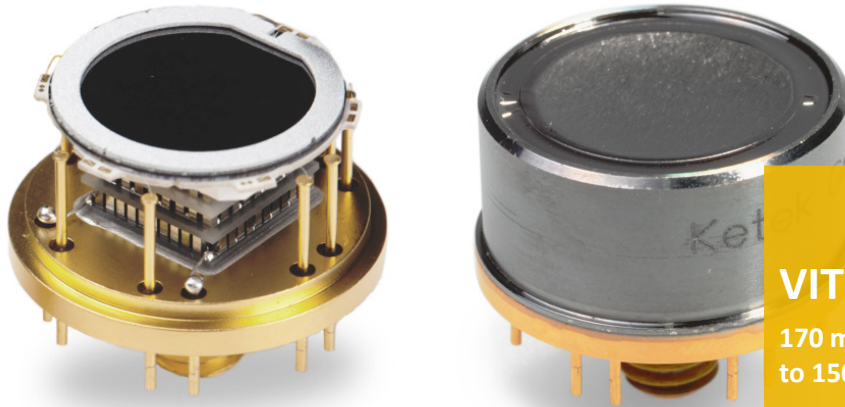


KETEK



VITUS H150

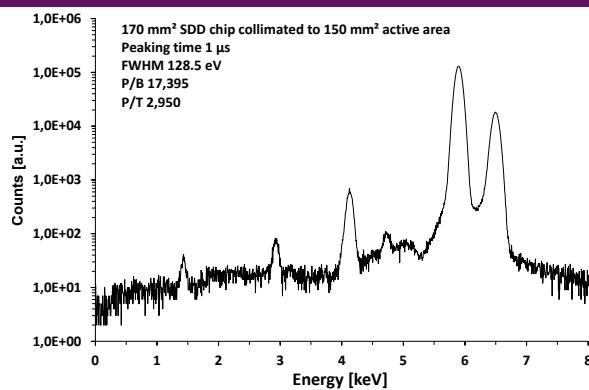
170 mm² collimated
to 150 mm²

**H150
VITUS**

X-ray Silicon Drift Detector

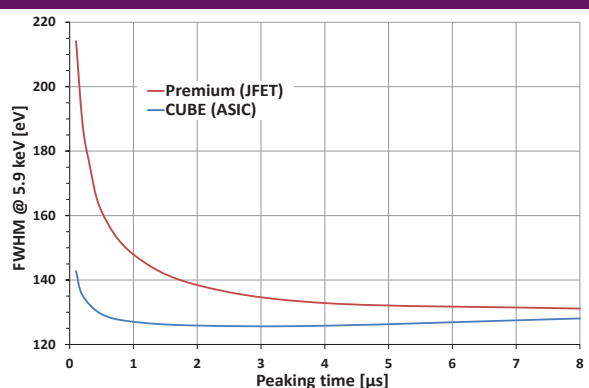
- Available with JFET or ultra-low-capacitance ASIC (CUBE) as first amplification stage
- Excellent energy resolution at very short peaking times down to 0.1 μs (CUBE)
- Very high count rate capability up to 2 Mcps (CUBE)
- Operable at up to +50 °C heat sink temperature with outstanding performance
- Best in class peak to background > 15,000 typ.

Typical spectrum acquired with the new VITUS H150 CUBE

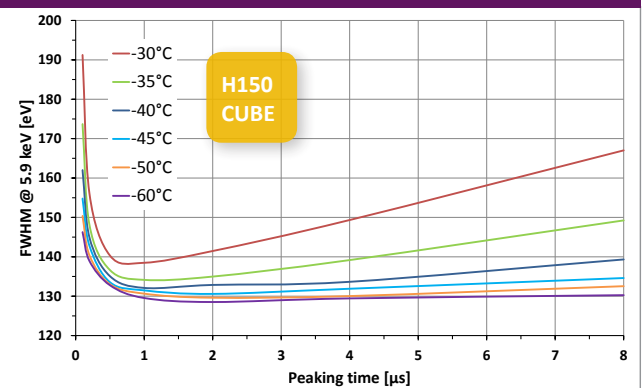


Class	CUBE ★★★★★
First stage amplification	ASIC
Energy resolution	≤ 136 eV
Peak to background	> 15,000
Peak to tail	> 2,000
Optimal peaking time at max. cooling	1 μs
Absorption depth Si	450 μm
Peak shift stability up to 100 kcps	< 1 eV
Max. input count rate	2,000 kcps
Window Be DuraCoat Plus	25 μm
Cooling performance	ΔT > 90 K
On-chip collimator	multilayer
Ordering codes	CUBE: V5CAT0-H150-ML4BEV 136

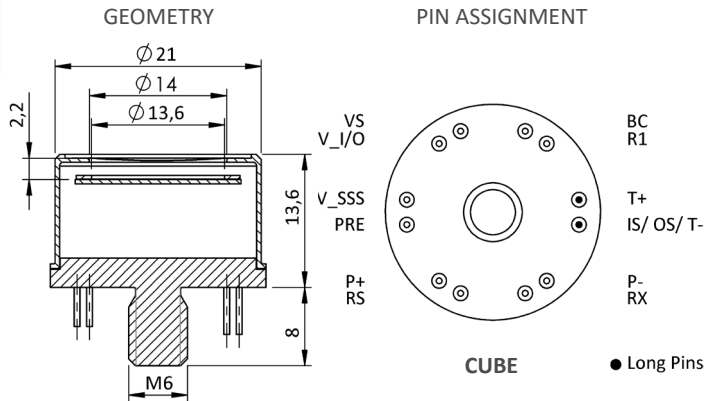
FWHM vs. peaking time at -35 °C chip temperature



FWHM vs. peaking time at different chip temperatures



H150 VITUS



Typical SDD parameters	Voltages	Currents
Ring 1 (R1)	-20 V ± 10 V	15 µA
Ring X (RX)	-130 V ± 30 V	15 µA
Back	-70 V ± 20 V	<1 nA
Peltier element (Be window)	9 V	1000 mA max.
Temperature monitor*	NTC thermistor 10 kΩ @ 25 °C *(application note with linearization circuit available)	
Output signal	ramped reset type	
Output gain	CUBE: 1.6 mV/keV ± 20 %	

AXAS-M with VITUS H150



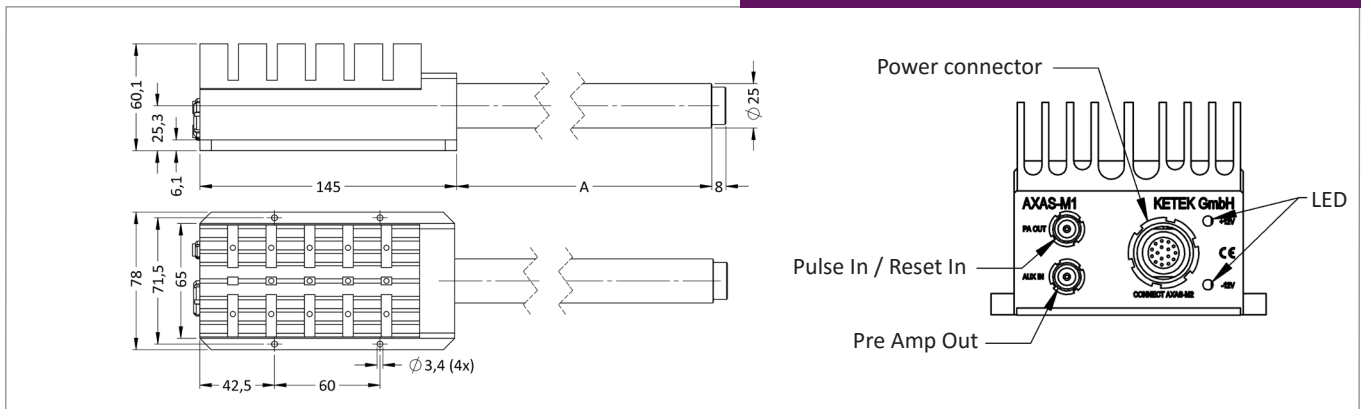
The AXAS-M is a modular, vacuum-compatible and high performance spectroscopic detector system. The AXAS-M1 unit consists of the VITUS H150 SDD and a low-noise preamplifier encapsulated in a thermally optimized housing with a cold finger of customizable length. The AXAS-M2 unit comprises regulated power supplies for the TEC and the SDD, as well as the optional KETEK DPP with a USB interface.

Ordering codes:

CUBE: M5CAT0-H150-ML4BEV 136

★★★★★

AXAS-M1 housing geometry [mm]



AXAS-M2 housing geometry [mm]

