Детектор частиц IDS 2030 OI Analytical

Use the IDS 2030 Charged Particle Detector to detect charged particles in the atmosphere or a vacuum. The rugged IDS-2030 delivers spatially-resolved answers fast.

We created the IonCCD by adding a conductive layer to a photosensitive CCD, a detector using the robust yet simple technology you trust in your smartphone and digital camera. The conductive layer blocks out photons but will respond to all particles that are carrying a charge.

The IonCCD is optimized for the detection of positive ions having a wide range of particle energies; from thermalized ions that you can find in drift tube and soft landing experiments, to accelerated ions in mobility and mass spectrometers. As a true charge detector, the signal response of the IonCCD is independent of the energy of the impacting particle, its mass, and the incident angle. The 2126 detector elements (pixels) of the IonCCD will present you with pictures of ions in unsurpassed resolution.

The IonCCD sensor comes on a ceramic substrate to reduce outgassing in vacuum applications, and is enclosed in protective aluminum housing for safe handling and easy mounting. The complete IDS 2030 includes a camera controller, the IonCCD sensor, a power supply, and cables. It is shipped in an airtight instrument case for easy storage and safe transport.

IDS 2030 Features:

True charge detector - Independent of particle energy, particle mass, and incident angle

Pressure independent charge detection – From high vacuum to above ambient pressure

Linear detector array - 2126 detector elements with a pitch of 21 µm

Low outgassing detector – Detector carrier is a ceramic PCB

Synchronization – Spectra acquisition can be synched using a trigger pulse

CE certified – FCC, RoHS, and WEEE

Size	
Controller	10.25 in L X 7.0 in W x 2.95 in H
Sensor	4.0 in L X 2.3 in W x 0.6 in H
Weight	
Controller	2.3 lbs.
Sensor	0.34 lbs.
Power for external power supply	100 - 240 VAC, 50/60 Hz, 2.0 A
Power, Internal	24 VDC
Power Consumption (max)	20 W
Power Consumption (nominal)	14 W
Operating Temperature	5 ºC - 40 ºC
Storage Temperature	5 ºC - 40 ºC
Relative Humidity	95 %
Variable Integration time	80 µs – 5.24 s
Frame time (min)	2.76 ms
Sensitivity	0.5 fA/ pixel/s with S/N =3
In frame dynamic range	5 X 10^3
External trigger	Pulse rising 0 VDC- 12 VDC; Low max. 0.6 VDC, high min. 3 VDC

Detector	
IonCCD	Linear detector array, charge-coupled device: 51 mm, 2126 active pixels each 21 µm wide and 1500 µm high. Effective area 88%.
Charge detector	Independent of pressure, particle mass and incident angle. Detects positive ions, negative ions, and electrons.
Certifications	FCC, CE, RoHS