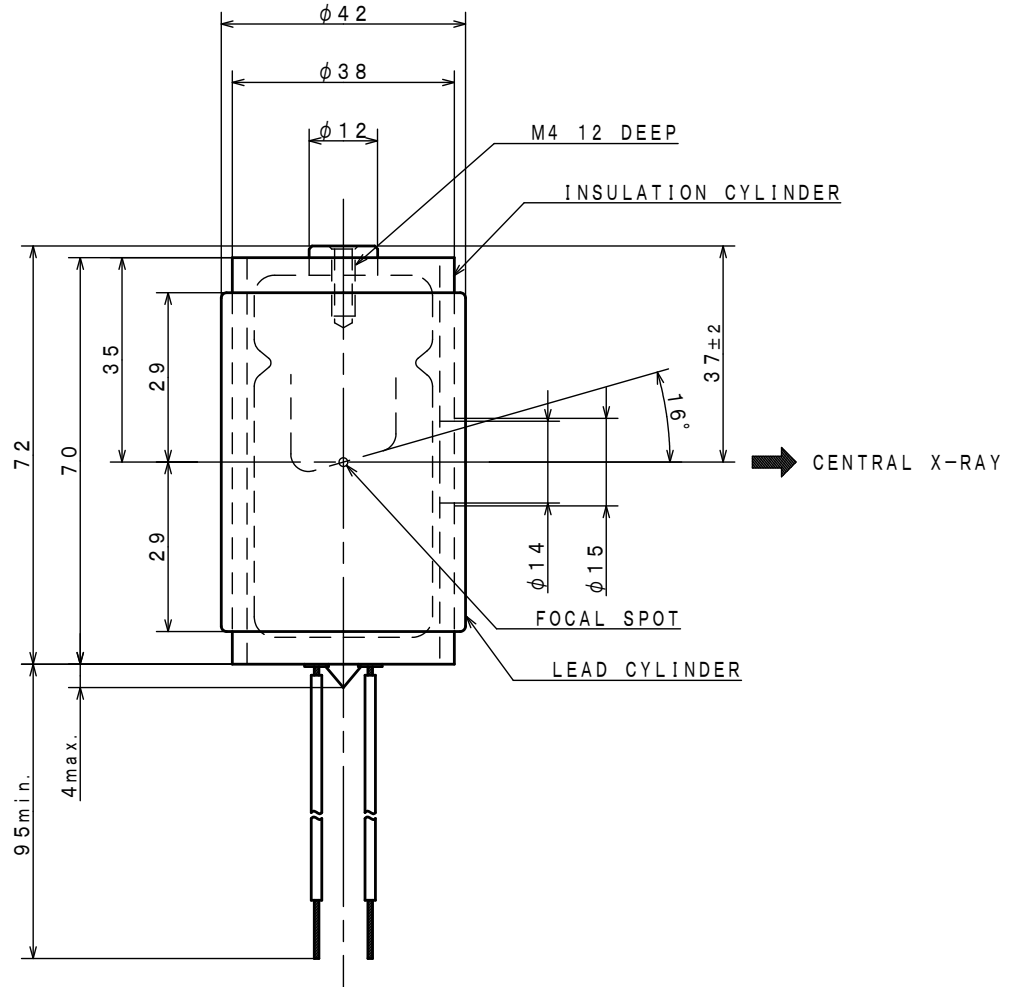
Dimensional Outline of D-0711S

Unit: mm



Dimensional Outline of D-0711SB

Unit: mm



F: Filament (Yellow)
K: Cathode (Black)



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·The head office of Canon Electron Tubes & Devices Co., Ltd. has been certified to meet all the requirements of Environmental Management System ISO14001.
·Canon Electron Tubes & Devices Co., Ltd. has been certified to meet all the requirements of Quality Management Systems ISO9001 and ISO13485.
Product scope is referred to the following URL. <https://etd.canon/eng/company/quality.htm>.