

**TOSHIBA X-RAY TUBE
 D-0814**

Stationary Anode X-ray Tube

- ◆ Especially designed for dental X-ray unit.
- ◆ These tubes have focus 0.8, and are available for maximum tube voltage 90 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	90 kV
Nominal Focal Spot Value	0.8
Nominal Anode Input Power (at 1.0s)	1350 W
	(See rating charts)
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 0.8 mm Al at 45 kV
X-ray Coverage	354 x 354mm at SID 750 mm
Weight (approx.)	100 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 of the anode shank.

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Absolute Maximum and Minimum Ratings

(At any time, these values must not be exceeded.)

Maximum X-ray Tube Voltage	90 kV
Between Anode (or Cathode) and Ground	45 kV
Minimum X-ray Tube Voltage	40 kV
Nominal X-ray Tube Current	33 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
Maximum Anode Heat Dissipation	210 W
Maximum Exposure Time	5 s

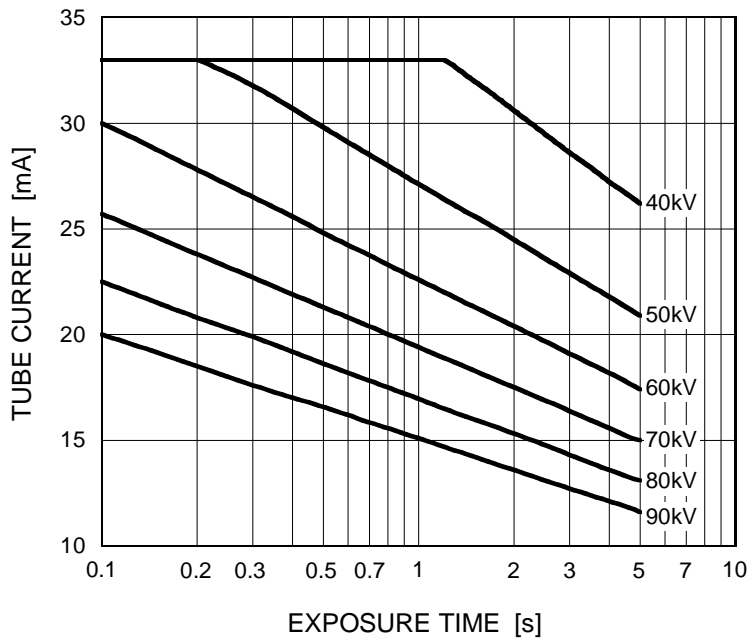
Environmental Limits

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)

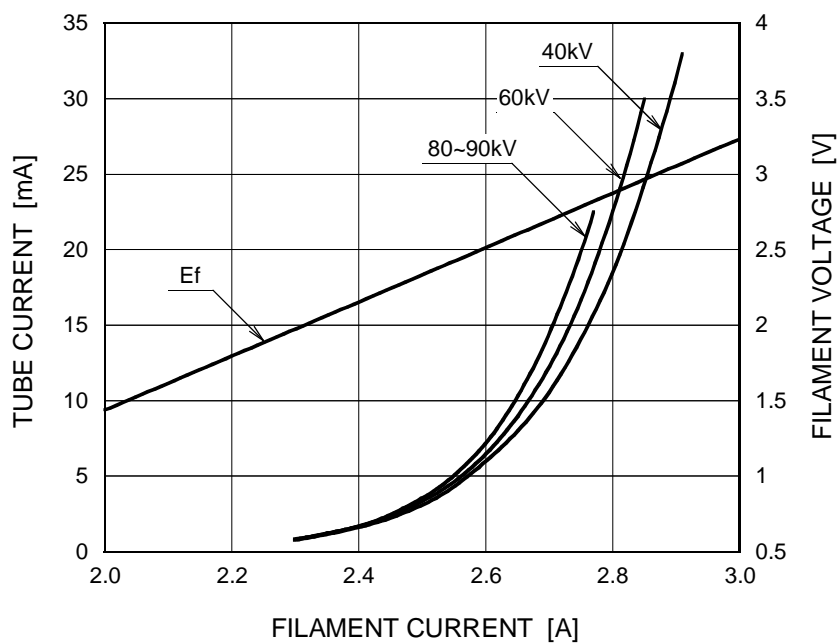
Constant Potential High-Voltage Generator

Nominal Focal Spot Value: 0.8



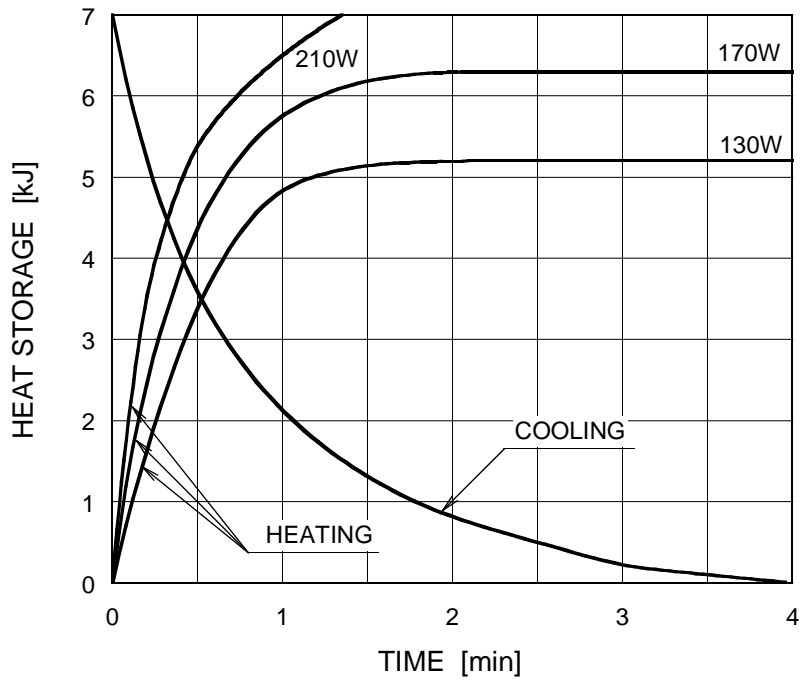
Emission & Filament Characteristics

Constant Potential High-Voltage Generator



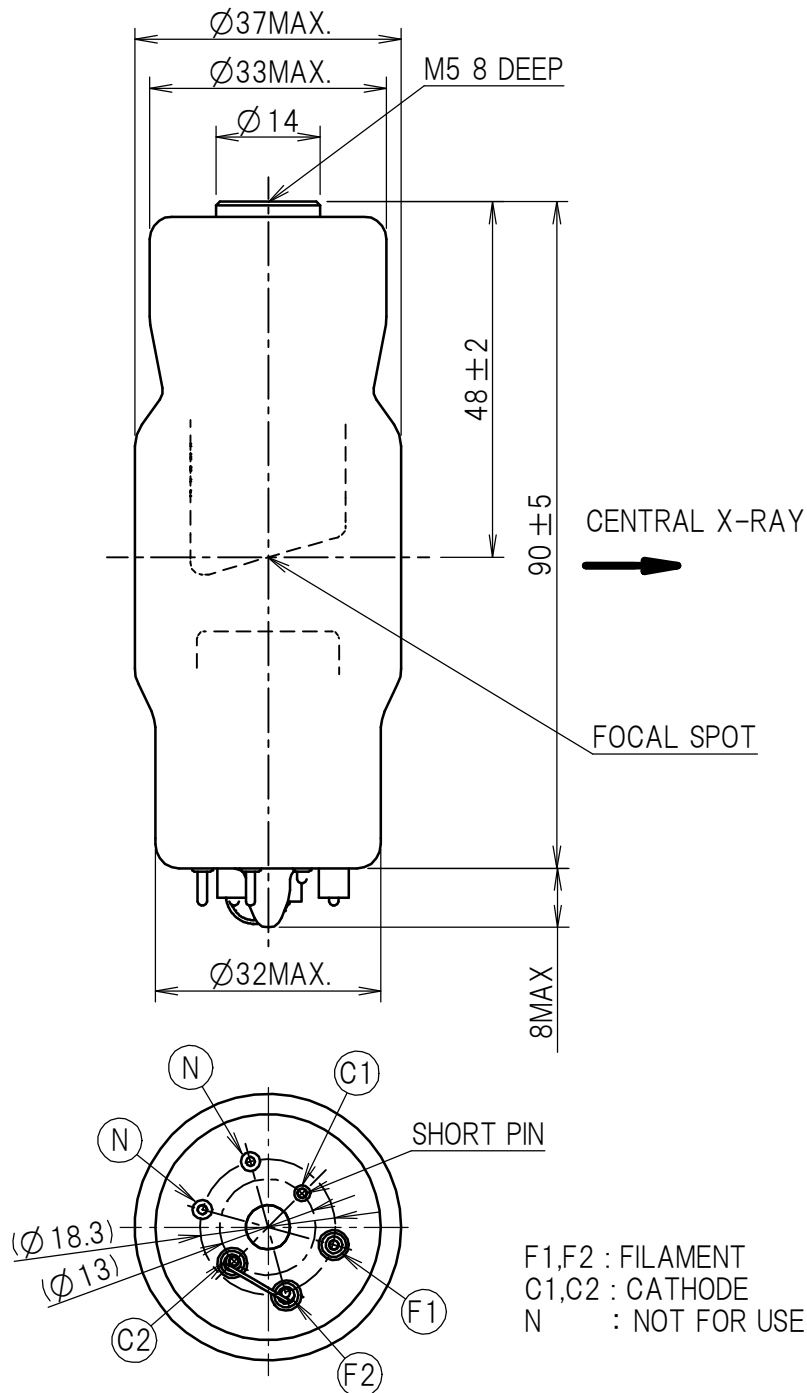
Note: This graph indicates typical characteristics.

Anode Heating / Cooling Curve



Dimensional Outline of D-0814

Unit: mm



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·Toshiba Electron Tubes & Devices Co., Ltd. meets the Environmental Management System Standard, ISO14001.

·Toshiba Electron Tubes & Devices Co., Ltd. meets internationally recognized Standards for Quality Management System ISO9001, ISO13485.