

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

**Stationary Anode X-ray Tube**

- ◆ Especially designed for dental X-ray unit.
- ◆ Provided with control grid to reduce tube current deviation by self-biasing.
- ◆ These tubes have focus 0.7, and are available for a maximum tube voltage 70 kV.
- ◆ Installed in the same enclosure with the high voltage transformer.

**General Data**

**Electrical:**

Circuit:

High Voltage Generator:

DG-073B-DC ..... Constant Potential High-voltage Generator

DG-073B-AC ..... 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 ..... <sup>(1)</sup> <sup>(2)</sup> 0.7

Filament Condition:

DG-073B-DC ..... Approx. 2.6 A / 3.3 V

DG-073B-AC ..... 4.0 V (Fixed)

Nominal Radiographic Anode Input Power ..... 560 W

Exposure Duty Cycle ..... 1:30 or More

(Exposure Time : Interval Time)

Note <sup>(1)</sup> DG-073B-DC: At 70 kV 8 mA with 125 kΩ bias resistor " Rg " (Fixed).

Note <sup>(2)</sup> DG-073B-AC: At 70 kV 8 mA with 30 kΩ to 50 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 .....  $\phi$  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 / Voltage:  
     DG-073B-DC ..... 3.0 A (3.8 ~ 5.1 V)  
     DG-073B-AC ..... 4.4 V (2.5 ~ 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):

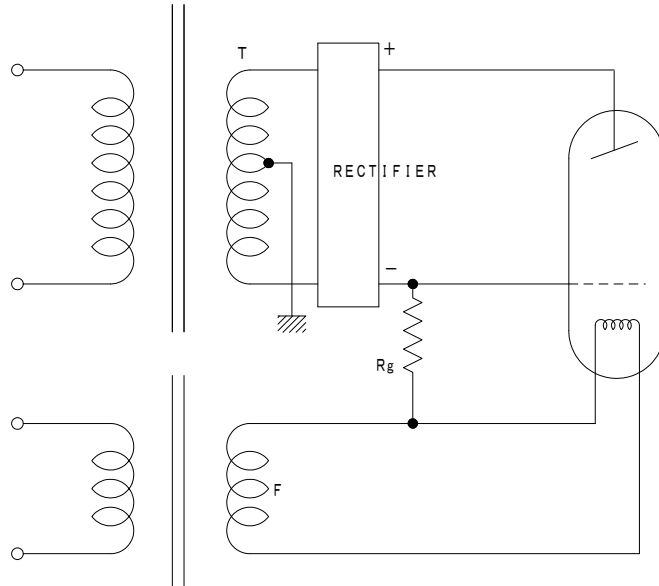
Oil Temperature ..... 10 ~ 60 °C  
 Oil Pressure ..... 70 ~ 140 kPa

Shipping and Storage Limits:

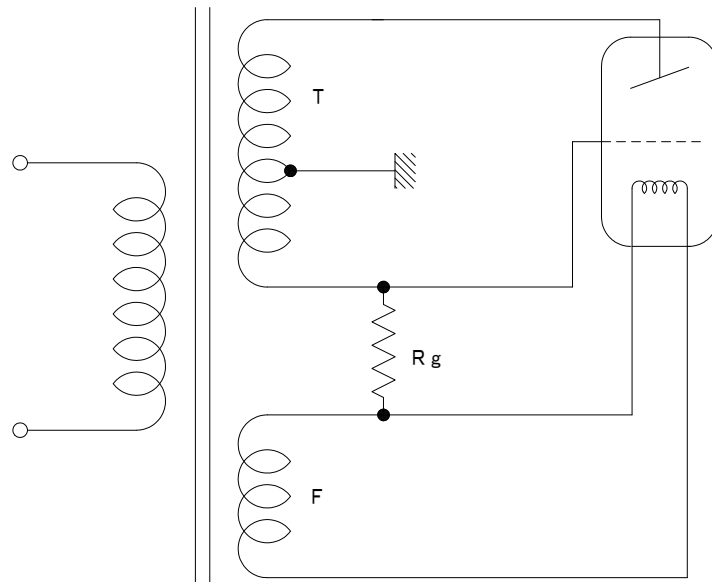
Temperature ..... -40 ~ 70 °C  
 Humidity ..... 10 ~ 90 %  
 (No Condensation)  
 Atmospheric Pressure ..... 50 ~ 106 kPa

## High Voltage Circuit

Constant Potential High-voltage Generator



One-peak High-voltage Generator (Self-rectified)

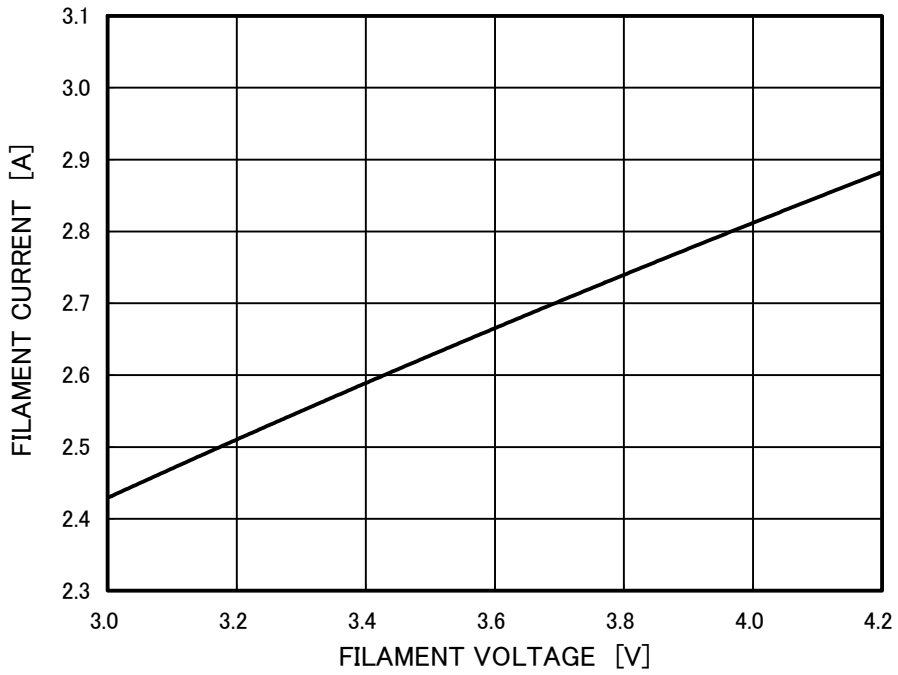


T: Transformer

F: Filament Transformer

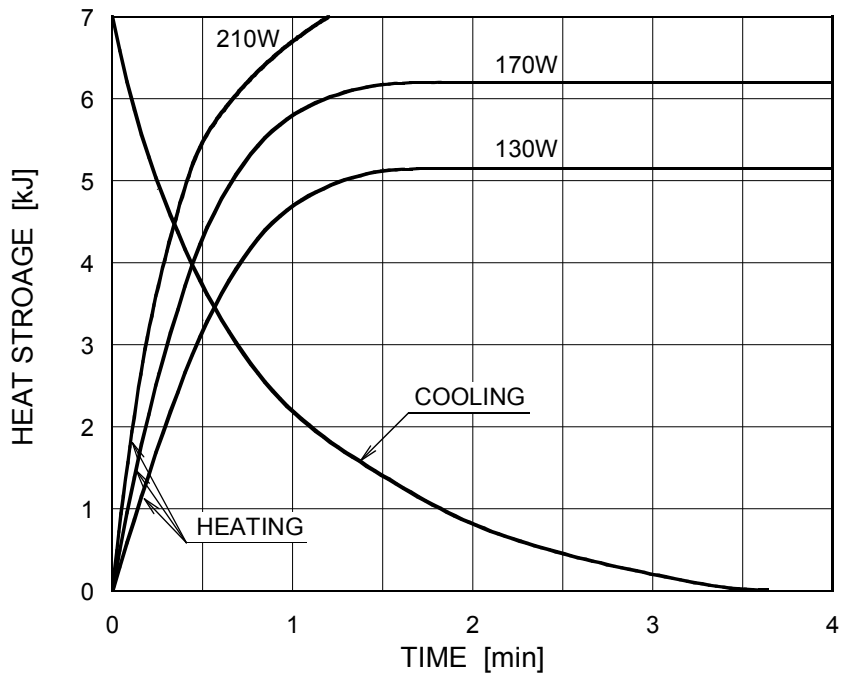
Rg: Bias Resistor

### Filament Characteristics



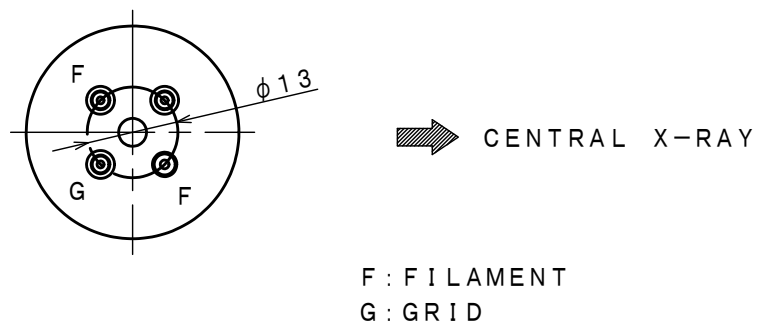
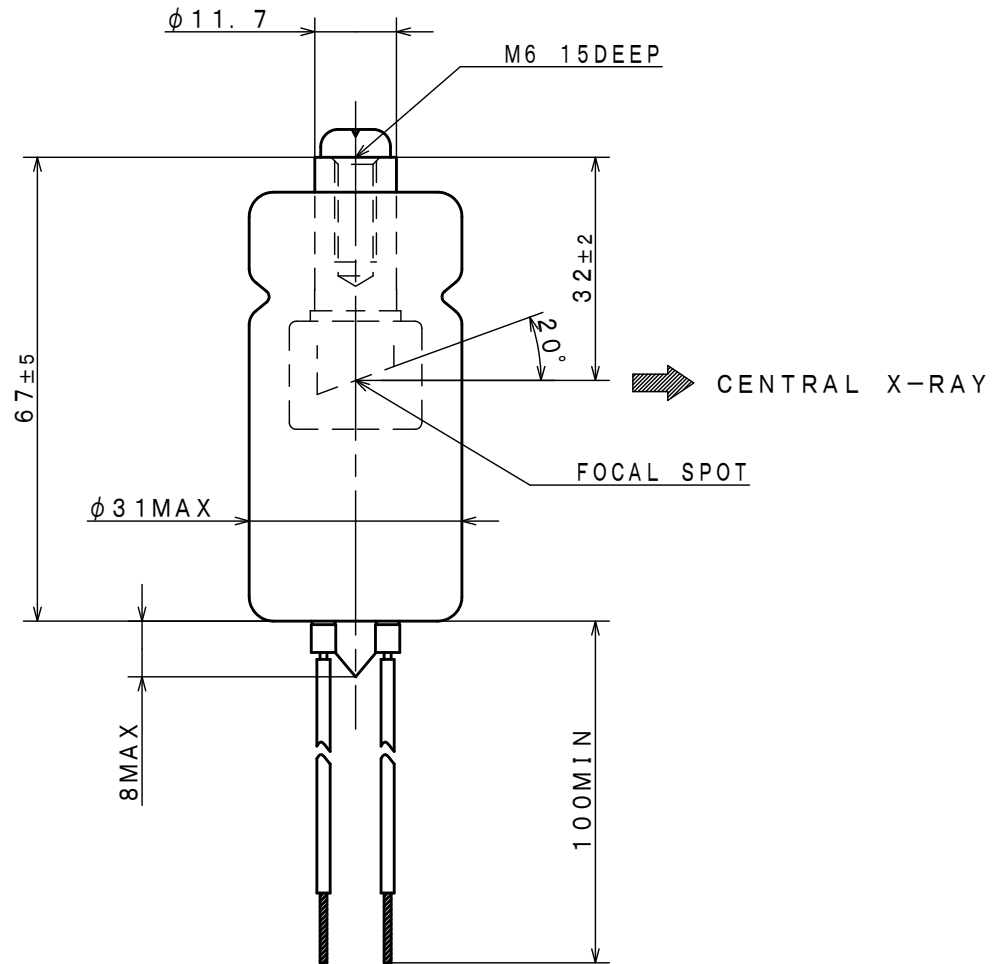
This graph indicates typical characteristics.

### Anode Heating / Cooling Curve



### Dimensional Outline

Unit: mm



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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>.

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