

# X-ray Tube Power Supply

## Shasta2 Series | Technical Datasheet

Following on our success of the Shasta series, X-Ray Technology has recently upgraded to the Shasta2 power supply to provide exceptional high voltage packaging and technological updates.

Optimized for operating Oxford Instruments X-Ray tubes to deliver highly stable x-ray performance for analytical and medical applications.



### Benefits

- Now smaller than previous models
- Filament Pre-Heat capabilities
- Voltage & Current Programming
- Safety Interlock
- Analog and digital controls
- EEC EMC Certified

### Features

- For best performance and regulatory compliance, ask for our highly flexible, high performance, high voltage cable.
- Ask for the model with grid voltage option for operating Apogee tubes.

#### Operating Voltage Range:

Operating Voltage Range:	10-50kV
Maximum Power:	50W
Maximum Beam Current:	2.0mA
DC Filament Supply:	Current: 3.5A adjustable limit Voltage: 5.0 VDC volt limit
Efficiency:	75%, typical
Voltage and Current Monitors:	0 to +10 VDC proportional from 0 to rated output. Accuracy ±1%
Voltage Program Inputs:	0 to +10 VDC proportional from 0 to rated output. Accuracy ±1%
Stability:	± 0.05% over an 8-hour period after 30-minutes warm-up
Input Voltage & Amps:	+24VDC @ 5.0A, max
Voltage Control:	Local: via multi-turn potentiometer (kV ADJ) Remote: via external voltage source 0 to 10V. Accuracy: ±1%
Emission Control:	Local: Internal potentiometer to set beam current between 0 and full output current. Remote: 0 to +10Vdc proportional from 0 to full output current. Accuracy: ±1%
Protection:	Over voltage, over current protection. Arc
Environment:	Operational: 0 to 50°C Storage: -40 to + 85°C Humidity: 0% to 90%, non-condensing
Temperature Coefficient:	0.01% per °C, voltage and current
Dimensions:	4.00" H x 2.87" W x 8.00" D (101.6mm x 72.95mm x 202.20mm)
Weight:	2.1 kg (4.5 lbs.) typical
Regulatory Approvals:	Compliant to EEC EMC Directive. Compliant to EEC Low Voltage Directive. RoHS Compliant. UL/CUL recognized
Digital Interface:	Supports USB, RS-232, and Ethernet digital interface. GUI available on request.

## Analog I/O Interface 15 Pin Male Connector

Pin	Signal	Parameter
1	Monitor Return	Signal Ground
2	Voltage Monitor	0-10 volts = 0 to full scale, Zout=1K $\Omega$
3	Current Monitor	0-10 volts = 0 to full scale, Zout=1K $\Omega$
4	Interlock Output	Connect 12V HVON bulb to pin 15 to enable
5	+10 Volt Reference	+10 volts at 1mA, maximum
6	Filament Monitor	1 volt = 1 amp, Zout=1K $\Omega$
7	Voltage Program Input	0-10 volts = 0 to full scale, Zin=10M $\Omega$
8	Local Voltage Program*	0-10 volts, screwdriver adjust
9	Filament Limit Setpoint*	1 volt = 1 amp, screwdriver adjust
10	Current Program Input	0-10 volts = 0 to full scale, Zin=10M $\Omega$
11	Local Current Program*	10 turn pot, screwdriver adjust
12	Not used (+24V Out for Interlock)	(Optional Interlock Configuration)
13	Not used (Interlock Coil)	(Optional Interlock Configuration)
14	Filament Preheat Setpoint*	1 volt = 1 amp, screwdriver adjust
15	Interlock Return	Interlock Ground

## Grid Bias Connector 2 Pin Phoenix Contact\*

Pin	Signal	Parameter
1	Ground	Chassis Ground
2	Grid Bias	0 to -300Vdc

\*Only applicable for 9700012

## USB Digital Interface- 4 Pin USB "B" Connector

Pin	Signal	Parameter
1	VBUS	+5 Vdc
2	D-	Data -
3	D+	Data +
4	GND	Ground

## Analog I/O Interface 15 Pin Male Connector

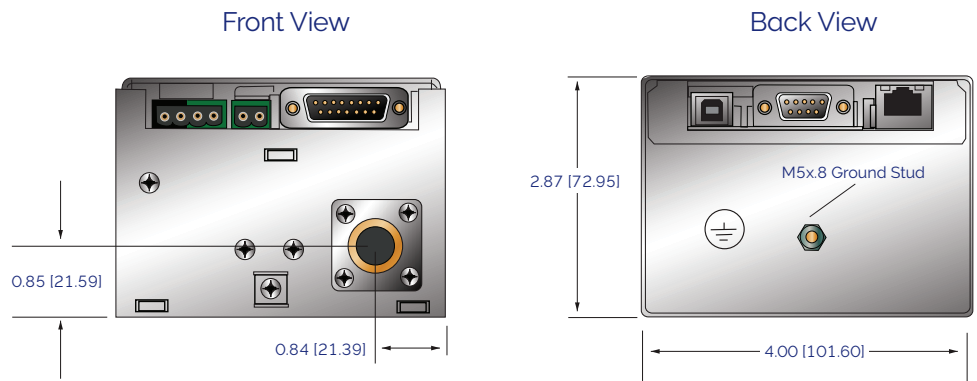
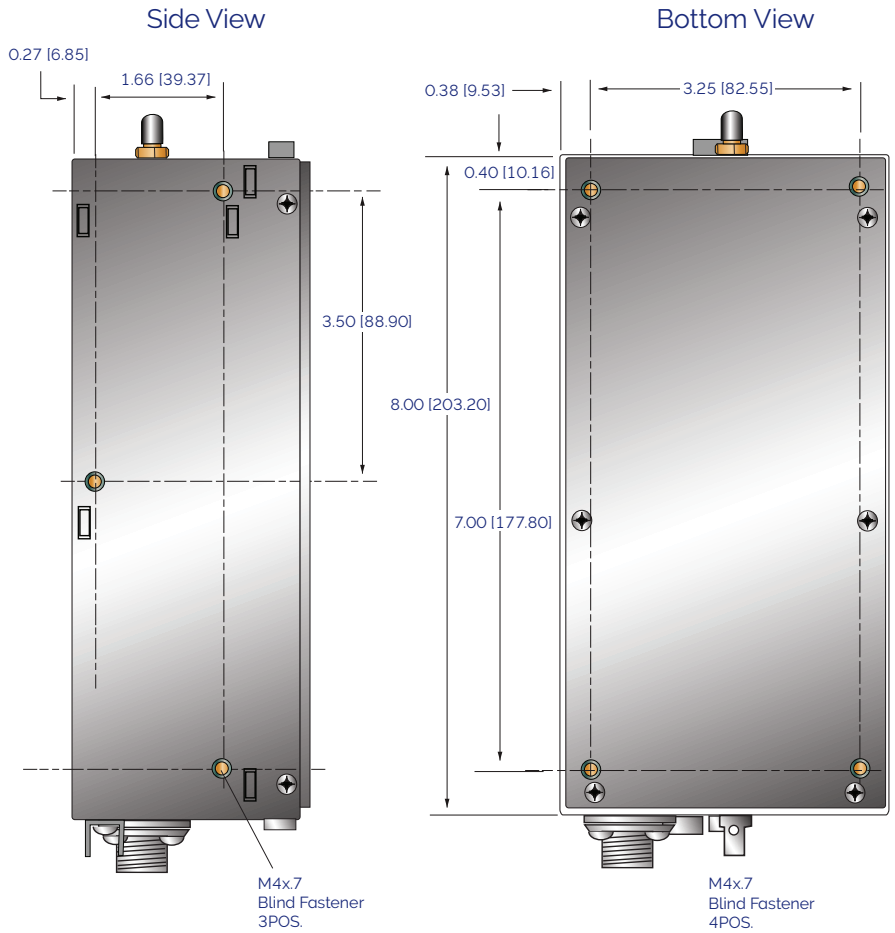
Pin	Signal	Parameter
1	TX+	Transmit Data +
2	TX-	Transmit Data -
3	RX+	Receive Data +
4	NC	No Connection
5	NC	No Connection
6	RX-	Receive Data -
7	NC	No Connection
8	NC	No Connection

## Analog I/O Interface 15 Pin Male Connector

Pin	Signal	Parameter
1	NC	No Connection
2	TX out	Transmit Data
3	RX in	Receive Data
4	NC	No Connection
5	SGND	Signal Ground
6	NC	No Connection
7	NC	No Connection
8	Voltage Monitor 2	0-10 volts = 0 to full scale, Zout=1K
9	Power Supply OK	+15V= OK, 0V= Fault, Sink/Source 3mA max

# Shasta2 50kV Power Supply | Technical Datasheet

Product Ordering Table			
Product #	Voltage	Power	Grid Control
9700011	50kV	50W	N/A
9700012	50kV	50W	0 to -300V



visit <https://xray.oxinst.com> for more information

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