

## TFS-5110

### 40 kV X-Ray Source



### Specification

- **Focal Spot Size 1.0 mm**  
Standard focal spot size is 1.0 mm. 0.18 mm focal spot is also available.
- **Continuous Operation: 9 W**  
Continuous maximum output from 4 kV to 40 kV and up to 2.0 mA operating current.
- **Available Target Materials**  
Ag Au Co Cr Cu Fe Mn Mo Ta Pd Re Ni Ti W

### Application

- **Analytical**
  - Particle Analysis
  - Thickness Gauging
  - Isotope Replacement
  - Soft X-Ray Radiology
  - Spectroscopy
  - Stress Analysis
  - Fluorescence
  - Densitometry

### Description

The TruFocus **TFS-5110** X-Ray source has been developed for high flux stability and long life when used under continuous operating conditions. The **TFS-5110** is a low cost answer for high spectral purity radiation. The **TFS-5110** is encapsulated in silicon rubber and features a grounded cathode and low attenuation Beryllium window.

# Characteristics

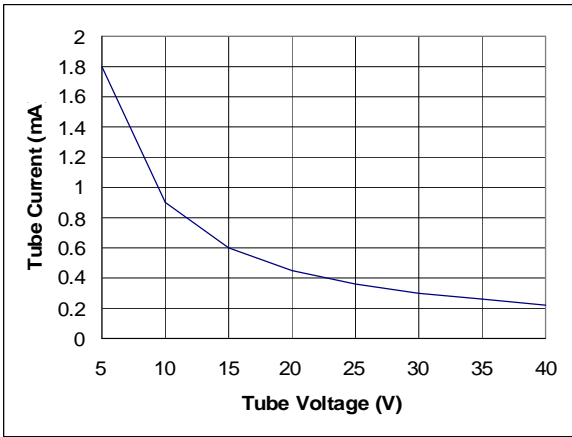
## General

Parameter	Value	Unit
Target Voltage	4-40	kV
Maximum Target Current	2.0 - 0.225	mA
Maximum Power	9	W
Maximum Filament Voltage	2.5	V
Maximum Filament Current	2.0	A
Beam Angle	24	degree
Operation	Continuous	—
Focal Spot	1.0 / 0.18	mm

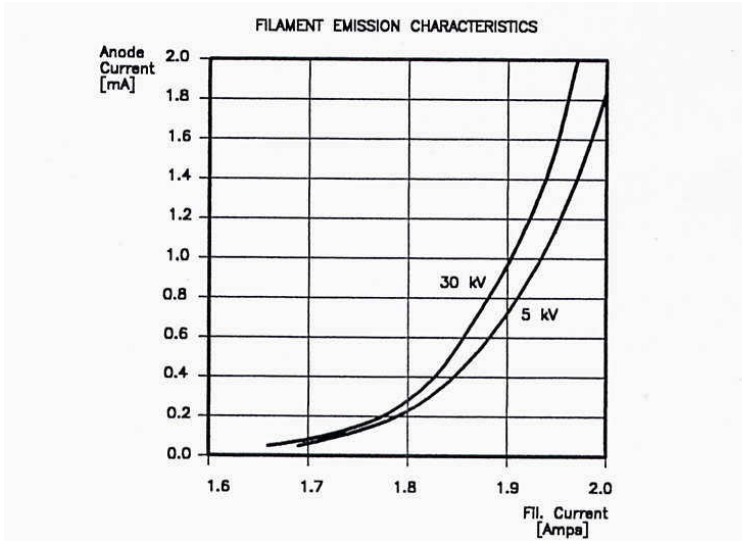
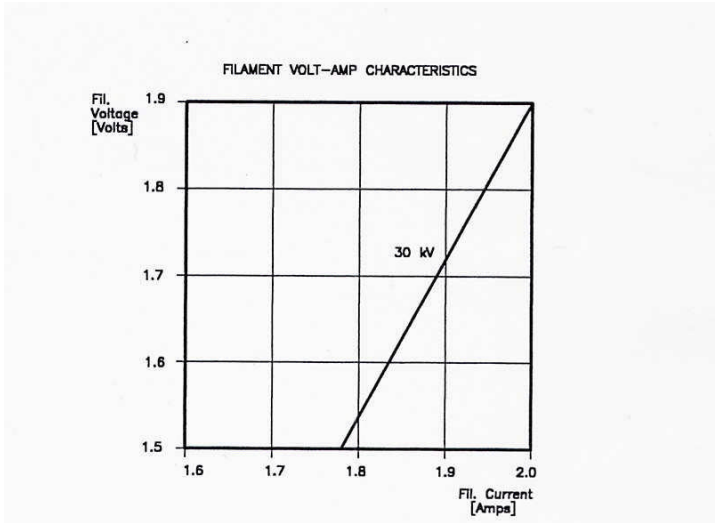
## X-Ray Tube

Parameter	Description
X-ray Tube	Encapsulated
Target Material	Tungsten
Window Material	Beryllium
Window Thickness	.005 "
Window Type	End Window
Operating / Storage Temperature (Max.)	+10 °C to +55 °C / 0 °C to +60 °C
Operating / Storage Humidity (Max.)	85 % RH
Cooling Method	Forced Air (100 cfm)
Weight	7.7 oz.
Flux Stability	<0.2%

## TUBE VOLT-AMP CHARACTERISTICS (9W)



## Filamentary Data

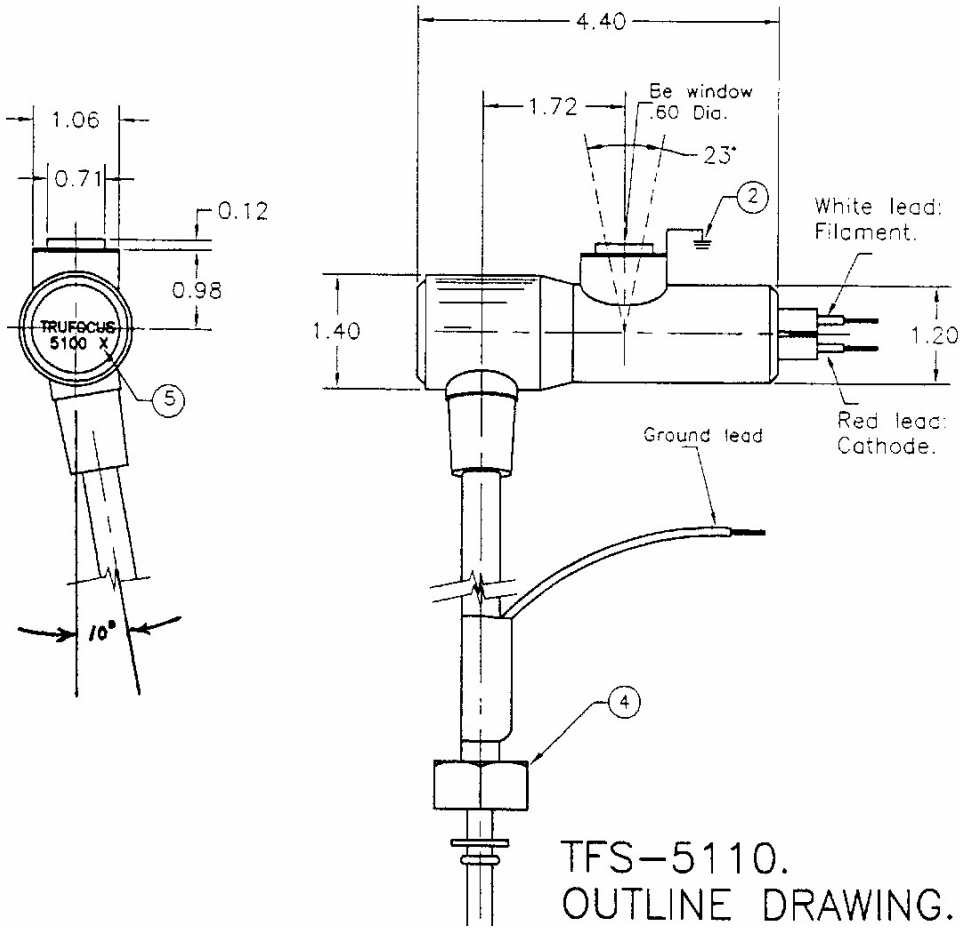


Dimensional Outline (unit: in)

NOTES:

- 1) Do not use excessive force on tube body.
- 2) Window flange must be grounded.
- 3) It is user responsibility to ensure that adequate shielding and interlock devices are provided to avoid accidental exposure to the hazards of radiation and or electrical shock.
- 4) High voltage lead shown with TruFocus nut connector.
- 5) Target material indicated by its chemical symbol.

TFS-5110 Outline Drawing.dwg Rev. A  
3/18/98 AR



TFS-5110.  
OUTLINE DRAWING.



### Pre-Cautionary Note -----

1. X-Ray radiation is harmful to the human body. It is necessary to take all safety precautions when operating this device.
2. The x-ray tube should be installed in an x-ray shielded cabinet to avoid exposure. It is recommended that the safety interlock system be used at all times.

### Warranty Information-----

This x-ray tube is warranted to be free of defects in materials and performance for a period of 356 days (1 year). This warranty is limited to repair or replacement of defective products only. This warranty replacement cost to customer shall be prorated over the duration of the warranty period. The warranty period commences on the date of installation, but no later than 30 days from the date of shipment from TruFocus to the customer. Any loss, damage, failure and/or malfunction relating in any way to accident, abuse, alteration, misuse, neglect, fitting, disassembly, attempted repair, storage, adjustment of the electronics, or failure to use the tube within the specifications or operating instructions provided by TruFocus, or the lack of proper routine care and maintenance of the tube or system in which it is installed, are expressly denied coverage under this warranty.

Subject to local and technical requirements and regulations. Availability of products in this promotional material may vary. Please consult with our sales office for availability.

Information furnished by TruFocus is believed to be reliable. However, no responsibility is assumed for possible inaccuracies or omissions. Specifications are subject to change without notice. Patent rights are granted to any and all of the circuits described herein. © 2006 TruFocus Corporation



WEBSITE:[www.trufocus.com](http://www.trufocus.com)

TruFocus Corporation  
468 Westridge Drive Watsonville, CA 95076 USA Telephone (831) 761 9981 Fax (831) 761 9984