

**ANALIX™
A-40 Series**



- ◆ The ANALIX A-40 series, a water-cooled, grounded anode X-ray tube designed for X-ray diffractometry.
- ◆ Four Beryllium windows hermetically sealed to metal body.
- ◆ Standard target materials, Co, Cr, Cu, Fe, Mo and W.

Electrical:

Circuit:

High Voltage Generator	Constant Potential High-Voltage Generator
Grounding	Anode grounding
Maximum Operating Tube Voltage	60 kV
Focal Spot Size	1 × 10 mm ²
Starting Tube Voltage	Less than 10 kV

Mechanical:

Dimensions	See Dimensional Outline
Overall Length	217 mm
Diameter of Maximum Part	φ67.8 mm

Target:

Angle	Zero degree
Material	Co, Cr, Cu, Fe, Mo, W
Inherent Filtration	0.3 mm Beryllium
X-ray Beam Angle	Approx. 4.5°
X-ray Port	4 Directions
Weight	Approx. 1.3 kg

Cooling:

Method	Water cooled
Quantity of water	Minimum 3.5 L/min
Temperature	Less than 35 °C
Maximum water pressure	490 kPa
Pressure drop	Approx. 98 kPa

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

Maximum X-ray Tube Voltage 60 kV
 Minimum X-ray Tube Voltage 10 kV
 Maximum X-ray Tube Current 50 mA
 Maximum Filament Current 3.8 A
 Filament Frequency Limits AC (Sine Wave) 0 ~ 20 kHz

Maximum input:

Tube Name	Targets	Maximum Input Power
A-40-Mo	Mo	2.4 kW
A-40-W	W	2.4 kW
A-40-Cr	Cr	2.0 kW
A-40-Cu	Cu	2.0 kW
A-40-Co	Co	1.8 kW
A-40-Fe	Fe	1.5 kW

Environmental Limits

Operating Limits:

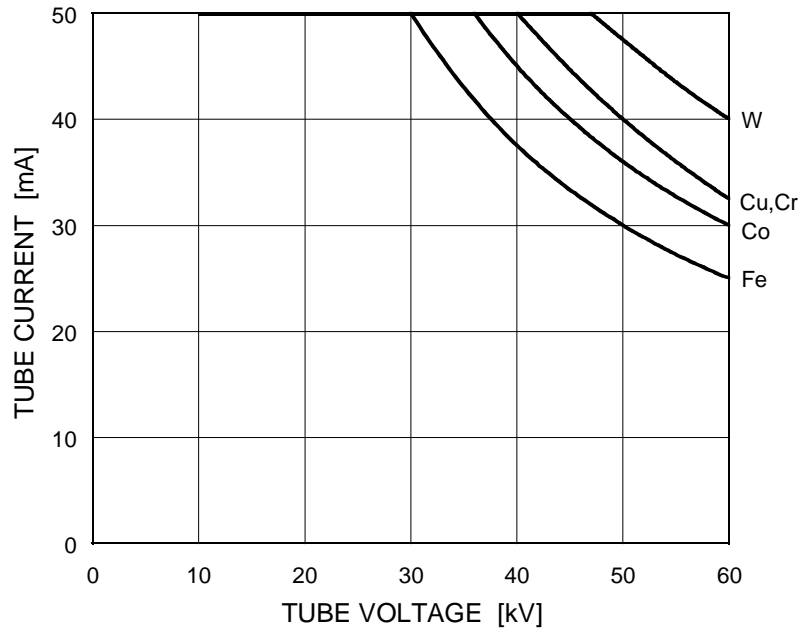
Temperature 10 ~ 40 °C
 Humidity 30 ~ 85 %
 (No condensation)
 Atmospheric Pressure 70 ~ 106 kPa

Shipping and Storage Limits:

Temperature -40 ~ 70 °C
 Humidity 20 ~ 90 %
 (No condensation)
 Atmospheric Pressure 50 ~ 106 kPa

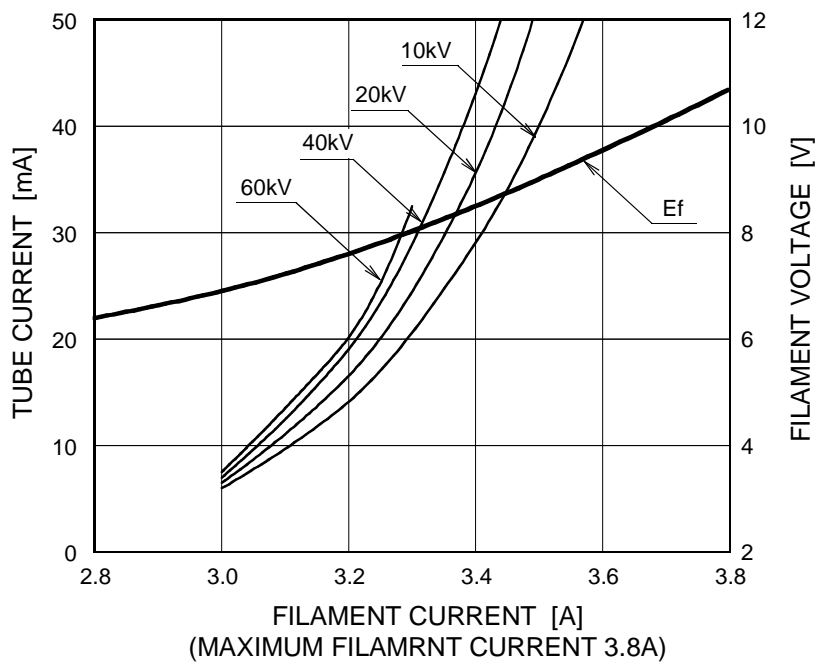
Maximum Rating Charts (Absolute Maximum Rating Charts)

Constant Potential High-Voltage Generator



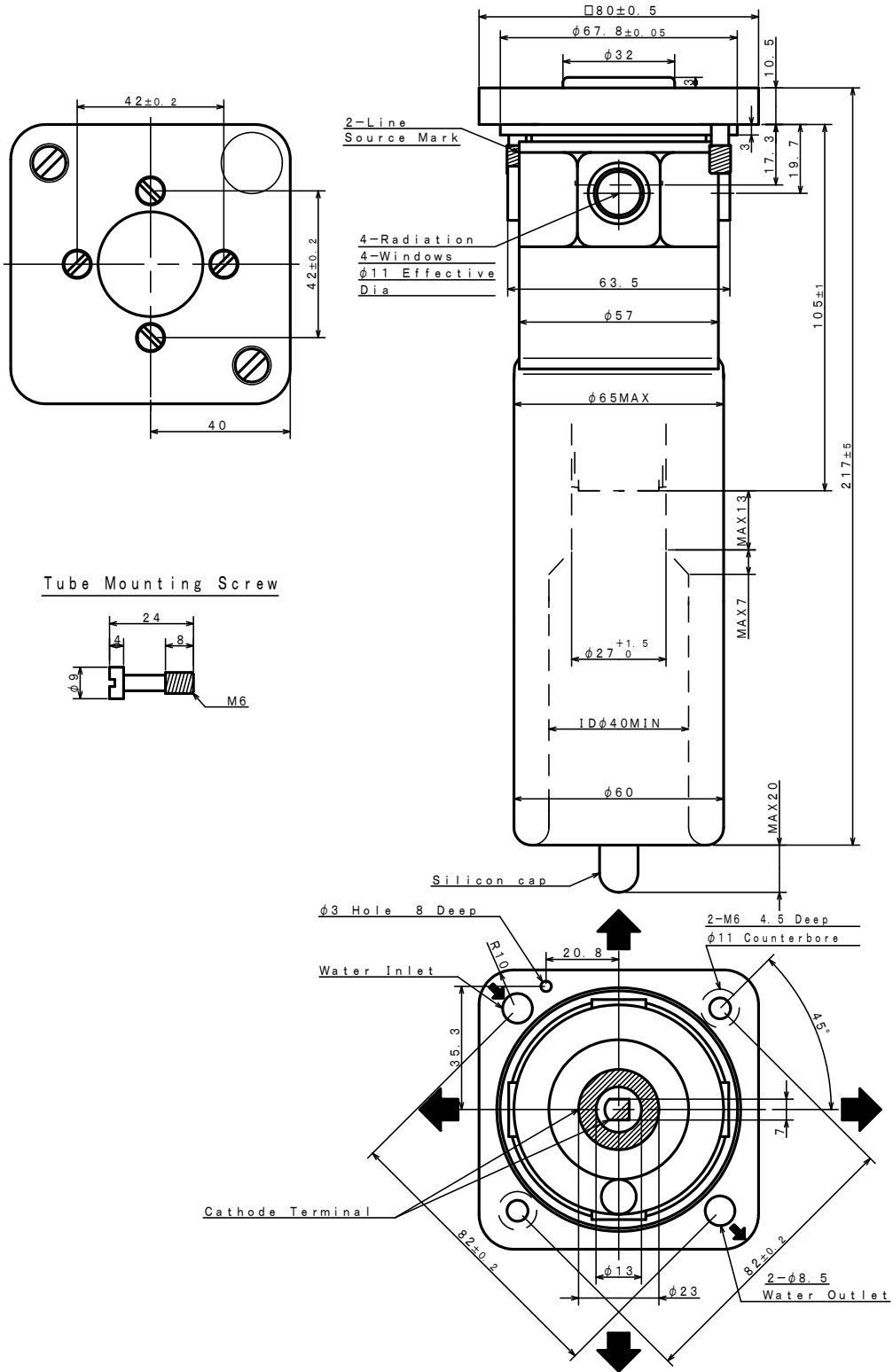
Tube Current & Filament Characteristics

Constant Potential High-Voltage Generator



Dimensional Outline

Unit: mm



- Note (1) Mark \blackrightarrow Indicates the direction of central X-ray.
 (2) The window mark in white gives a line source. This focus lies in A-A' axis.
 (3) The material of target is signified with the chemical element symbol.

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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.