

XDRIFT SDD

Applications

X-Ray Fluorescence

X-Ray Diffraction

Energy Dispersive Spectroscopy

- Lightweight, perfect for both OEM portable or benchtop instrumentation
- Alloy sorting / Metallurgy
- Jewelry and precious metal analysis
- Light element analysis
- Mining & Ore analysis
- Soil Analysis
- Coating analysis
- Scientific / Space research
- Quality control
- Plastic additive analysis
- Regulatory / Environmental Compliance
- Contamination sampling
- Food and Drug analysis
- Archeology
- Art authentication

Standard Package Includes:

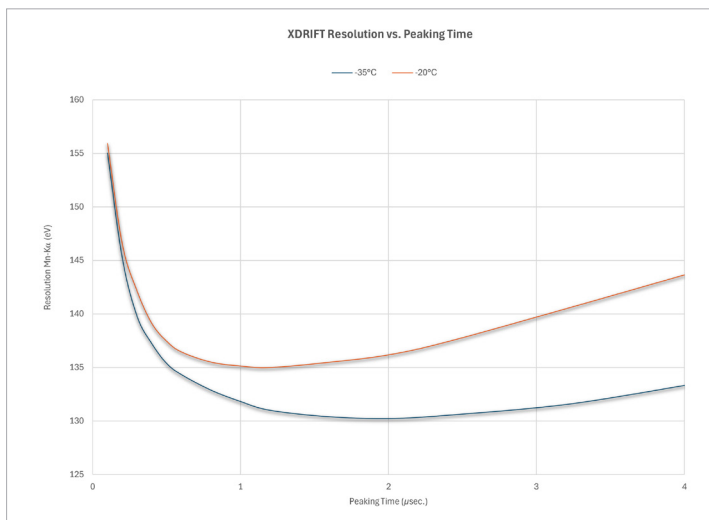
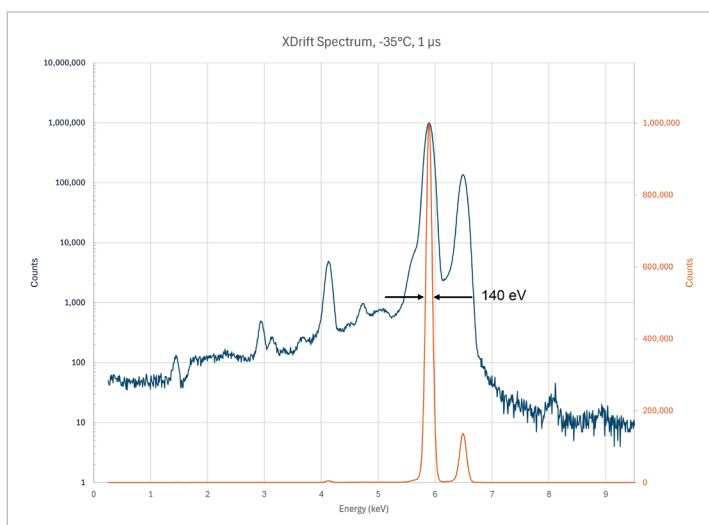
XDRIFT SDD

- Vacuum sealed detector module
- DuraBeryllium window
- CMOS ASIC
- Preamplifier with a 10 pin FFC type input/output connector

Moxtek XDRIFT detectors are designed to meet your OEM requirements and feature an SDD module with an internal, low-noise CMOS preamplifier for fast count rates. The detectors include a flex-type printed circuit assembly (preamp) with a positive ramp output signal.

The XDRIFT detectors come with our standard aluminum housing (heatsink), without housing, or bring your own designs for us to integrate.

- XDRIFT 20mm² SDD Module with Ultra-low noise CMOS ASIC
- Multilayer collimator and internal blocking layer for no stray peaks in the spectrum
- 8 μm DuraBeryllium[®] protected window, vacuum encapsulated
- Available with a temperature sensing thermistor (standard) or a temperature diode (optional)
- Flex type printed circuit preamplifier with 10-pin FFC connector
- Aluminum heat sink—RF/EMI shielded cover and passivated for corrosion resistance



Specifications

SDD Entrance Window Active Area: 20 mm²

Sensor Thickness: 500 μm

Detector Window: 8 μm thick DuraBeryllium®

Collimator Material: Multilayer

Energy Resolution: ≤ 140 eV FWHM @ 1 μs PT, -35° C

Peak to background: >15,000:1 @ 1 keV (18,000:1 typical)

Test Conditions: XIA μDXP DPP, -35° C, Fe 55, 5.89 keV

Weight: 31 grams (with heat sink)

Standard Warranty: 1 year

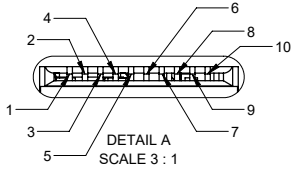
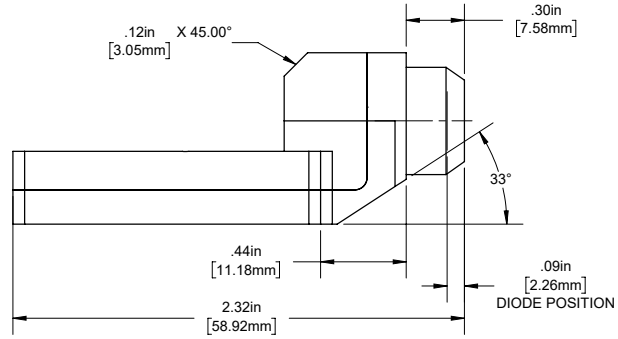
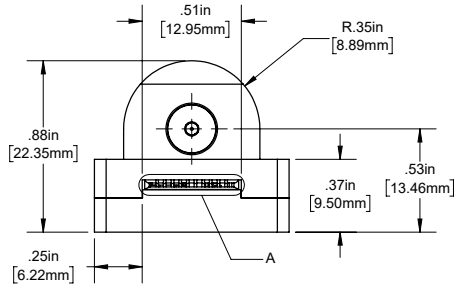
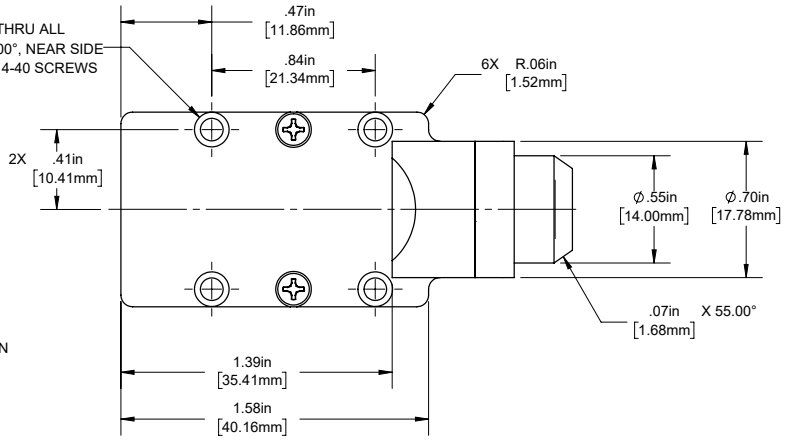
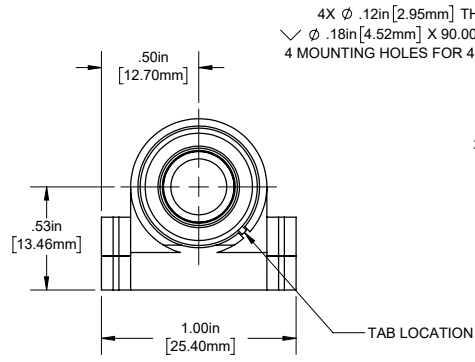
Operating Parameters

Parameter	Typical Value	Operating Limits or Conditions
Low Voltage Bias (Positive)	+5 V	+4.9 V to +5.3 V
Low Voltage Bias (Negative)	-5 V	-5.3 V to -4.9 V
High Voltage Bias (Negative)	-170 V	-173 V to -167 V
Ramp Threshold (Positive)	+2.0 V	
Ramp Threshold (Negative)	-0.5 V	
Preamp Gain	2.75 mV/keV	
TEC Supply		+3.5 VDC Max, 0.540 A Max
TEC ΔT	80° C	@ 55° C heat sink temperature
Temperature Read	10 kΩ NTC Thermistor or Temperature Diode	@ 25° C

Preamp Pinout

Pin ID	Name	Description	Set
1	TEC -	Temperature Control	GND
2	TEC +	Temperature Control	+3.5 VDC Max
3	+ 5V In	Low Voltage Bias (Positive)	+5 V
4	- 5V In	Low Voltage Bias (Negative)	-5 V
5	GND	Signal Ground	GND
6	Ramp	Output Signal	N/A
7	Therm or Temp Diode	Temperature Read	N/A
8	GND	Signal Ground	GND
9	NC	Not Connected	N/A
10	- HV In	High Voltage Bias (Negative)	-170 VDC

Mechanical Drawing



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