

**INDUSTRIAL X-RAY TUBE  
I-317**

**X-ray Tube for Industrial Use**

- ◆ The tube I-317, which has focus 0.1m, is designed for non-destructive X-ray inspection.
- ◆ This tube can be used with Max. 100 kV constant potential circuit of cathode grounded.

**General Data**

**Electrical:**

Circuit:

High Voltage Generator .....	Constant potential high-voltage generator
Grounding .....	Cathode and X-Ray port grounded
Nominal X-ray Tube Voltage .....	100 kV
Nominal Focal Spot Value .....	(*) 0.1 (Cathode bias: -20 V)

(\* ) Permissible Value: Refer to IEC60336:1993.

**Mechanical:**

Dimensions .....	See dimensional Outline
Overall Length .....	180 mm
Maximum Diameter .....	φ 62 mm
Target:	
Angle .....	10 degrees
Material .....	Tungsten
Inherent Filtration .....	Be 0.5 mm
X-ray Coverage:	
Perpendicular Direction of Tube Axis .....	20 degrees
Longitudinal Direction of Tube Axis:	
Cathode side .....	10 degrees
Anode side .....	6 degrees
Weight (Approx.) .....	710 g
Insulating Medium .....	Insulation Oil
Cooling Method .....	Oil immersed (60°C Max.) and convection oil cooling.
Tube Holding .....	Holding the mounting flange with 6-M4 screws (P=0.7)

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

Maximum X-ray Tube Voltage .....	100 kV
Minimum X-ray Tube Voltage .....	40 kV
Maximum X-ray Tube Current .....	0.83 mA
Maximum Filament Current .....	3.7 A
Filament Frequency Limit .....	DC or AC (Sine Wave) 0 ~ 20 kHz
Maximum Input Power (Continuously) .....	50 W
Maximum Operating Temperature (Oil Temperature) .....	60 °C

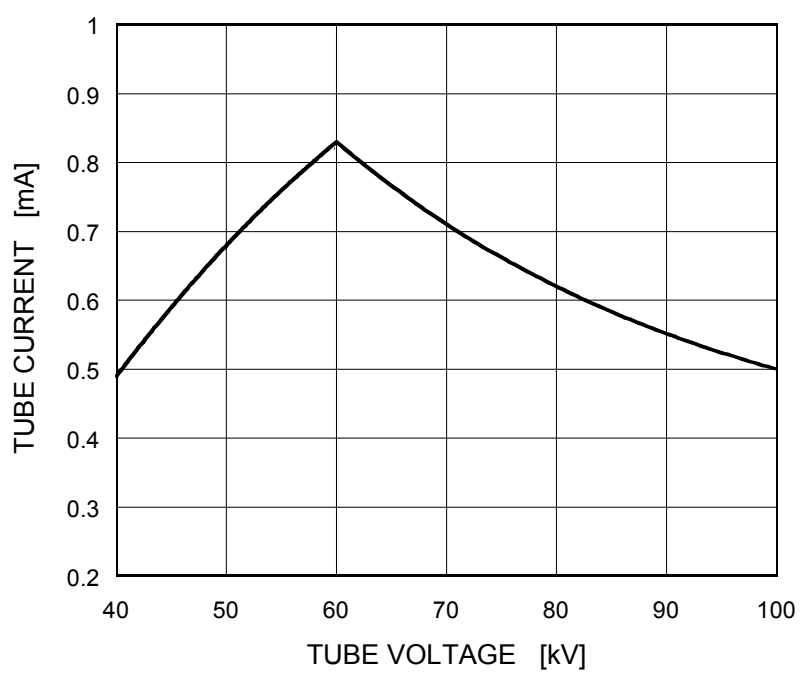
## Environmental Limits

### Operating Limits (in dielectric oil):

Oil Temperature .....	10 ~ 60 °C
Oil pressure .....	70 ~ 140 kPa

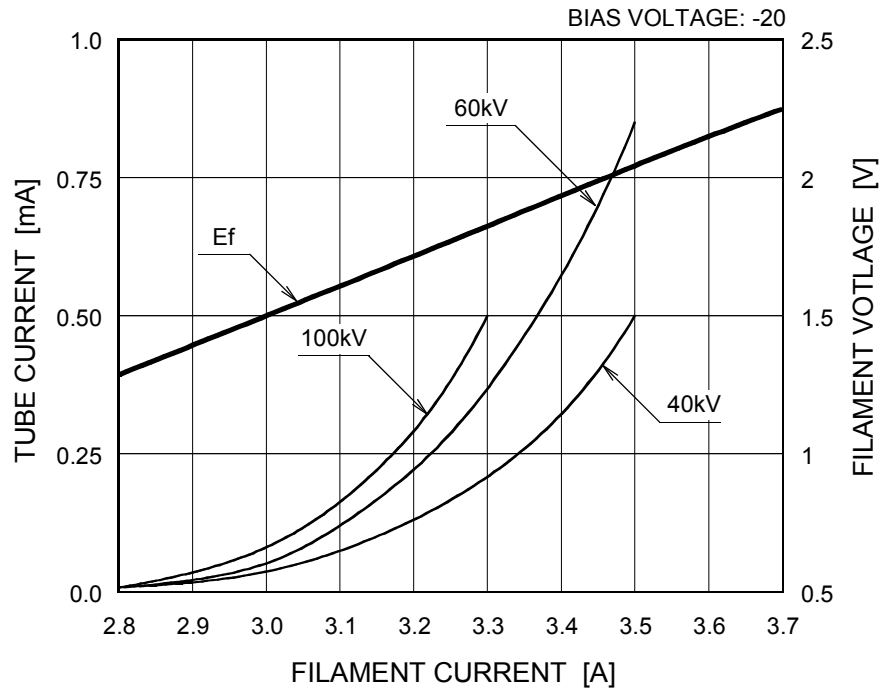
### Shipping and Storage Limits:

Temperature .....	-40 ~ 70 °C
Humidity .....	10 ~ 90 % (No condensation)
Atmospheric Pressure .....	50 ~ 106 kPa

**Maximum Input (continuous)**

## Emission & Filament Characteristics

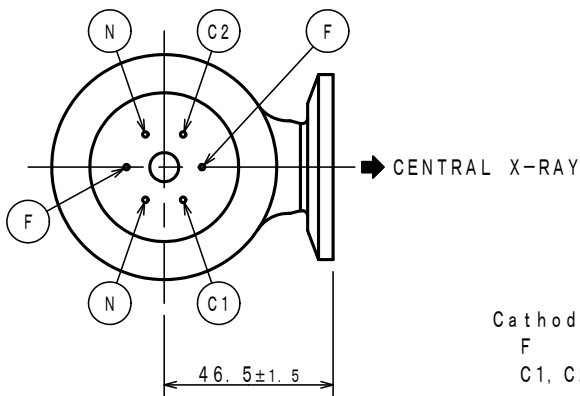
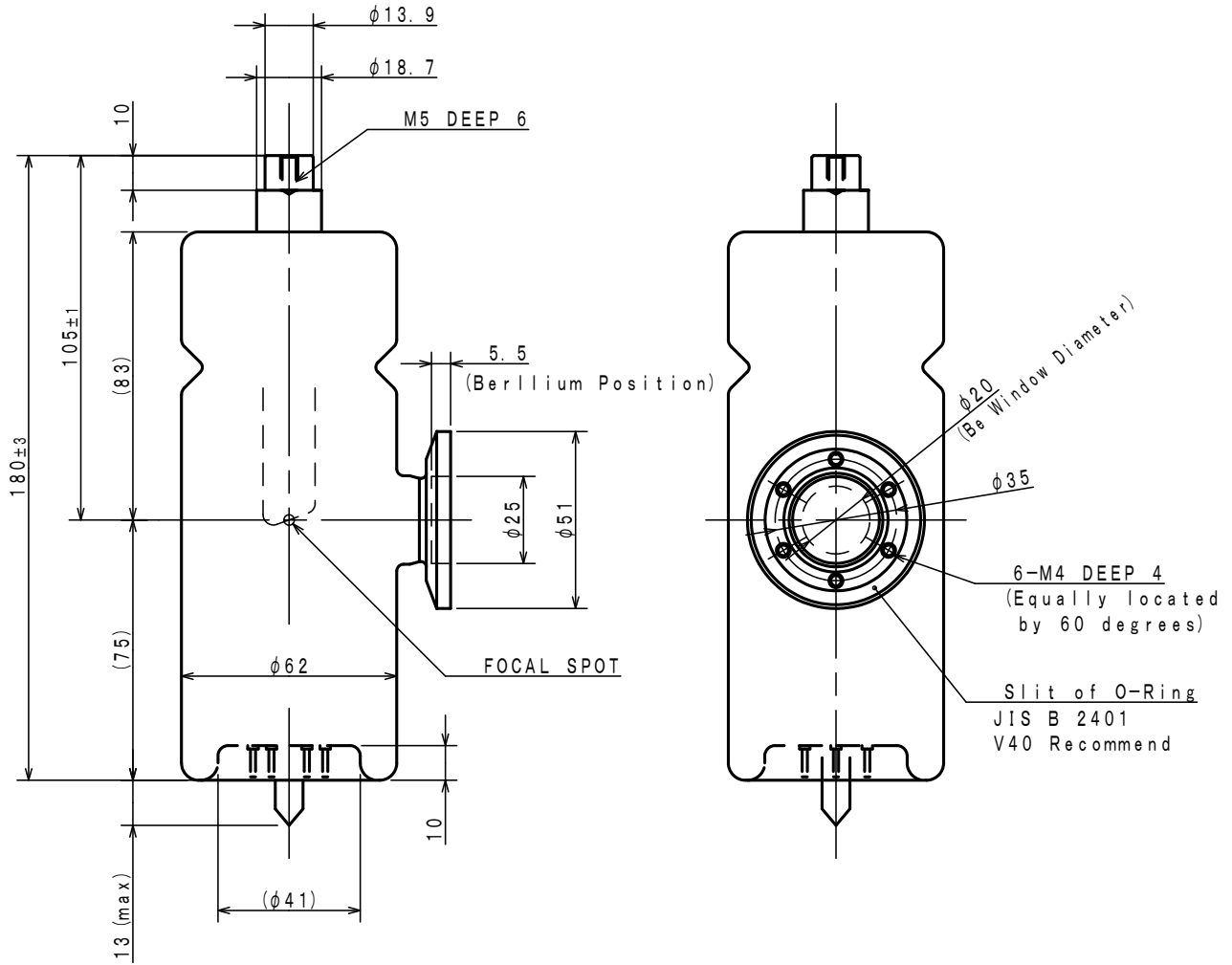
Constant potential high-voltage generator



Note: This graph indicate typical characteristics.

### Dimensional Outline

Unit: mm



Cathode Terminals  
 F : FILAMENT  
 C1, C2 : CATHODE  
 Terminals "C" are mutually connected inside the tube.  
 N : NOT FOR USE



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