

**X-RAY TUBE
DG-073B**

Stationary Anode X-ray Tube

- ◆ Especially designed for dental X-ray unit.
- ◆ Provided with control grid to reduce tube current deviation by self-biasing.
- ◆ This tube has 0.7 focal spot, and is available for a maximum tube voltage 70 kV.
- ◆ Installed in the same enclosure with the high voltage transformer.
- ◆ This tube can use to both DC and AC circuit.

General Data

Electrical:

Circuit:

High Voltage Generator:

DC Circuit Constant Potential High-Voltage Generator

AC Circuit..... One-Peak High-Voltage Generator (Self-rectified)

Grounding Center-Grounded

Nominal X-ray Tube Voltage 70 kV (Fixed)

Nominal X-ray Tube Current 8 mA (Fixed)

Nominal Focal Spot Value ⁽¹⁾ ⁽²⁾ 0.7

Nominal Radiographic Anode Input Power

DC Circuit 560 W

AC Circuit 396 W

Filament Condition:

DC Circuit Approx. 2.6 A / 3.3 V

AC Circuit 4.0 V (Fixed)

Exposure Duty Cycle 1:30 or more

(Exposure time : Interval time)

Note ⁽¹⁾ DC: At 70 kV 8 mA with 125 kΩ bias resistor " Rg " (Fixed).

Note ⁽²⁾ AC: At 70 kV 8 mA with 30 kΩ to 55 kΩ bias resistor " Rg " (Fixed).

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★The information contained herein may be changed without prior notice. It is therefore, advisable to contact to CETD before processing with the design of equipment incorporating this product.

Mechanical:

Dimensions:

- Overall Length See dimensional outline
- Maximum Diameter See dimensional outline

Target:

- Anode Angle 20 degrees
- Material Tungsten
- Inherent Filtration At least 1.0 mm Al
- X-ray Coverage ϕ 130 mm at SID 200 mm
- Weight (Approx.) 130 g
- Cooling Method Oil immersed (60°C Max.) and convection oil cooling.
- Tube Holding Holding the glass envelope of the anode end and cathode end, or the screw (M6) of the anode shank.

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

Maximum X-ray Tube Voltage	70 kV
Maximum Inverse Tube Voltage	80 kV
Maximum Filament Current	3.0 A
Filament Frequency Limits	DC or AC (Sine Wave) 0 ~ 20 kHz
Thermal Characteristics:	
Anode Heat Content	7 kJ
Maximum Heat Dissipation	210 W
Maximum Radiographic Exposure Time	3.2 s

Environmental Limits

Operating Limits (in dielectric oil):

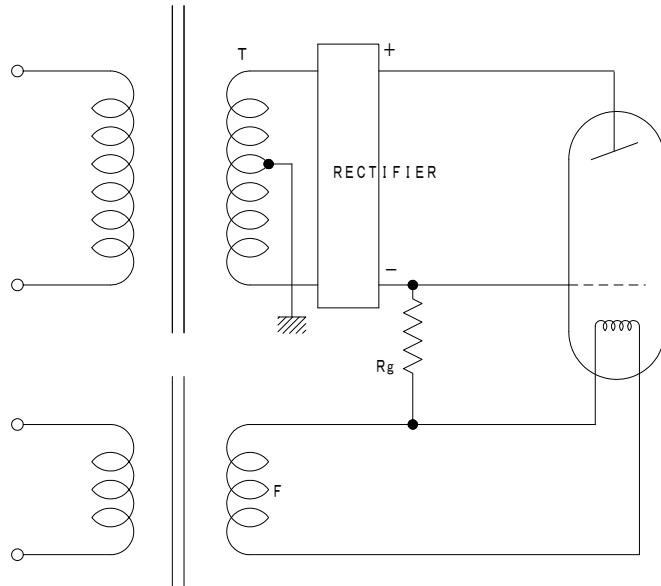
Oil Temperature	10 ~ 60 °C
Oil Pressure	70 ~ 140 kPa

Shipping and Storage Limits:

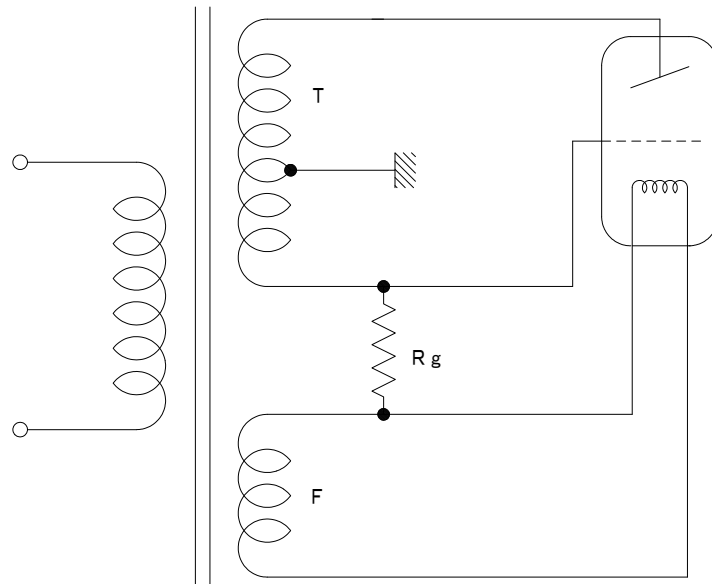
Temperature	-40 ~ 70 °C
Humidity	10 ~ 90 %
	(No condensation)
Atmospheric Pressure	50 ~ 106 kPa

High Voltage Circuit

Constant Potential High-Voltage Generator



One-Peak High-Voltage Generator (Self-rectified)

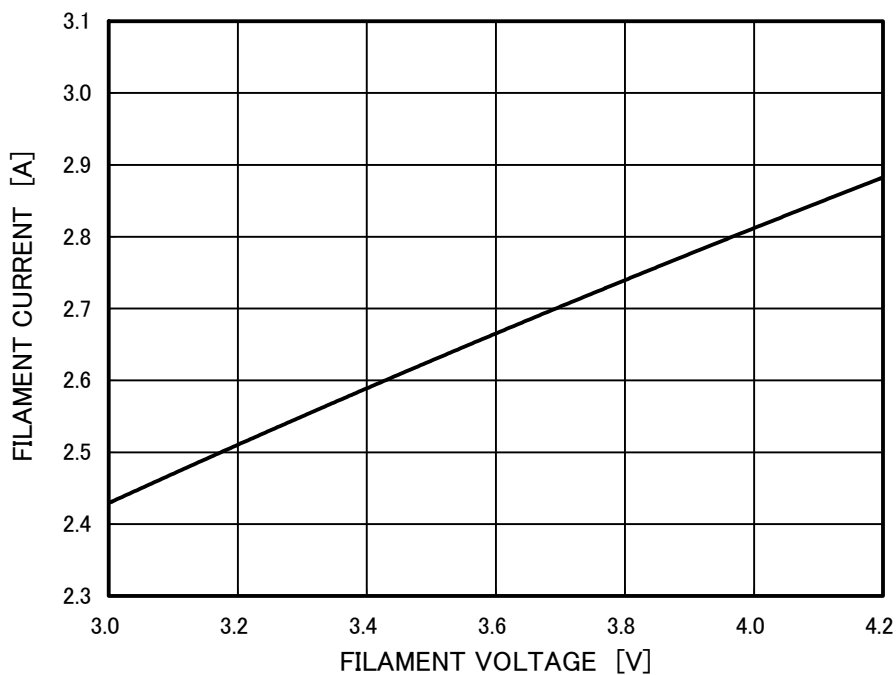


T: Transformer

F: Filament Transformer

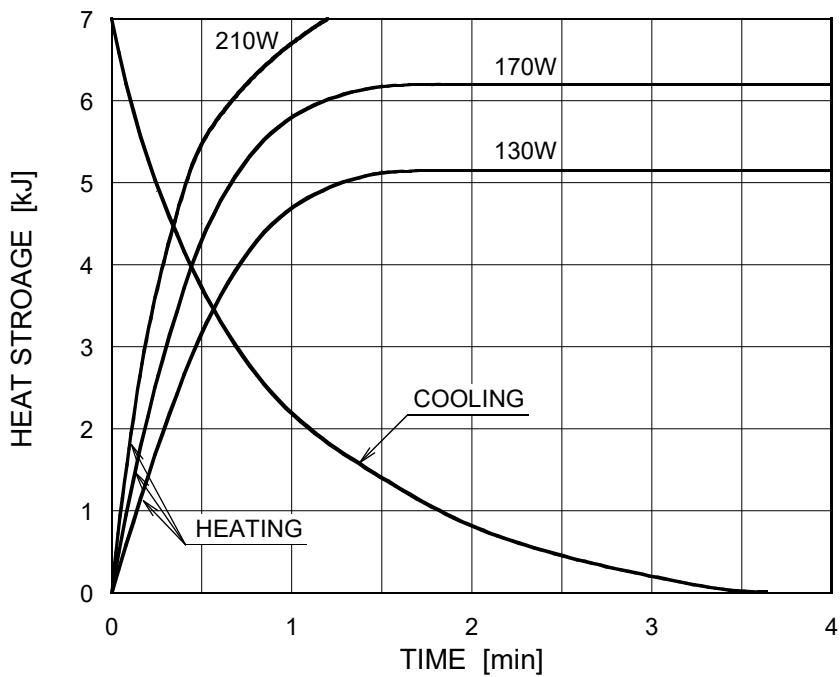
Rg: Bias Resistor

Filament Characteristics



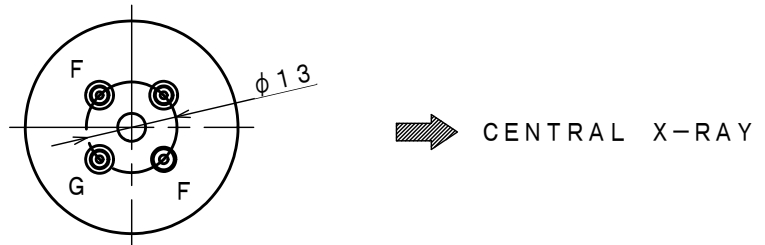
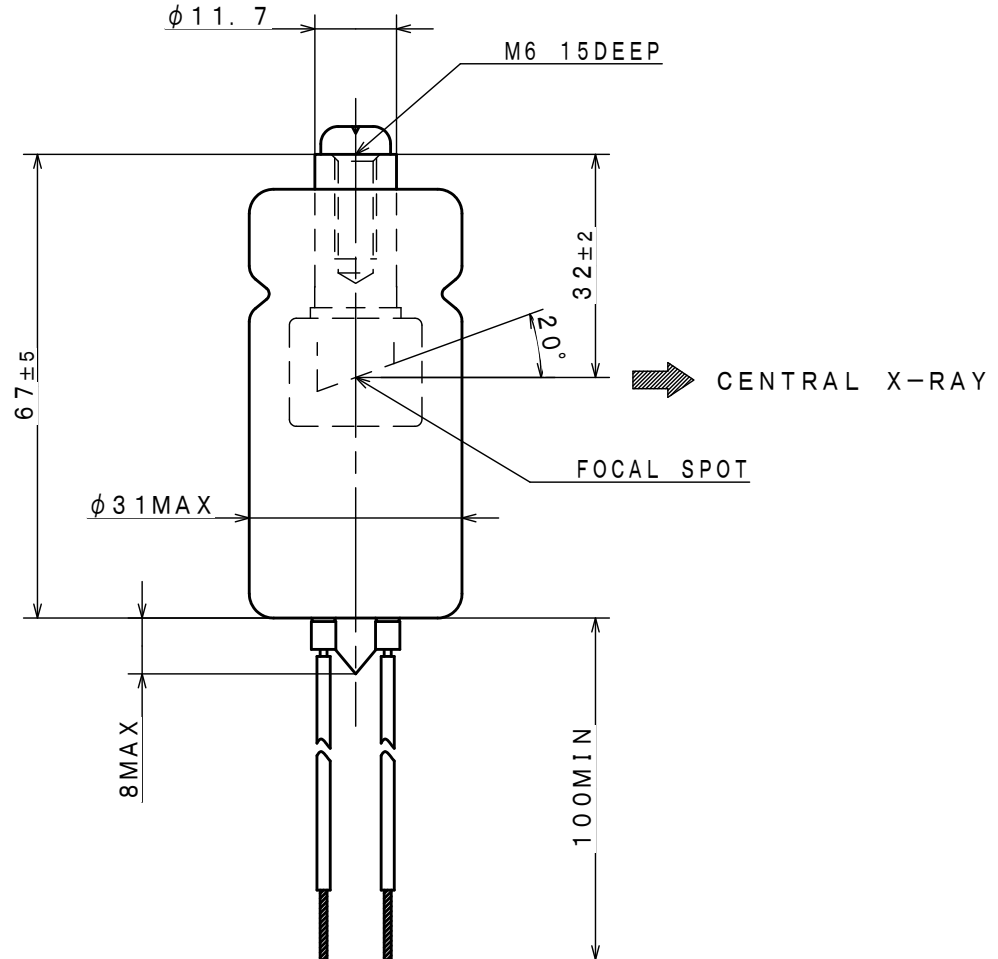
This graph indicates typical characteristics.

Anode Heating / Cooling Curve



Dimensional Outline

Unit: mm



F : FILAMENT
G : GRID