X-ray spectra meter XS100

Equipped with SDD detector, Throughput of High-resolution, High count rate

XS100 is X-ray spectrometer with SDD detector (30 mm²), which is a high-resolution. XS100 was downsizing by integrated combination of SDD, DSP, high-voltage power supply and Peltier device. The pre-amplifier signal from SDD detector was carried out DSP processing by ADC (100 MHz, 14 bit) and FPGA. That data is transferred to a PC by USB connection. It was carried out transistor reset processing in an appropriate way. Therefore, it has substantially-improve the throughput.

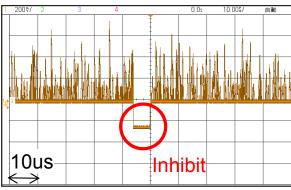
Function Detector

Detector cooling

Energy resolution

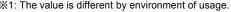
Output of spectra by X-ray spectrometer SDD detector 30mm² Cooling by Peltier device 125eV@5.9keV 2 us peaking time 150eV@5.9keV 0.15 us peaking time

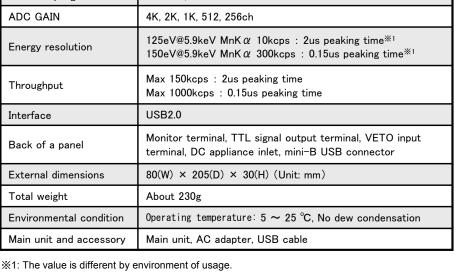




	(ch)	centroid (ch) 552.73	peak (count) 30.902k	gross (count) 391.502k	net (count) 378.983k	(ch) 11.605	FWHM (eV) 125.848	(eV) 230,384
32.0k -	555	332.73	JOIJOER	JJIJOER	J. C.JUJK	111005	123.010	250.501
30.0k -				Λ				
28.0k -				- / 1				
26.0k -			- 1	- 11			_	
24.0k -								
22.0k -				- 1				
20.0k -				1				
18.0k -				1. 1			1 -	
된 16.0k -	F	·WŁ	HM:	=17	5eV	ന്ന	: 9k	eV
5 14.0k -		**:		1 7	OC V	$\mathbf{\omega}$,. y i v	CV
12.0k -				1				
10.0k -				1 1				
8.0k -				1				
6.0k -				1		$-\Delta$		
4.0k -				1		1 / 1		
2.0k -				/ \		1		
0.0-			منيب		<u> </u>	40	<u> </u>	
5024	5200	5300 5400 550	0 5600 5700	5800 5900 6000	6100 6200 630 eV	0 6400 6500	6600 6700 680	0 6900 7000 7100 72

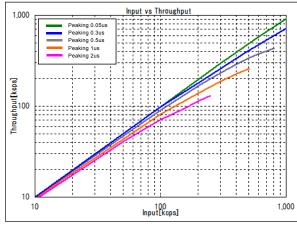
Name	XS100				
Detector	SDD detector 30mm² (active area)				
Detector cooling	Cooling by Peltier device				
ADC sampling	100MHz, 14bit				
ADC GAIN	4K, 2K, 1K, 512, 256ch				
Energy resolution	125eV@5.9keV MnK $lpha$ 10kcps : 2us peaking time lpha_1 150eV@5.9keV MnK $lpha$ 300kcps : 0.15us peaking time lpha_1				
Throughput	Max 150kcps : 2us peaking time Max 1000kcps : 0.15us peaking time				
Interface	USB2.0				
Back of a panel	Monitor terminal, TTL signal output terminal, VETO input terminal, DC appliance inlet, mini-B USB connector				
External dimensions	80(W) × 205(D) × 30(H) (Unit: mm)				
Total weight	About 230g				
Environmental condition	Operating temperature: 5 ~ 25 °C, No dew condensation				
Main unit and accessory	Main unit, AC adapter, USB cable				





X Please note that contents may change without prior notice.

Input vs Resolution 170 160 130 120 Input[kcps]



Design and fabrication of electronic circuit associated with measurement control and radiation measurement Techno AP

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Updated on Oct. 29. 2014