

WanSen X-RAY TUBE**XD13-0.6/1.5-110****XD13-0.6/1.5-110S****XD13-0.6/1.5-110SB****XD13-0.6/1.5-110SBR****Stationary Anode X-Ray Tube**

- ◆ Designed for DC applications with high input power
- ◆ This X-ray tube has 0.6 and 1.5 dual focal points.
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.

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 :

Small Focus 0.6 (IEC336)

Big Focus 1.5 (IEC336)

Nominal Anode Input Power (at 0.1 seconds):

Big Focus 4.4kW

Small Focus 0.66kW

Nominal Photographic Anode Input Power (at 0.1 seconds):

Big Focus 4.4kW

Small Focus 0.62kW

Exposure Duty Cycle 1:60 or More
(Exposure Time : Interval Time)

Continuous Anode Input Power 230W

Air Specific Release Kinetic Energy Rate Not Less Than 3.40mGy/s
(75kV, 40mA, 1s, 49cm from focal point (16cm from insulating oil))

Mechanical:

Dimensions:

Overall Length	see dimensional outline
XD13-0.6/1.5-110.....	145mm
XD13-0.6/1.5-110S.....	145mm
XD13-0.6/1.5-110SB.....	145mm
XD13-0.6/1.5-110SBR.....	166mm
Maximum Diameter.....	see dimensional outline
XD13-0.6/1.5-110.....	51mm
XD13-0.6/1.5-110S.....	57mm
XD13-0.6/1.5-110SB.....	62mm
XD13-0.6/1.5-110SBR.....	62mm

Anode Target:

Anode Angle	15°
Target Surface Materials	Tungsten
Inherent Filtration	At Least 0.8mmAl equivalent at 75kV
X-ray Coverage.....	498×498mm at SID 550mm

Approximate weight:

XD13-0.6/1.5-110	0.42kg
XD13-0.6/1.5-110S.....	0.5kg
XD13-0.6/1.5-110SB.....	1.1kg
XD13-0.6/1.5-110SBR.....	1.2kg

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

Tube Holding:

XD13-0.6/1.5-110	Screws for fixing the anode end and cathode end of the glass housing or anode rod
XD13-0.6/1.5-110S/XD13-0.6/1.5-110SB/XD13-0.6/1.5-110SBR.....	Holding the insulation cylinder

Absolute maximum and minimum ratings**(At any time, these values must not be exceeded.)**

Maximum Tube Voltage.....	110kV
Minimum Tube Voltage	55kV
Maximum Tube Current	80mA
Maximum Filament Current	
Big Focus	4.5A
Small Focus	4.5A
Filament Voltage (At maximum filament current)	
Big Focus	6.3± 0.8V
Small Focus	5.0± 0.5V
Thermal Characteristics:	
Anode Heat Storage Capacity	30KJ(41KHU)
Maximum Anode Heat Dissipation Rate	240W

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

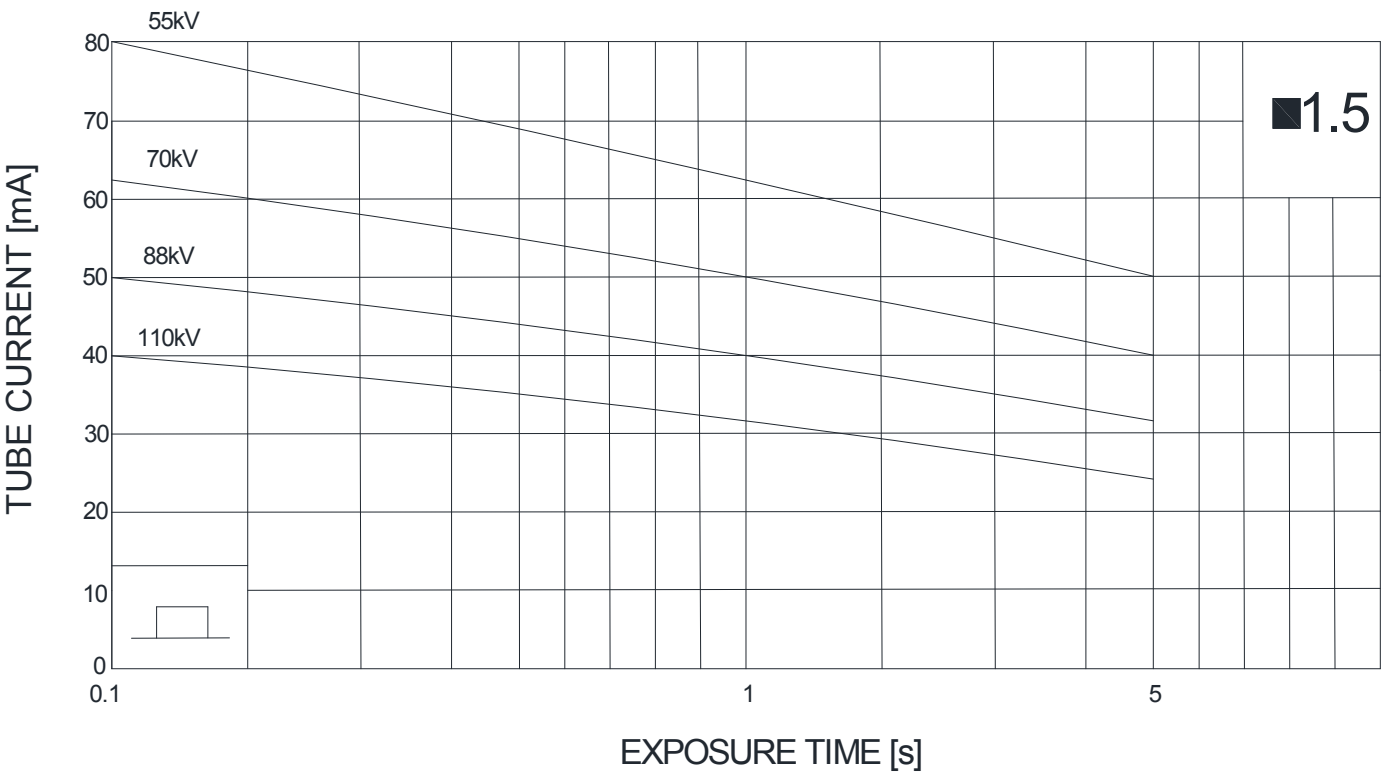
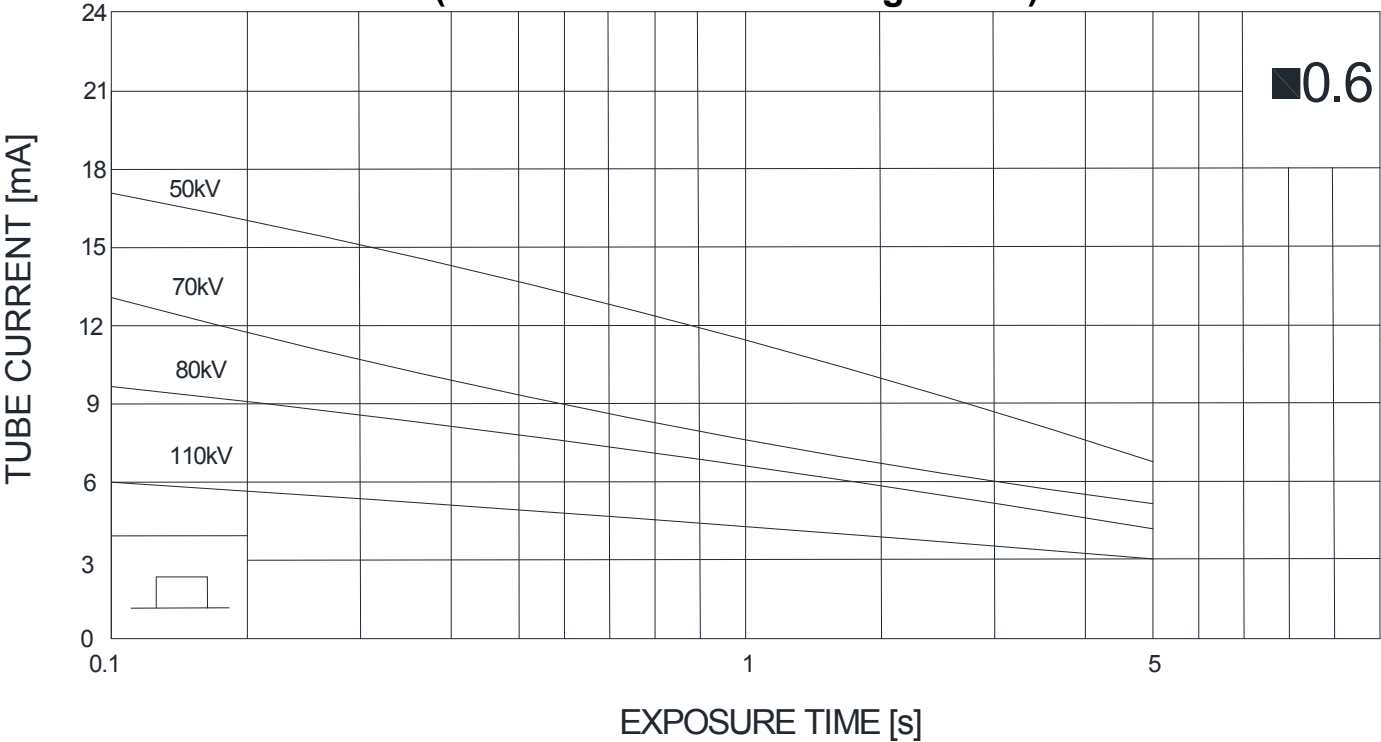
Read through this page before using the tube.

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.

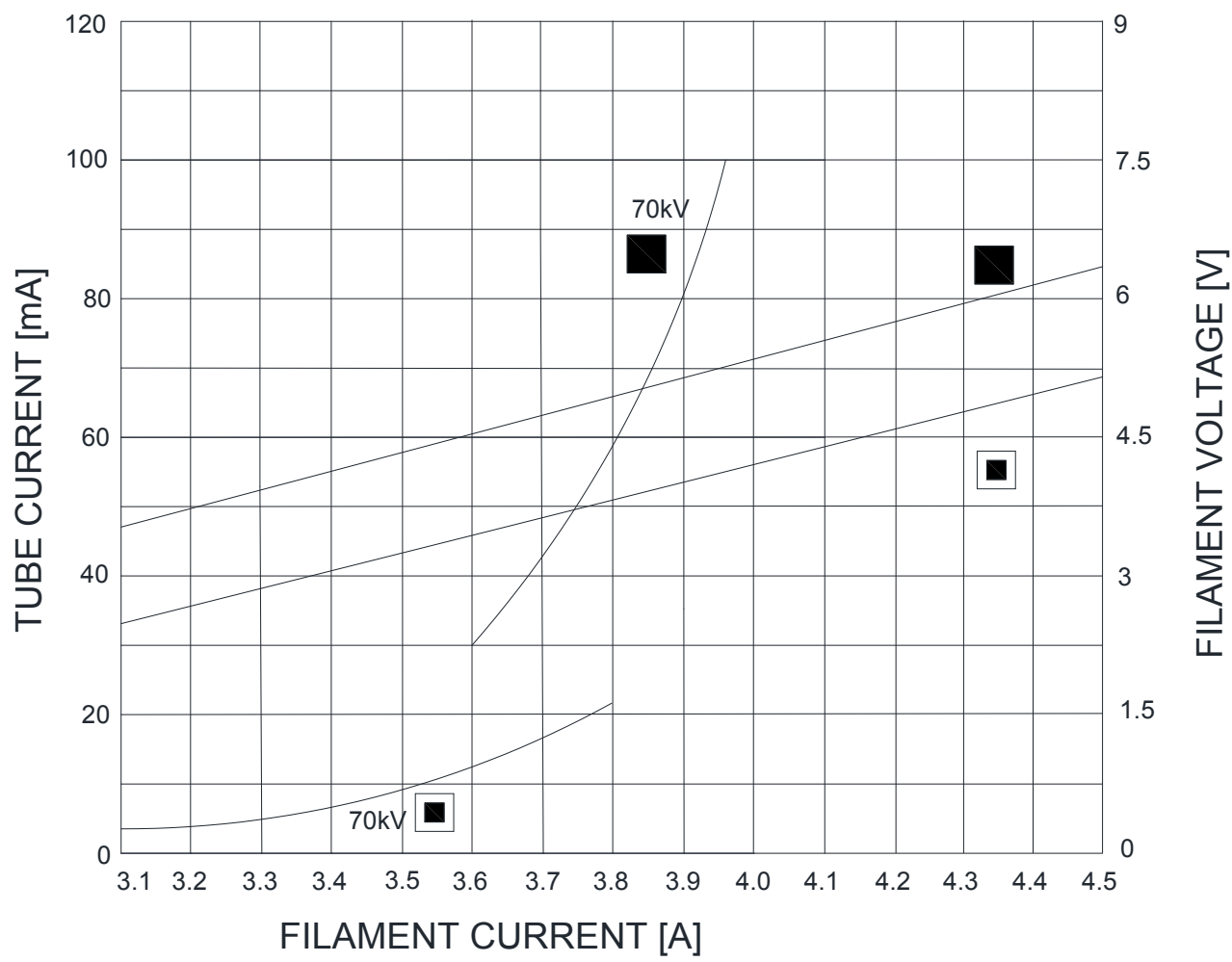
1. The tube shall be handled or operated only by qualified personnel.
Only a specialist with knowledge of X-ray tube should assemble, maintain and remove the tube.
2. The tube envelope is made of glass. In transporting and handling, sufficient care should be taken not to give strong impact or vibration 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

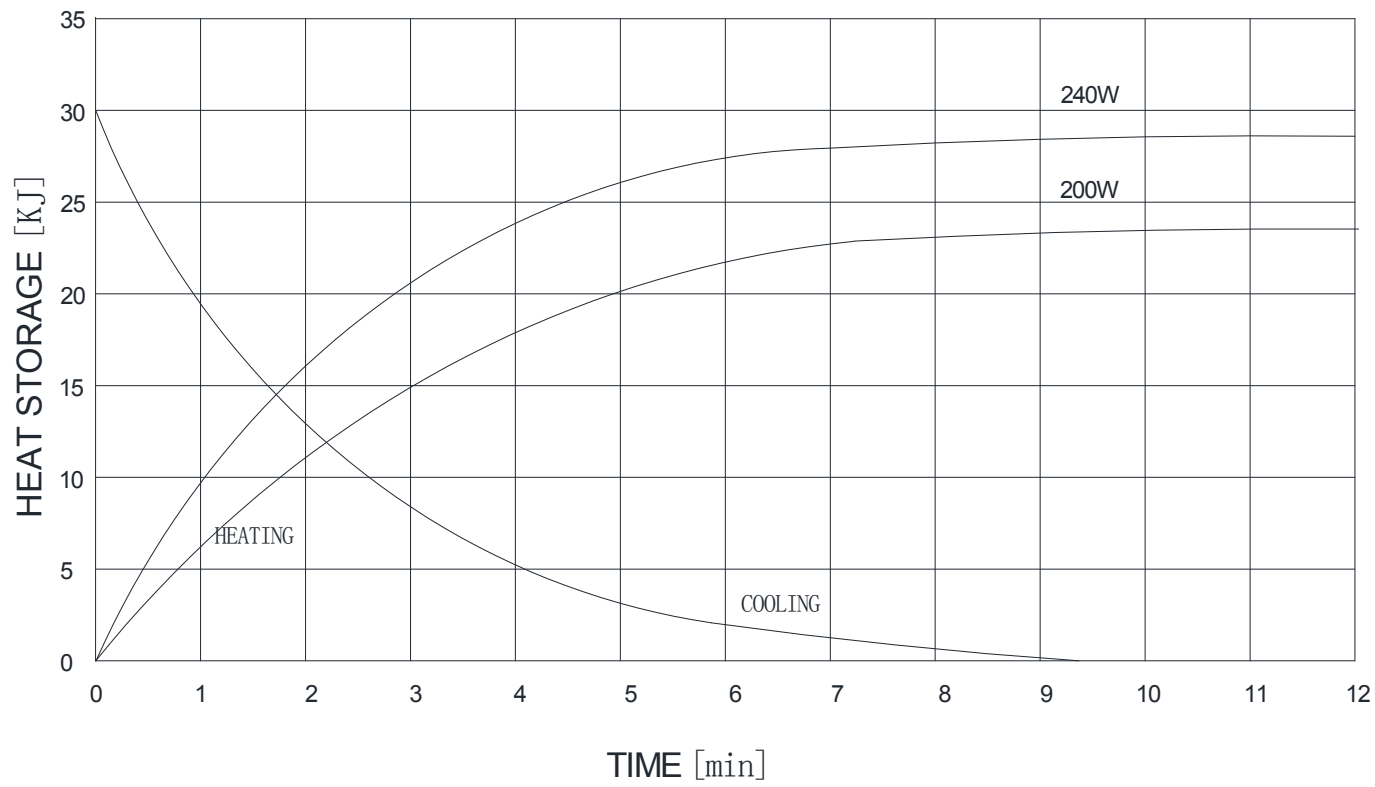
(Absolute maximum rating charts)



Emission & Filament Characteristics

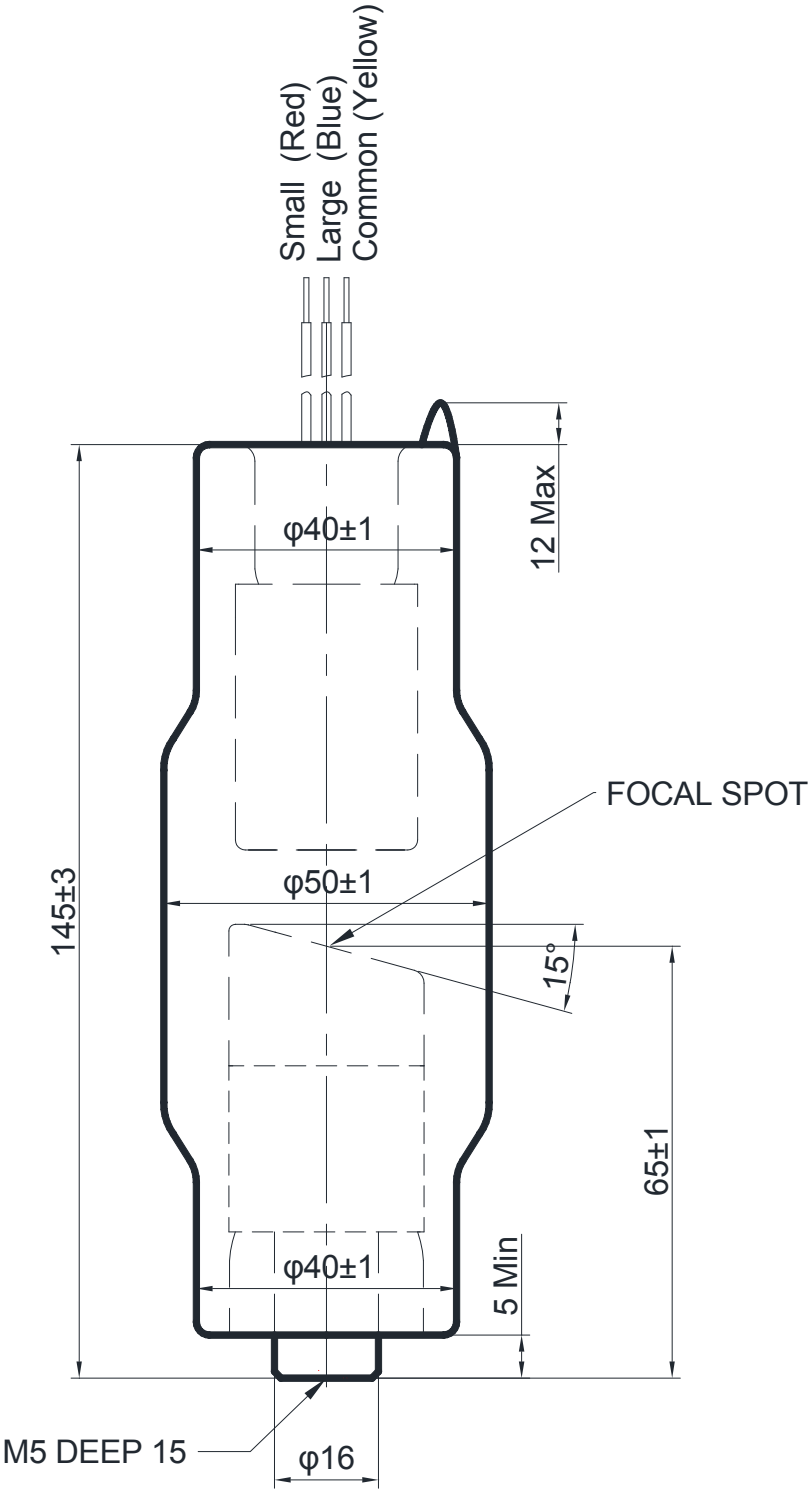


Anode Thermal Characteristics



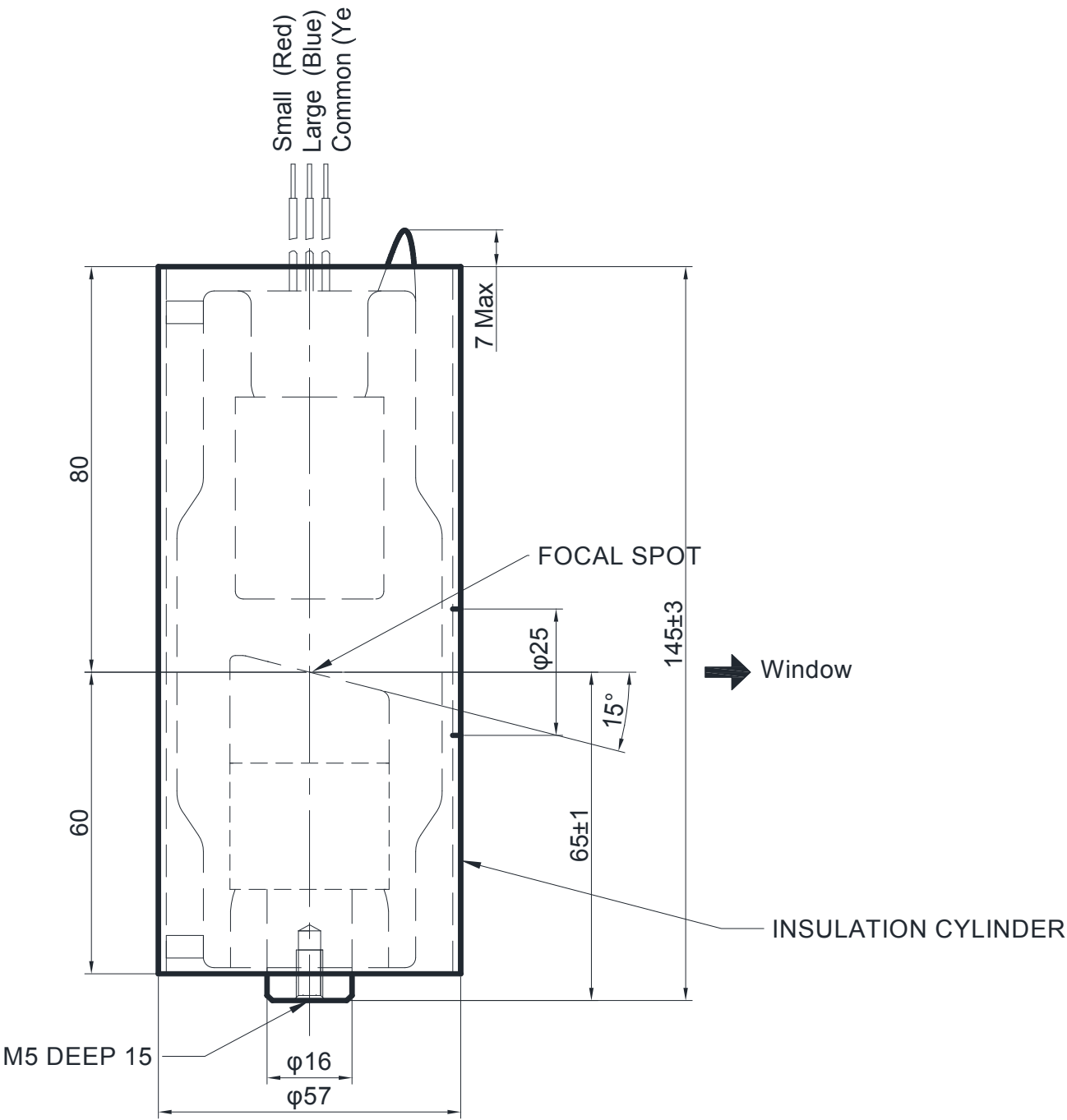
X-Ray Tube Dimensions -XD13-0.6/1.5-110

Unit: mm



X-Ray Tube Dimensions -XD13-0.6/1.5-110S

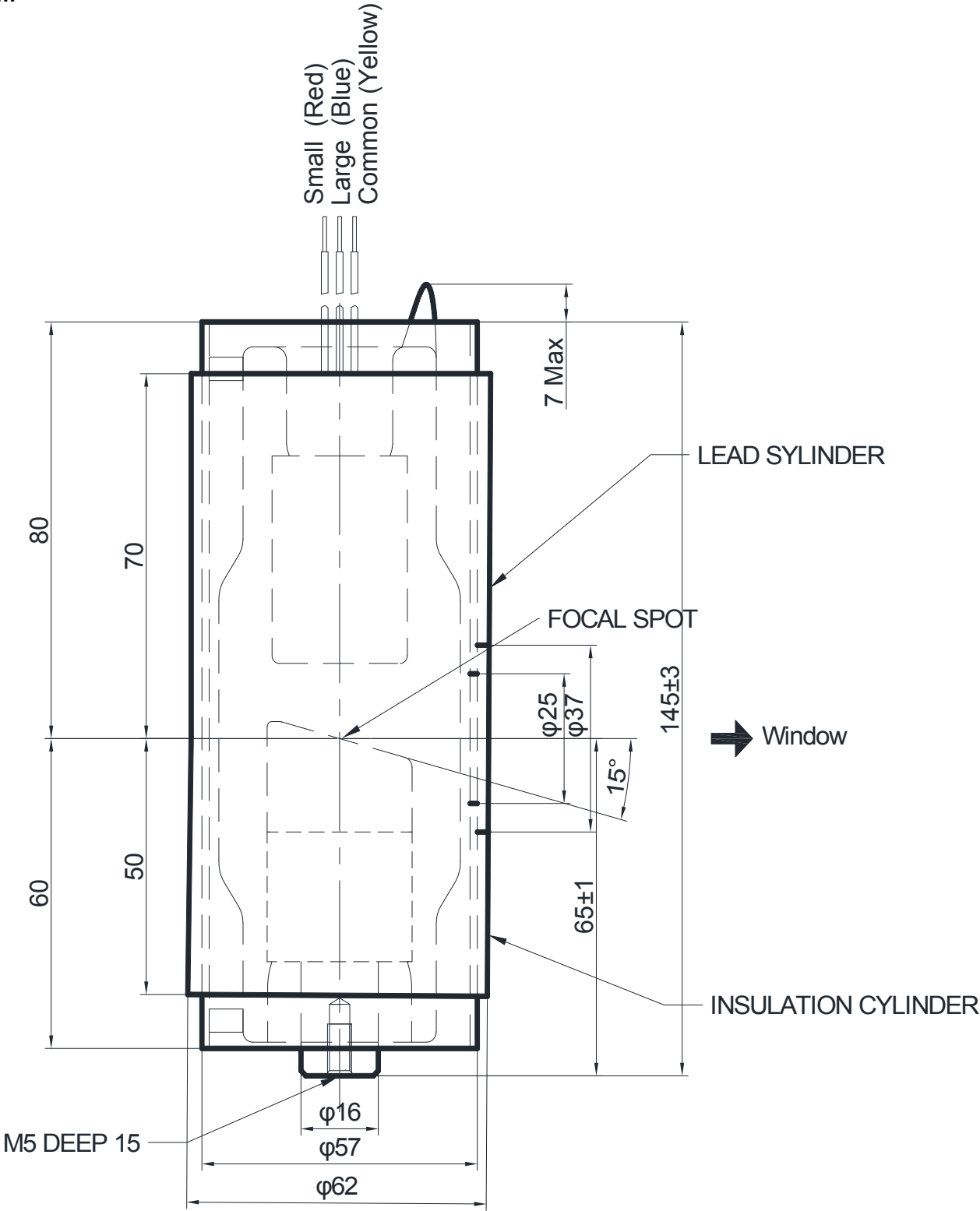
Unit: mm



X-Ray Tube Dimensions -XD13-0.6/1.5-110SB

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nit: mm



X-Ray Tube Dimensions -XD13-0.6/1.5-110SBR

Unit: mm

