

WanSen X-RAY TUBE**XD12-0.8-90****XD12-0.8-90S****XD12-0.8-90SB****Stationary Anode X-Ray Tube**

- ◆ Designed for DC applications with high input power
- ◆ This X-ray tube has a 0.8 focal point.
The maximum tube voltage that can be used is 90kV.
- ◆ Mounted in the same housing as the high voltage transformer.
- ◆ WanSen product versions comply with IEC standards.

General data

Electrical:

Circuit:

High Voltage Generator constant high voltage generator

Grounding Methods Center-grounded

Nominal X-ray Tube Voltage90kV

Nominal Value Of Focus :

Focus0.8 (IEC336)

Nominal Anode Input Power (at 0.1 seconds):

Focus0.6kW

Nominal Photographic Anode Input Power (at 0.1 seconds):

Focus0.56kW

Exposure Duty Cycle1:60 or More

(Exposure Time : Interval Time)

Continuous Anode Input Power110W

Air Specific Release Kinetic Energy Rate Not Less Than1.2mGy/s

(70kV, 20mA,0.1s, 49cm from focal point (16cm from insulating oil))

Mechanical:

Dimensions:

Overall Lengthsee dimensional outline

XD12-0.8-90.....73mm

XD12-0.8-90S.....73mm

XD12-0.8-90SB.....73mm

Maximum Diameter.....see dimensional outline

XD12-0.8-90.....31mm

XD12-0.8-90S.....38mm

XD12-0.8-90SB.....42mm

Anode Target:

Anode Angle19°

Target Surface Materials Tungsten

Inherent FiltrationAt Least 0.7mmAl equivalent at 90kV

X-ray Coverage.....479×479mm at SID 490mm

Approximate weight:

XD12-0.8-90.....0.12kg

XD12-0.8-90S.....0.15kg

XD12-0.8-90SB.....0.3kg

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

Tube Holding:

XD12-0.8-90Screws for fixing the anode end and cathode end of the
glass housing or anode rod

XD12-0.8-90S/XD12-0.8-90SB.....Holding the insulation cylinder

Absolute maximum and minimum ratings

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

Maximum Tube Voltage.....	90kV
Minimum Tube Voltage	50kV
Maximum Tube Current	13.7mA
Maximum Filament Current	
Focus	2.0A
Filament Voltage (At maximum filament current)	
Focus	3.0± 0.5V
Thermal Characteristics:	
Anode Heat Storage Capacity	7KJ (9.5KHU)
Maximum Anode Heat Dissipation Rate	120W

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

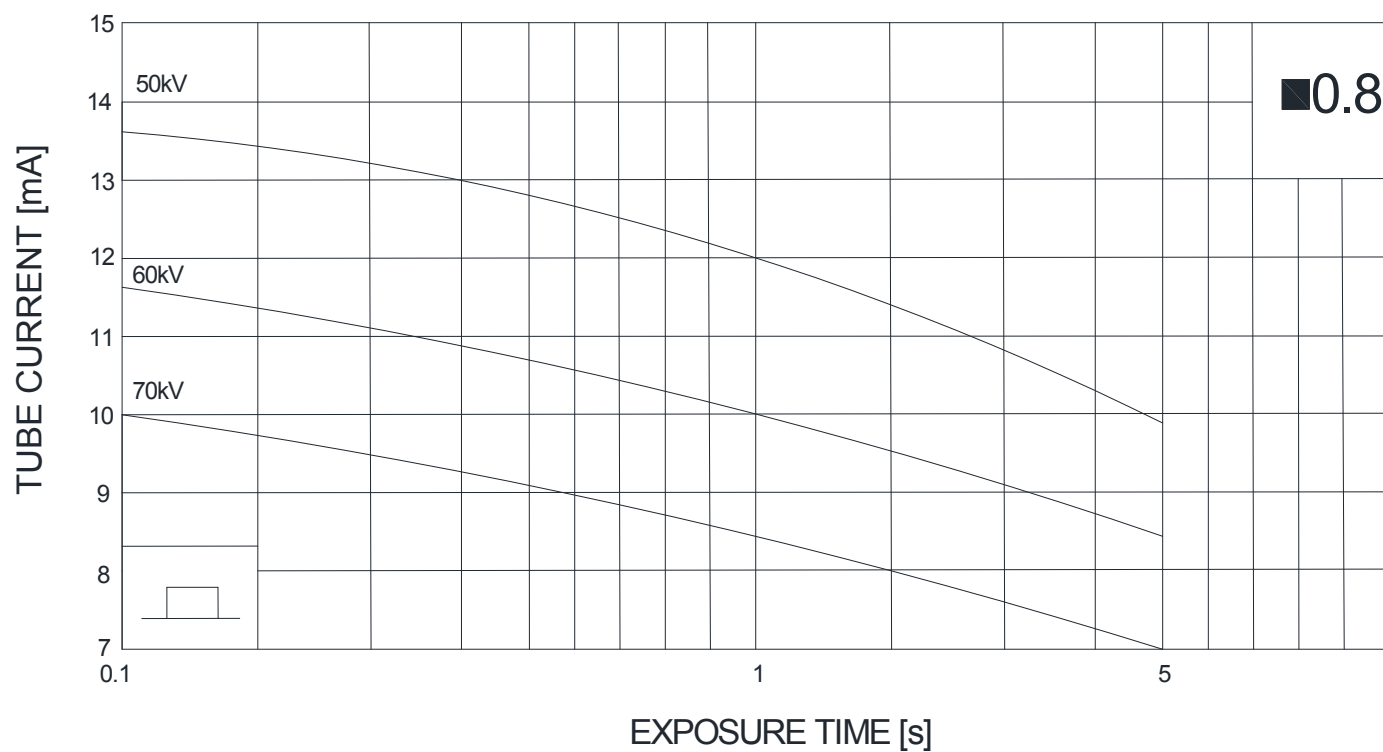
Cautions

Read through this page before using the tube.

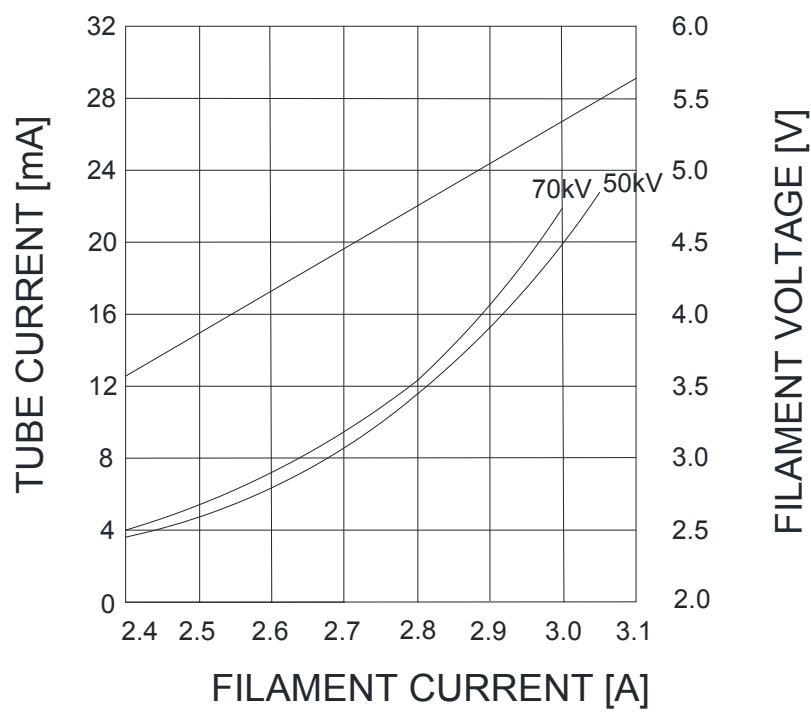
Since X-ray tube will emit X-rays when it is energized with high voltage, special knowledge is required to handle it. The items below show general cautions for the tube handling.

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.

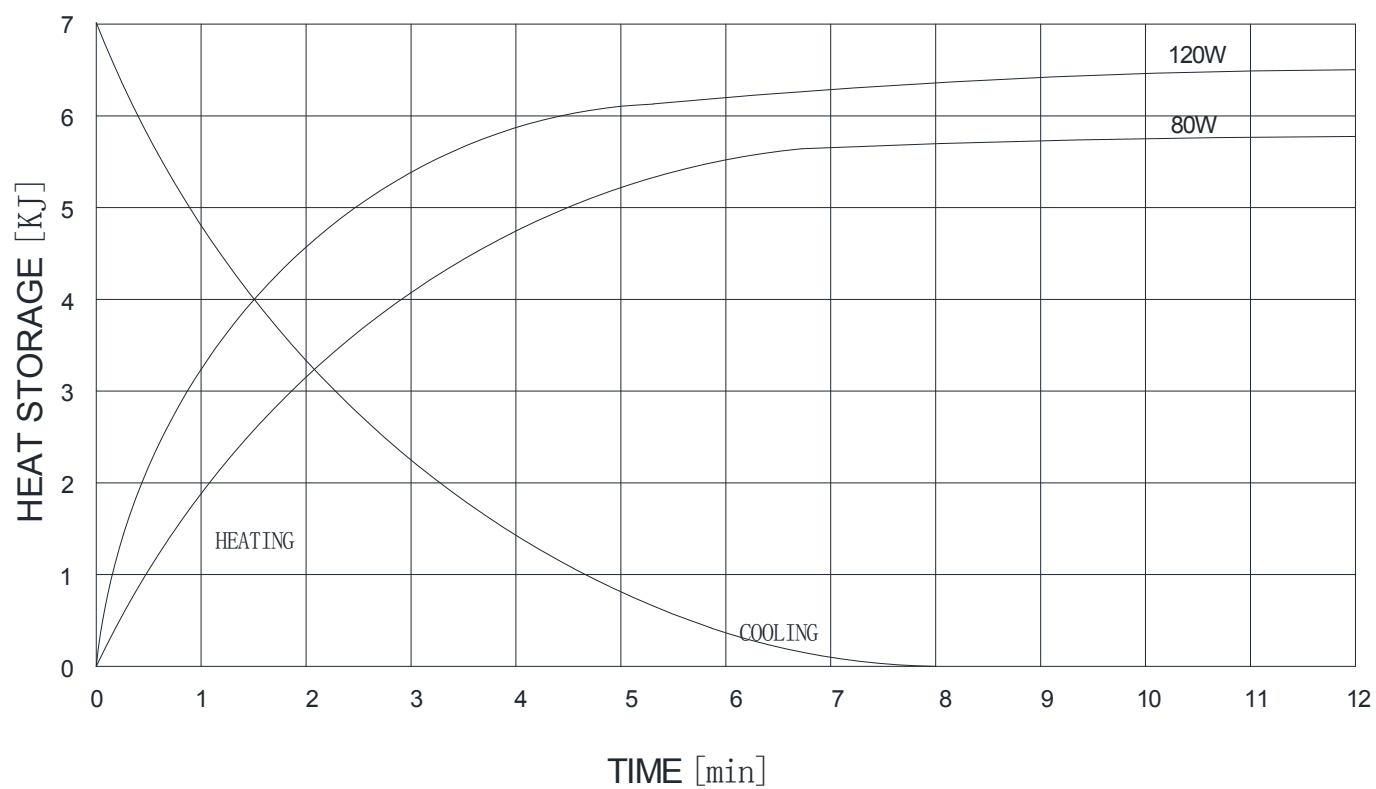
Maximum Rating Charts
(Absolute maximum rating charts)



Emission & Filament Characteristics

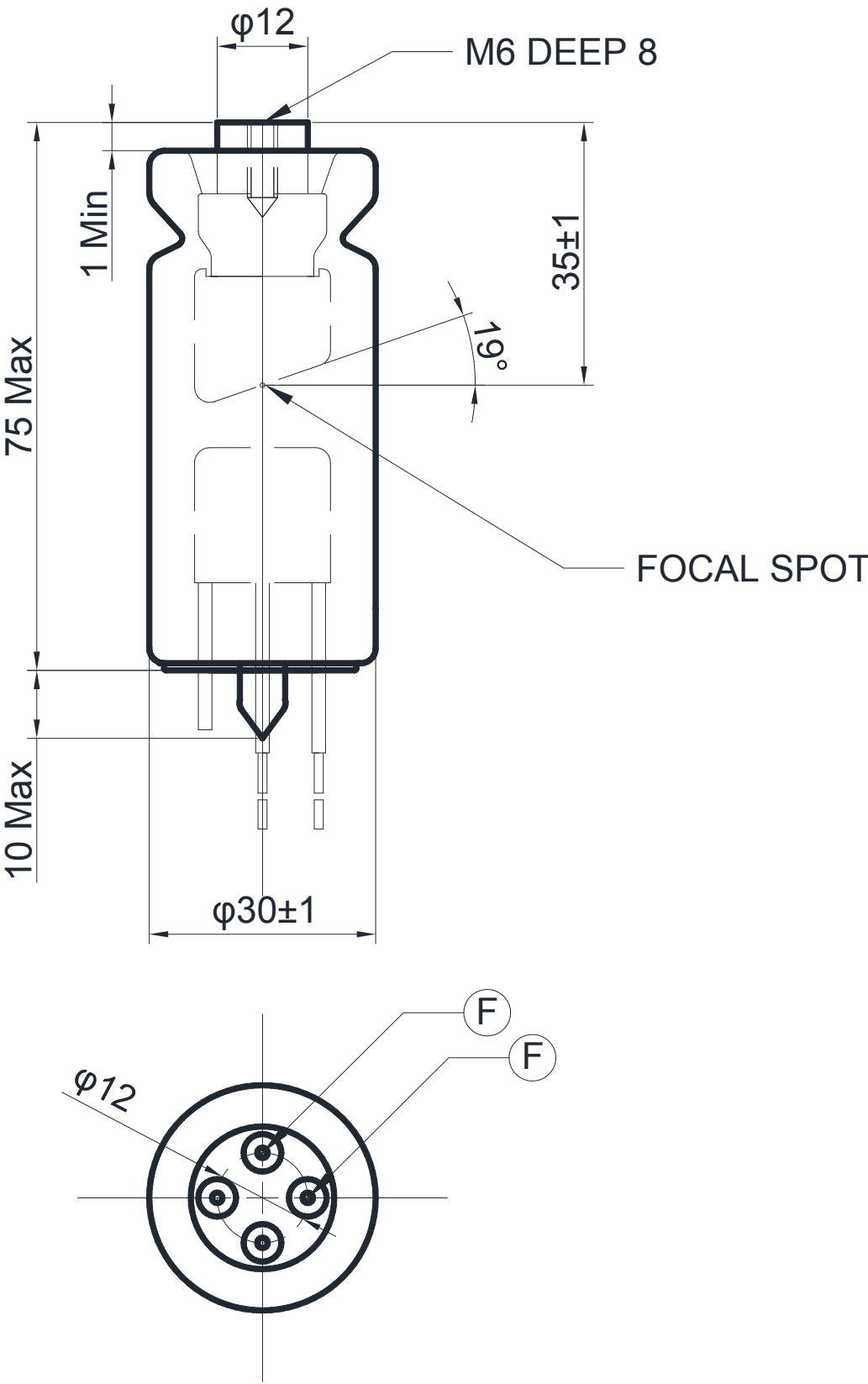


Anode Thermal Characteristics



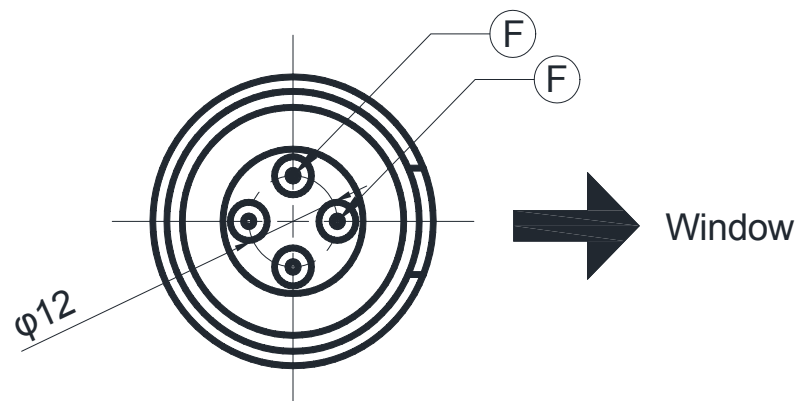
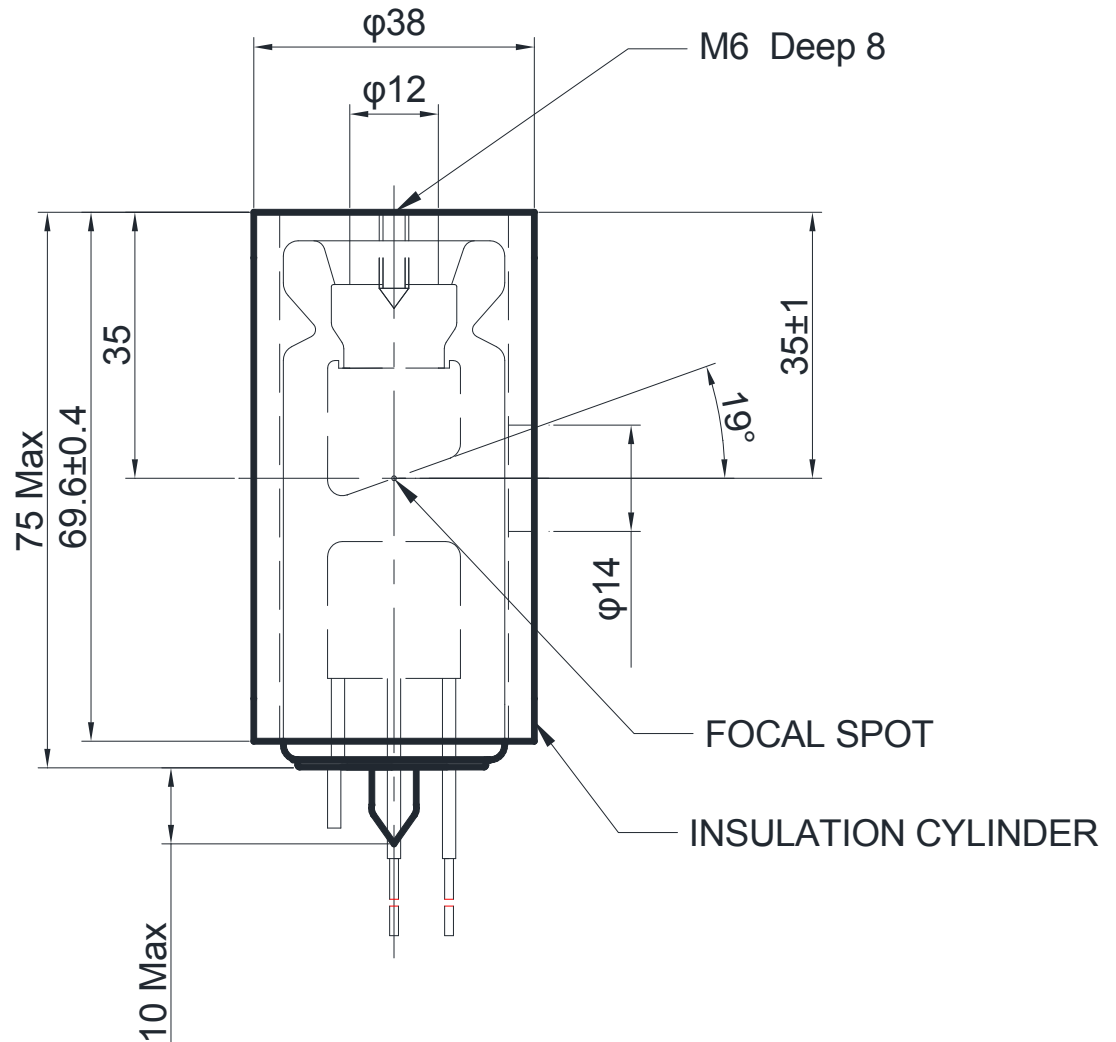
X-Ray Tube Dimensions -XD12-0.8-90

Unit: mm



X-Ray Tube Dimensions -XD12-0.8-90S

Unit: mm



X-Ray Tube Dimensions -XD12-0.8-90SB

Unit: mm

