

**TOSHIBA X-RAY TUBE  
D-205B / D-205BS**

**Stationary Anode X-ray Tube**

- ◆ Especially designed for dental X-ray unit and portable X-ray unit.
- ◆ These tubes have focus 2.0, and are available for a maximum tube voltage 125 kV or 100kV.
- ◆ Installed in the same enclosure with the high voltage transformer.

**General Data**

**Electrical:**

Circuit: <sup>(1)</sup>

High Voltage Generator .....	One-Peak High-Voltage Generator (Self-rectified) Two-Peak High-Voltage Generator Constant Potential High-Voltage Generator
Grounding .....	Center-grounded
Nominal X-ray Tube Voltage:	
One-Peak High-Voltage Generator .....	125 kV
Two-Peak High-Voltage Generator .....	125 kV
Constant Potential High-Voltage Generator .....	100 kV
Nominal Focal Spot Value .....	2.0
Nominal Anode Input Power (at 1.0s) .....	
One-Peak High-Voltage Generator .....	2000 W
Two-Peak High-Voltage Generator .....	3000 W
Constant Potential High-Voltage Generator .....	3300 W
Exposure Duty Cycle .....	1:60 or more (Exposure time: interval time)

Note (1) Since the version of a product differs with circuits to use, please choose the product that was in the circuit to use. (Please use it in the circuit indicated by specifications)

**Mechanical:**

Dimensions:

Overall Length .....	See dimensional outline
Maximum Diameter .....	See dimensional outline

Target:

Anode Angle .....	20 degrees
Material .....	Tungsten
Inherent Filtration .....	At least 0.8 mm Al at 50 kV
X-ray Coverage .....	354 x 354 mm at SID 490 mm

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

Weight (approx.):

D-205B .....	Approx. 430 g
D-205BS .....	Approx. 580 g
Cooling Method .....	Oil immersed (60°C Max.) and convection oil cooling.
Tube Holding:	
D-205B .....	Holding the glass envelope of the anode end and cathode end or the screw of the anode shank
D-205BS .....	Holding the insulation cylinder

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

Maximum X-ray Tube Voltage:

One-Peak High-Voltage Generator .....	125 kV
Two-Peak High-Voltage Generator .....	125 kV
Constant Potential High-Voltage Generator .....	100 kV
Between Anode (or Cathode) and Ground:	
One-Peak High-Voltage Generator .....	63 kV
Two-Peak High-Voltage Generator .....	63 kV
Constant Potential High-Voltage Generator .....	50 kV
Minimum X-ray Tube Voltage .....	50 kV
Maximum X-ray Tube Current .....	See rating charts
One-Peak High-Voltage Generator .....	40 mA
Two-Peak High-Voltage Generator .....	80 mA
Constant Potential High-Voltage Generator .....	70 mA
Maximum Filament Current .....	5.0 A
Filament Voltage:	
At Maximum Filament Current .....	5.0 ~ 6.7 V
Filament Frequency Limits .....	DC or AC (Sine Wave) 0 ~ 20 kHz
Thermal Characteristics:	
Anode Heat Content .....	28 kJ
Maximum Anode Heat Dissipation .....	265 W
Maximum Radiographic Exposure Time .....	10 s

**Environmental Limits**

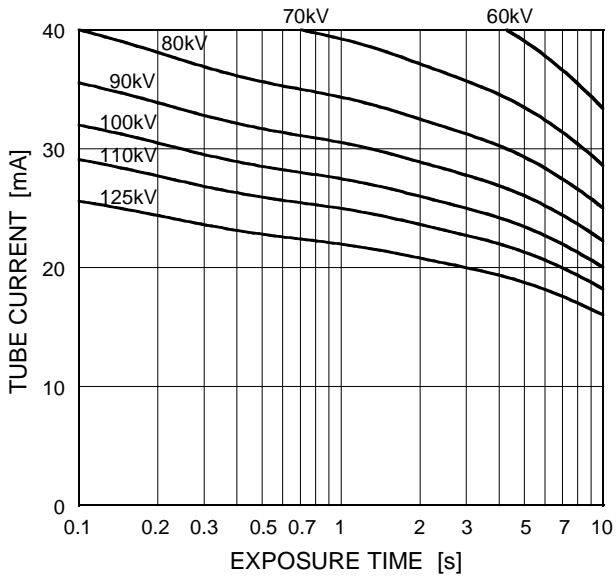
Operating Limits (in dielectric oil):

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)

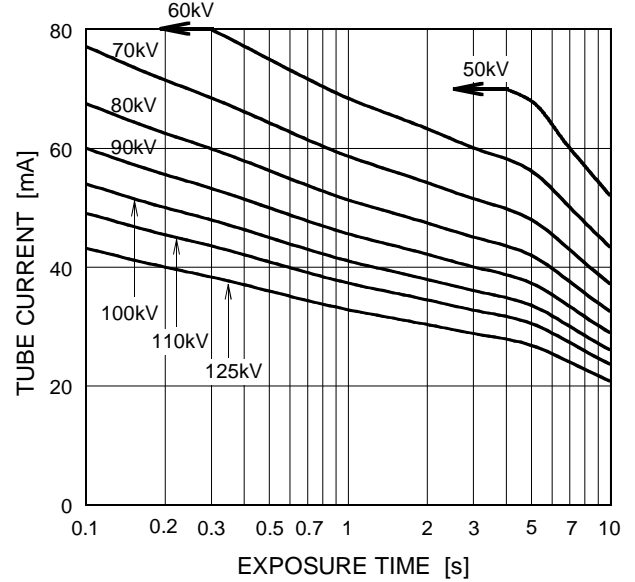
One-Peak High-Voltage Generator

Nominal Focal Spot Value: 2.0



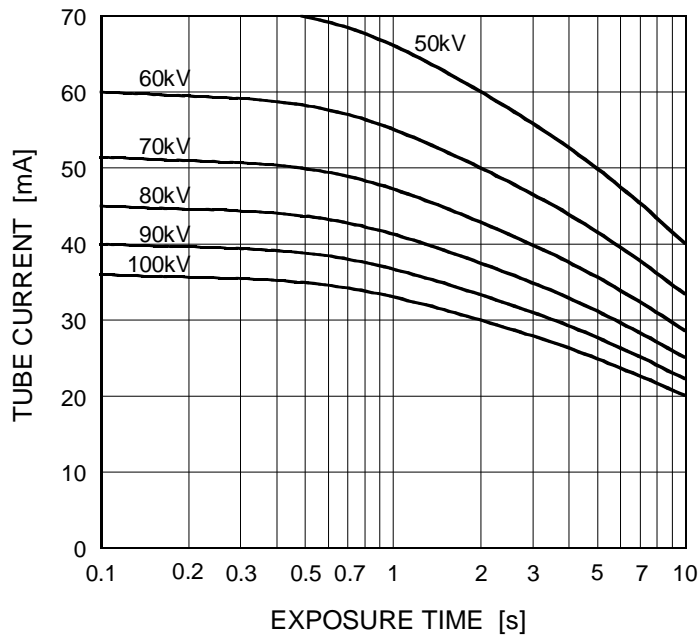
Two-Peak High-Voltage Generator

Nominal Focal Spot Value: 2.0



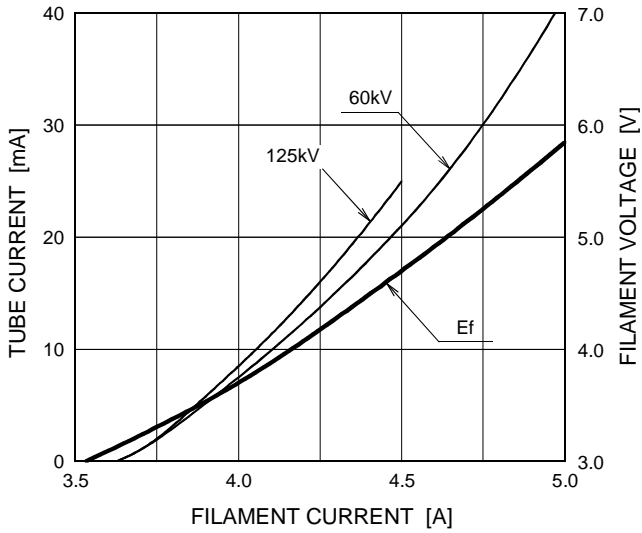
Constant Potential High-Voltage Generator

Nominal Focal Spot Value: 2.0



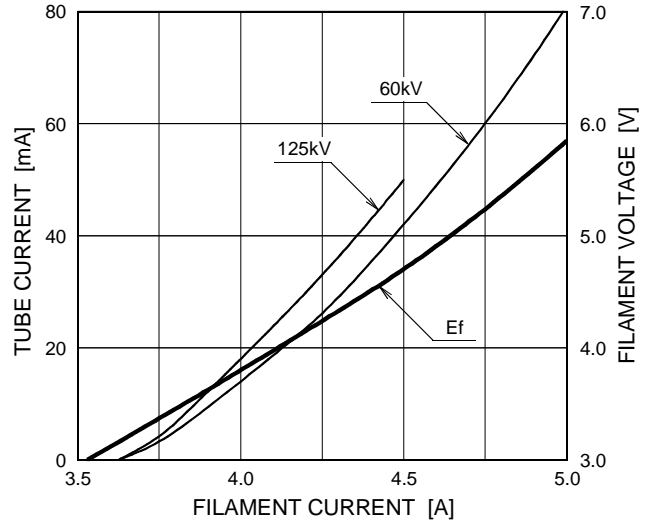
## Emission & Filament Characteristics

One-Peak High-Voltage Generator



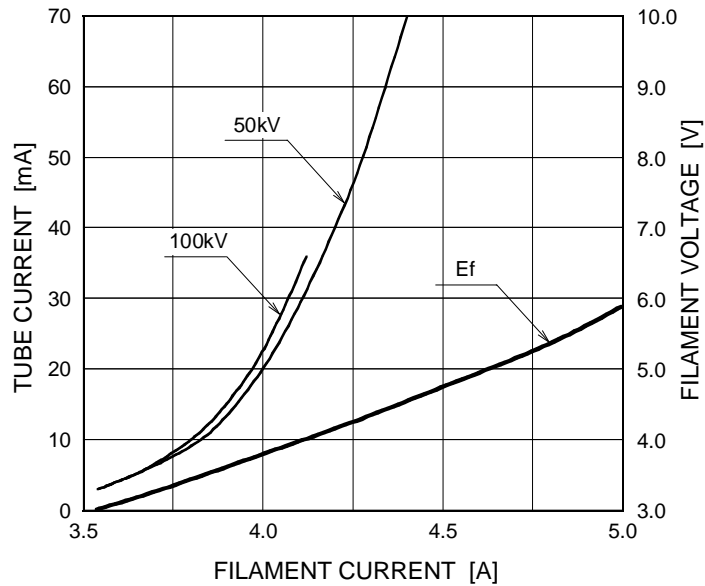
Note: This graph indicates typical characteristics.

Two-Peak High-Voltage Generator



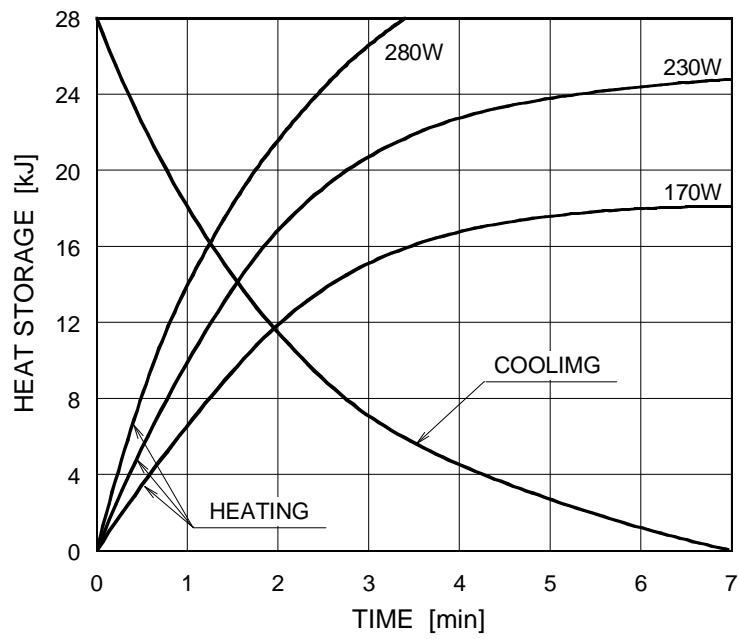
Note: This graph indicates typical characteristics.

Constant Potential High-Voltage Generator



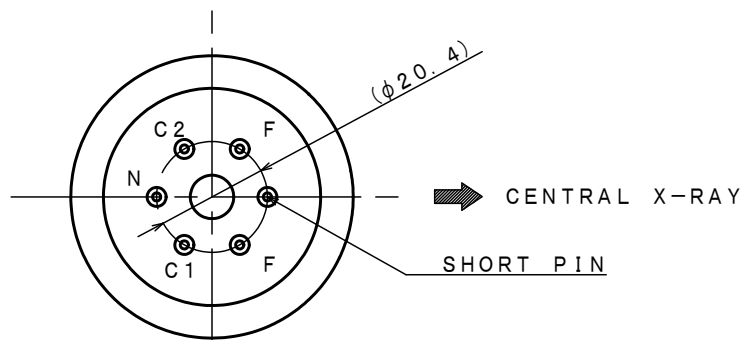
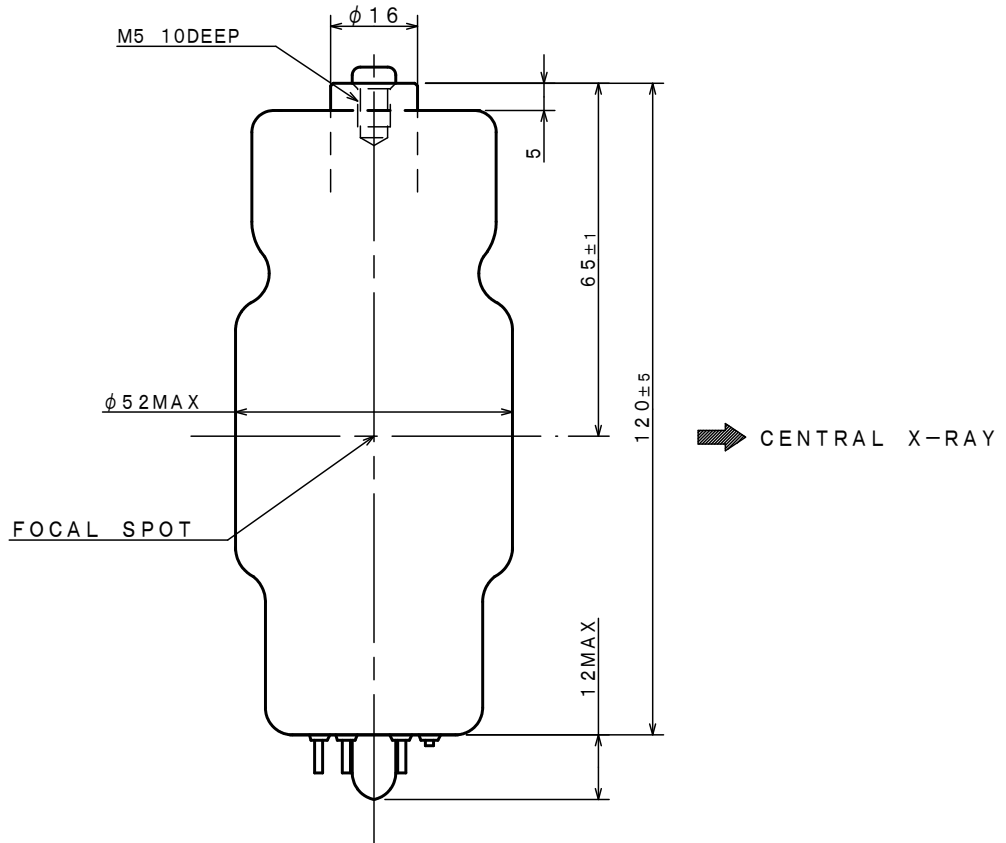
Note: This graph indicates typical characteristics.

### Anode Heating / Cooling Curve



### Dimensional Outline of D-205B

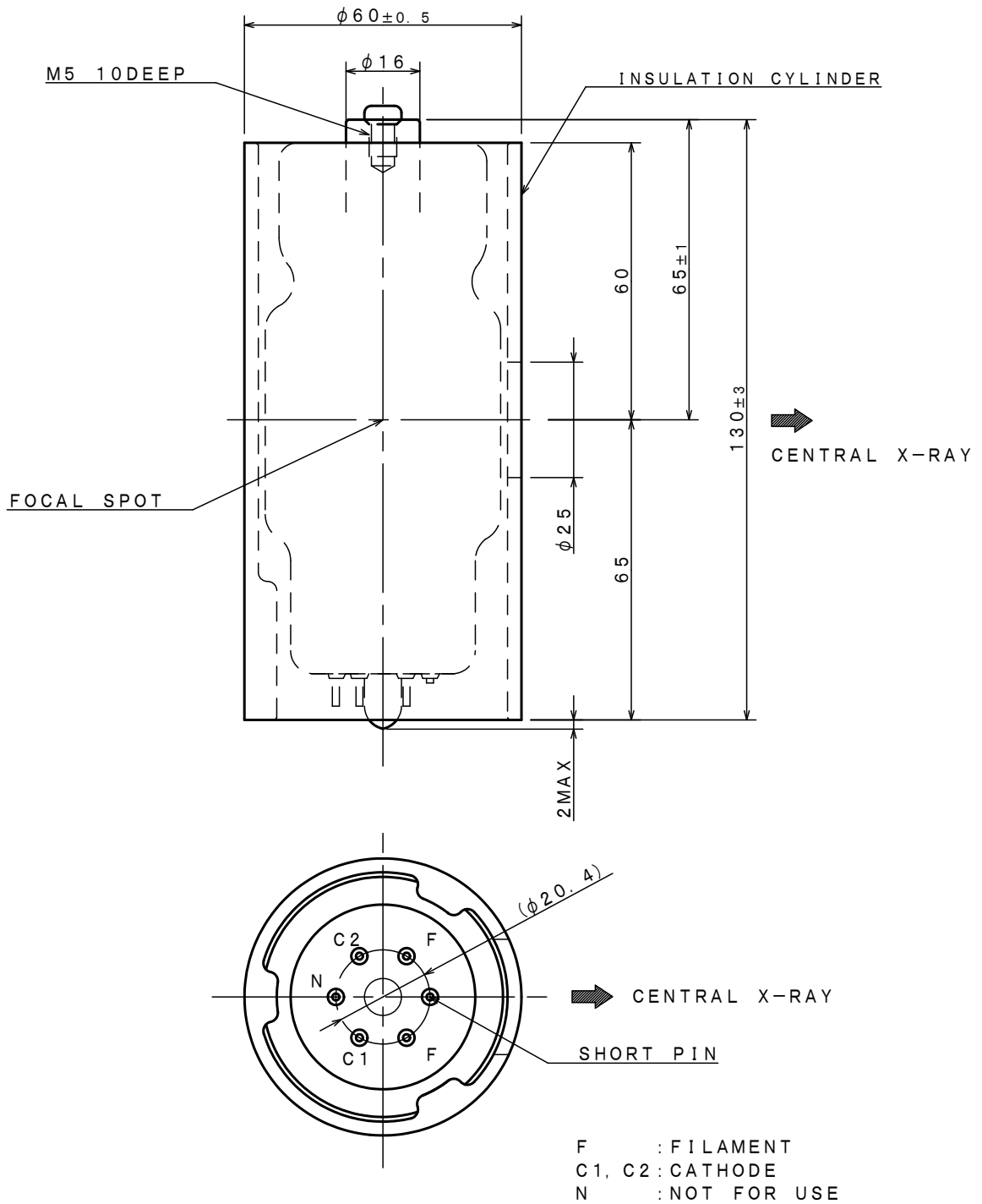
Unit: mm



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

### Dimensional Outline of D-205BS

Unit: mm



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