WanSen X-RAY TUBE

XD1-2.3-110

Stationary Anode X-Ray Tube

- Designed for DC applications with high input power

  This X-ray tube has a 2.3 focal point.
  The maximum tube voltage that can be used is 110kV.

- Mounted in the same housing as the high voltage transformer.

- WanSen product versions comply with IEC standards.

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General data

Electrical:

Circuit:

High Voltage Generator ..... constant high voltage generator

Grounding Methods ..... Center-grounded

Nominal X-ray Tube Voltage 110kV

Nominal Value Of Focus :

Focus 2.3 (IEC336)

Nominal Anode Input Power (at 0.1 seconds):

Focus 4.2kW

Nominal Photographic Anode Input Power (at 0.1 seconds):

Focus 4.0kW

Exposure Duty Cycle .....1:60 or More

(Exposure Time : Interval Time)

Continuous Anode Input Power 225W

Air Specific Release Kinetic Energy Rate Not Less Than 1.2mGy/s

(75kV, 40mA, 1s, 49cm from focal point (16cm from insulating oil))

Mechanical:

Dimensions:

Overall Length .....see dimensional outline

Maximum Diameter.....see dimensional outline

Anode Target:

Anode Angle .....19°

Target Surface Materials ..... Tungsten

Inherent Filtration .....At Least 0.8mmAl equivalent at 75kV

X-ray Coverage.....274×274mm at SID 505mm

Approximate weight 0.52kg

Cooling method .....Oil immersed (60°C Max.) and convection oil cooling

Tube Holding .....Screws for fixing the anode end and cathode end of the glass housing or anode rod

Absolute maximum and minimum ratings

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

Maximum Tube Voltage.....110kV
Minimum Tube Voltage ..... 70 kV
Maximum Tube Current 63mA
Maximum Filament Current
  Focus 4.5A
Filament Voltage (At maximum filament current)
  Focus .....6.5± 0.5V
Thermal Characteristics:
  Anode Heat Storage Capacity .....30kJ（40.5KHU）
  Maximum Anode Heat Dissipation Rate 235W

Environmental Limits

Operating Limits (in dielectric oil)
  Oil Temperature ..... 10 ~ 60℃
  Oil pressure .....70 ~ 106 kPa
Shipping and Storage Limits:
  Temperature ..... -40 ~ 70℃
  Humidity .....10 ~ 90 %
  (No condensation)
  Atmospheric Pressure .....50 ~ 106 kPa

Cautions

Read through this page before using the tube.

Since X-ray tube will emit X-rays when it is energized with high voltage, special knowledge is required to handle it. The items below show general cautions for the tube handling.

1. The tube shall be handled or operated only by qualified personnel.
   Only a specialist with knowledge of X-ray tube should assemble, maintain and remove the tube.

2. The tube envelope is made of glass. In transporting and handling, sufficient care should be taken not to give strong impact or vibration to the tube.

3. Radiation protection of the tube unit assembled with this tube must be sufficiently taken. And the leakage technique factor of the tube unit must not exceed maximum anode cooling rate of this tube.

4. Regulations and standards require the minimum source-skin distance (SSD) and the minimum filtration of the useful beam.
   Use the tube after fulfilling them.

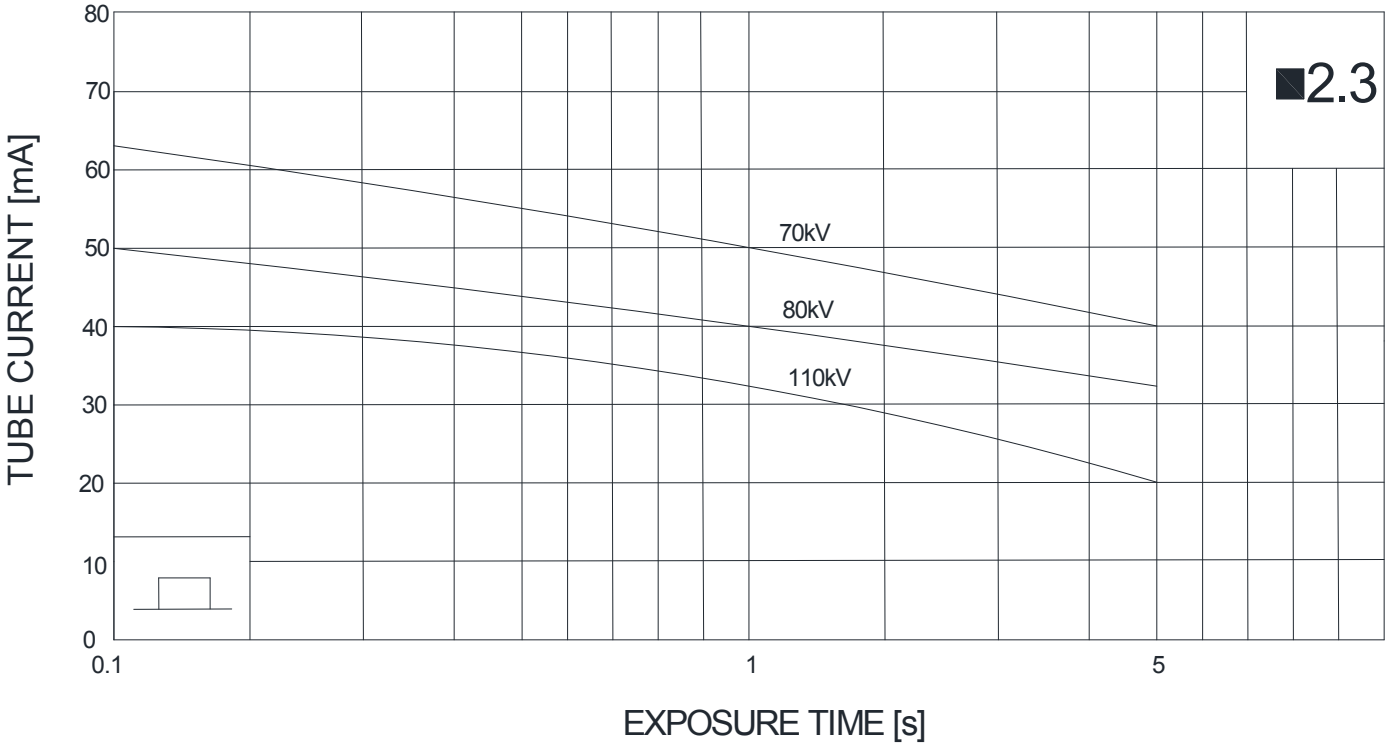
5. The tube might be broken due to only one overload operation.
   Provide proper overload protection circuit.
   Operate the tube by selecting a proper input condition according to the conditions for operation and tube characteristics charts.

6. When any abnormalities are found in using this tube, immediately switch off the power supply and contact WanSen Service sector.

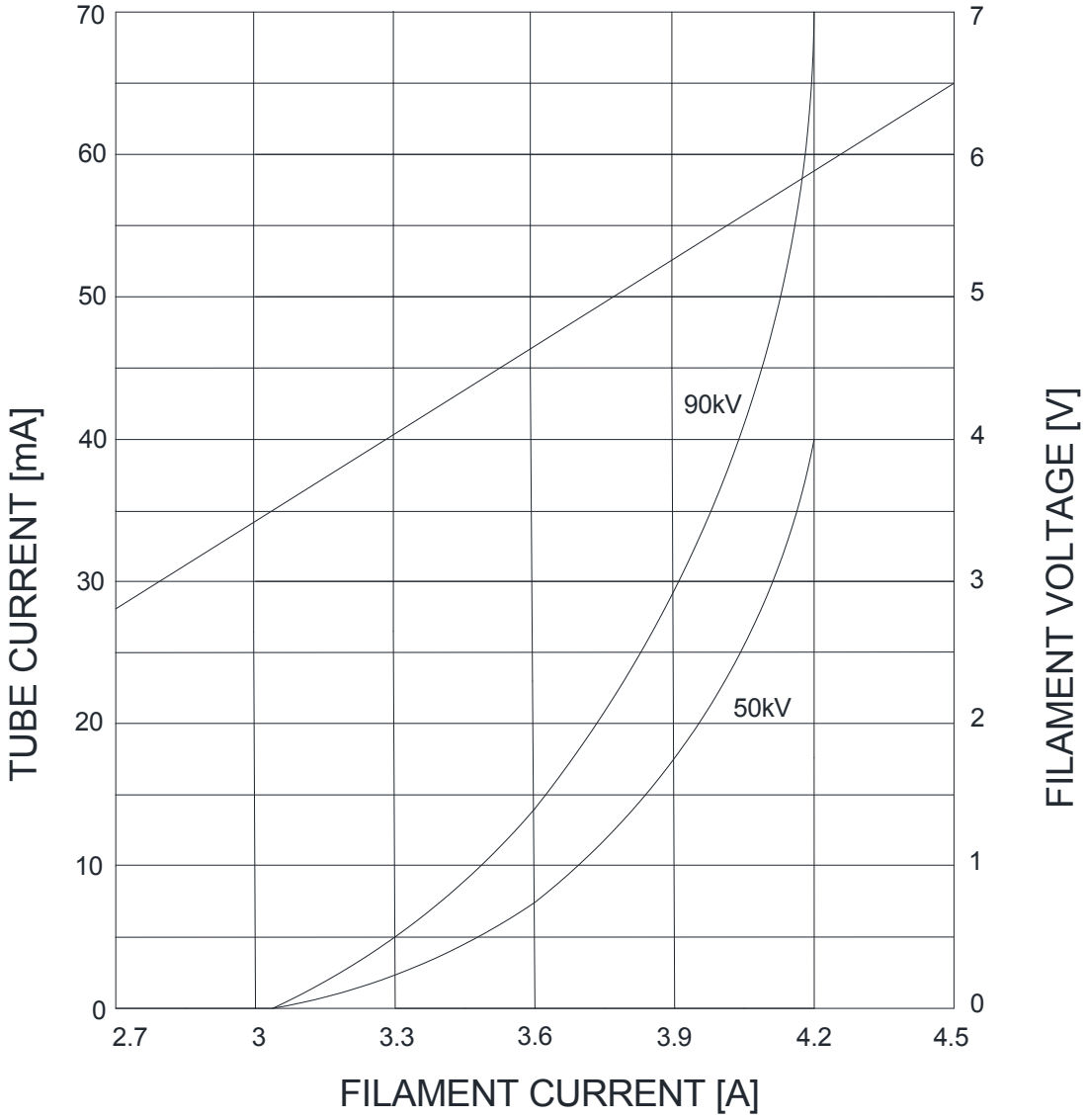
7. The charts of this specification are indicating standard values.
   For usage not described here or for any unclear items, contact WanSen Service sector.

Maximum Rating Charts

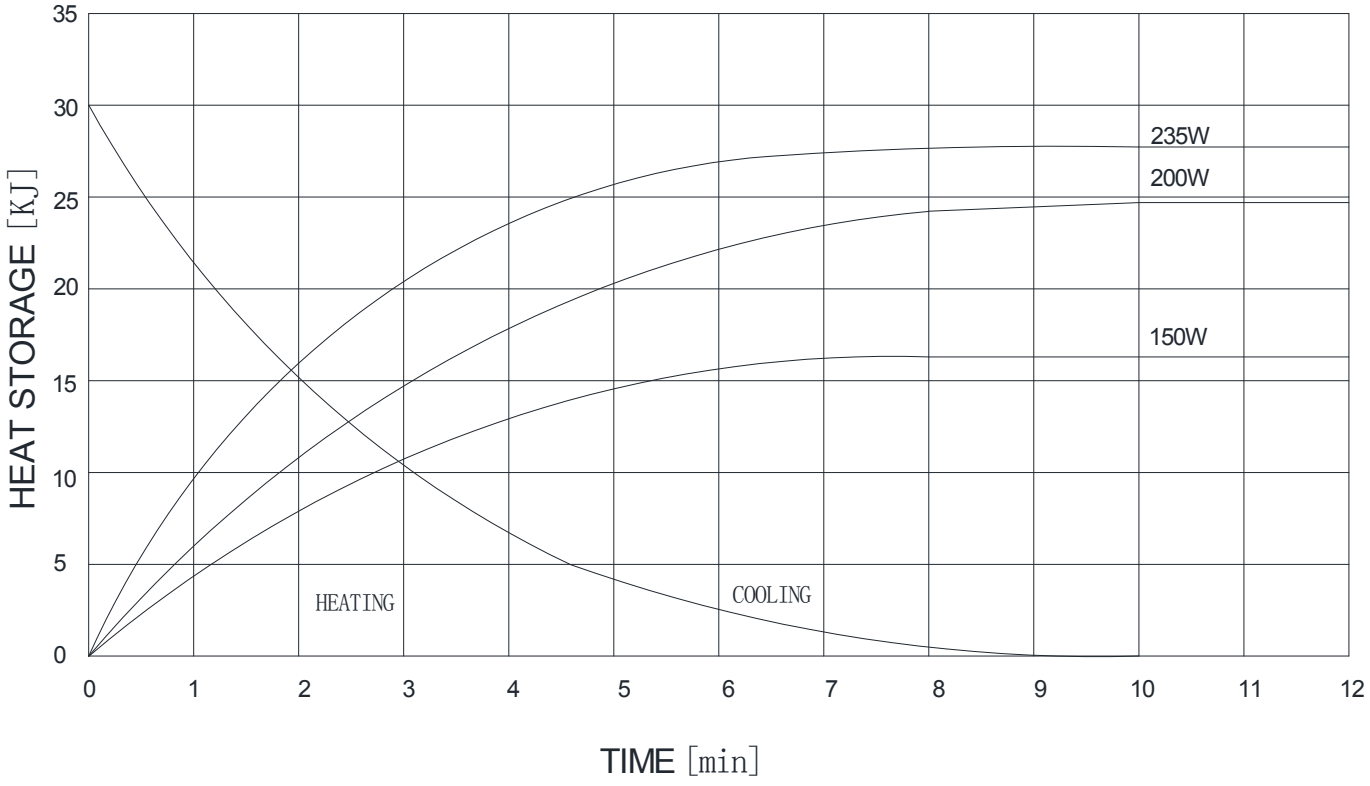
(Absolute maximum rating charts)



Emission & Filament Characteristics



Anode Thermal Characteristics



X-Ray Tube Dimensions -XD1-2.3-110

Unit：mm