WSM 50501 | PACKAGE X-RAY TUBE

wisman®
High voltage power supply
威思曼高压电源

ISO9001:2008

A | X-RAY TUBE

- MAX ANODE CURRENT:1.0mA
- MAX ANODE VOLTAGE:50kV
- MAX FILAMENT CURRENT:2.0A
- NOMINAL FILAMENT VOLTAGE;2.0V
- MAX PACKAGE TEMPERATURE: 55℃

INTRODUCTION

WSM50501 Series X-Ray tube is a multi-use, side-window X-Ray tube. The tube is packaged in a metallic casing lined with lead. The package is filled with special designed insulation oil for high-voltage insulation and heat dissipation. The tube is to be operated in a positive anode mode with the cathode grounded. This series is in use for many industrial applications.

TYPICAL APPLICATIONS

RoHS inspection, X-Ray fluorescence analysis, X-Ray thickness gauging, density analysis, X-Ray imaging, real-time process control, and etc.

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SPECIFICATIONS

Parameter	Descriptions
Max Anode Voltage	50kV
Max Anode Current	0-1mA
Max Power	50W
Focal Spot Size	1*1mm(100μm options available)
Filament Characteristic	50kV/1mA If≈ 1.7A
Filament Voltage	≈2.5V
Be Window Thickness	200μm(100μm Optional)(Glass window options available)
Cone Angle	20°
Anode Material	W, Mo ,Rh, Ag(Other materials available)
Cooling Methods	Forced air @ 150 CFM
Surface temperature	less than 55℃
Connection	Anode connect positive HV polarity,Cathode grounded
Dimension	Φ70X163.5
Approximate Weight	2.2kg

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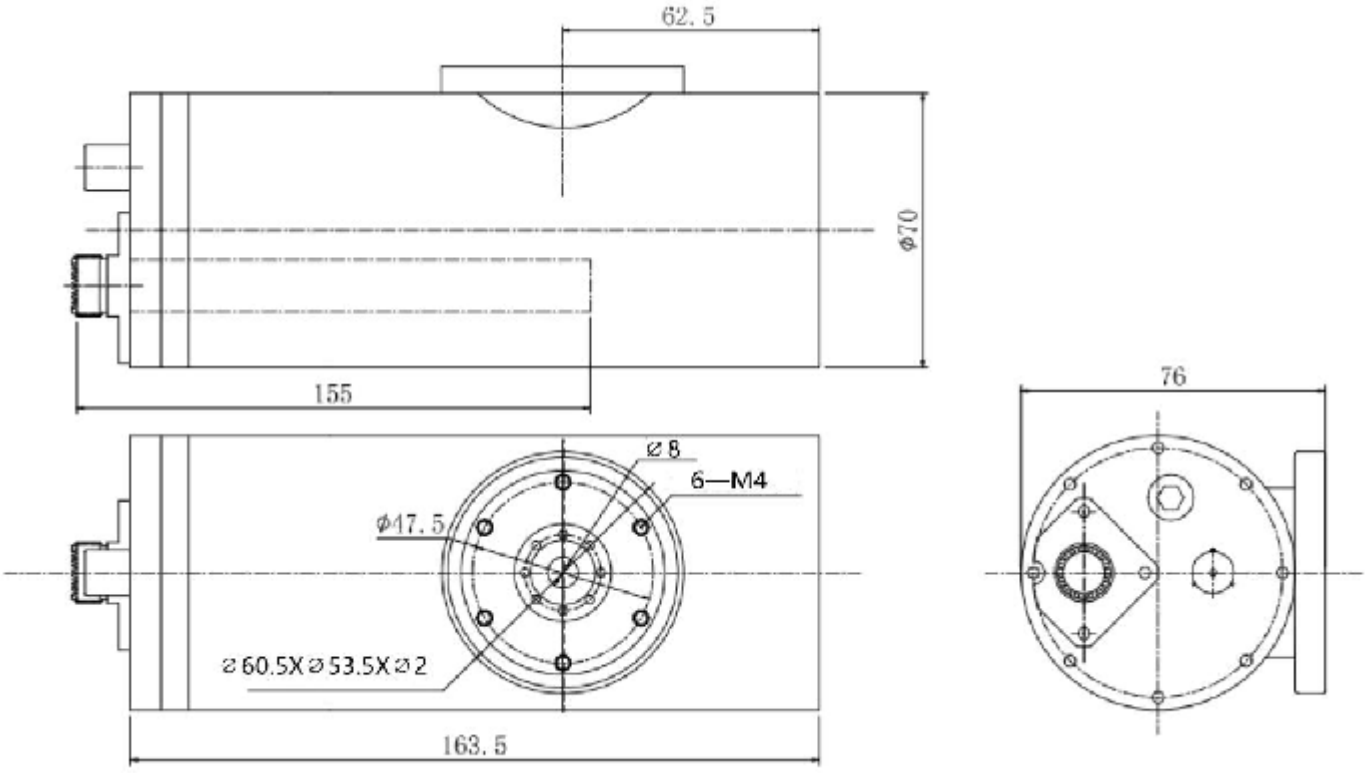
OUTLINE DRAWING



OPERATION MANUAL

I How to start the X-ray tube under normal use?

In order to ensure the longevity of the X-ray tube, please follow the steps below to obtain the required anode voltage and tube current: Turn on the tube voltage to 50% of the required tube voltage, (if the required tube voltage is lower than 20kV, it can be directly turned on for use.) Start the tube current to 50% of the desired tube current (wait 10 seconds)increase the tube voltage to the desired tube voltage, and increase the tube current to the desired tube current.

I How to mature an X-ray tube that has not been used for a long time?

New or long-term unused X-ray tubes should be properly seasoned before use. The aging process improves product stability and extends service life. Start the machine under the state of tube voltage 20kV and tube current 0.2mA, and work for ten minutes. Then keep the tube current constant, and gradually increase the tube voltage until the required tube voltage is reached. If the tube current is found to be unstable at a certain tube voltage, the aging time at this voltage should be increased until the current is stable.

I Filament protection:

In order to prevent the filament from being overheated, melted and broken due to high current impact on the filament when it is started. The filament circuit design of the instrument should make the starting current of the filament rise slowly, the initial setting value is recommended to be less than 1A, and then slowly rise to the required filament current according to the selected tube current. The maximum filament current limit of the instrument should be less than 2A, normally 1.8A. Avoid using it in the case of low tube voltage and high tube current, and it is forbidden to use it when the tube voltage is below 4kV.

I Cooling:

Make sure that the air volume is greater than 150CFM, and the shell temperature does not exceed 55℃. If the cooling conditions are poor, it is recommended to reduce the power usage. It is recommended that customers use a 55℃ temperature sensor to control the temperature.

I Use environment:

The ambient temperature is 5-30℃, and the relative air humidity is less than 70%.

I Storage environment:

The storage environment is clean and dry, free of corrosive gas. Be careful to protect the beryllium window and prevent it from being touched. The product is fragile and should be handled with care.

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