

Hitachi High-Technologies Science America, Inc.

Vortex[®] ME Series

Silicon Drift Detectors for Science at the Speed of Light



Vortex[®] silicon drift detectors are a range of high quality and technology leading x-ray detectors.

The Vortex[®] ME-7 is a 7 sensor SDD detector, designed to be compatible with UHV environments and able to place the sensors very close to samples, generating superior solid angles. Patented heat-pipe technology efficiently carries heat away from the SDD.

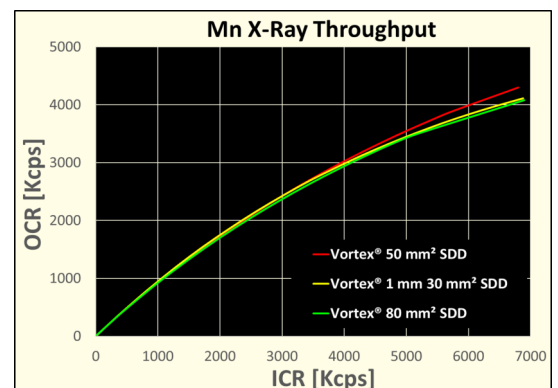
Vortex[®] ME detectors are produced from high purity silicon using state-of-the-art CMOS production technology. They offer best-in-class count rate capability and excellent resolution when coupled with a DPP. A unique feature of these detectors is their ability to process high count rates with very small loss in energy resolution and minimal peak shift as a function of count rate.

The Vortex[®] ME-7 detector

- Is available with probe lengths of up to 500mm
- Has sensors thickness available of 0.5mm
- Generates superb energy resolution, even at high count rates
- Employs thermoelectric cooling (TEC) technology for extremely fast detector temperature stabilization
- Is available in additional customized configurations under special agreement

Guaranteed resolution for ME-7 Vortex[®] SDD configurations.
Data collected at 5.9 kV, 0.5 μ s peaking time.

| Thickness (mm) | Active Area (mm ²) | Resolution (FWHM) |
|----------------|--------------------------------|-------------------|
| 0.5 | 350 | 150 |



Vortex[®] ME Series

| Parameter | ME-7 |
|--------------------------------|--|
| Number of elements | 7 |
| Snout Length (mm) | Up to 500mm |
| Design | Round tube, flat face |
| SDD thickness (mm) | 0.5 |
| Active Area (mm ²) | 0.5 mm thick: 50 |
| Detector Window | Be standard — 25 μm |
| Snout diameter (mm) | 38.1 |
| Operating position | Any angle |
| Preamplifier | CUBE |
| Gain | 1.7 mV/keV (+/- 10%) or Custom settings available |
| Ramp levels (V) | -1 to +1 |
| Rise time (ns) | <60 |
| Peak to Background | >1000 achievable |
| Ambient temp. (°C) | 5-40 |
| Pressure range | Ambient to UHV |
| 3rd Party DPP | Quantum Detectors—Xspress3 or Xspress3 Mini XIA—Mercury, μDXP, xMAP or Falcon X |
| Throughput Count Rate (Output) | 0.9 Mcps with XIA Mercury, μDXP and xMAP 3.5 Mcps Quantum Detectors Xspress3 and Xspress3 Mini and XIA Falcon X |

The Vortex line-up consists of a wide-range of SDD configurations. Let us help you find the right one for your application:

Vortex



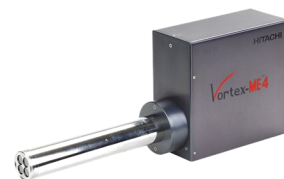
EX Series



EM Series



ME Series



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