IC Plus Intensity Monitoring Ionisation Chamber

Ion chambers can be used in a variety of experiments, including: X-ray protein crystallography, generic diffraction experiments, and absorption spectroscopy.

A complete system requires a detector head, high voltage supply, and signal processing module. FMB Oxford supplies a full range of products in various configurations, along with the relevant cabling, to suit all your application requirements.

The detector head consists of a gas tight chamber containing two parallel plates, over which a high voltage is applied to produce a potential gradient. When X-rays pass through the chamber some are absorbed producing electron-ion pairs that are subsequently separated by the gradient and collected at the plates. The small current produced in the plates is then processed by the electronics module to give a quantitative representation of the X-ray intensity.

The IC Plus ionisation chambers are suitable for use in a number of diffraction and crystallography experiments, including protein crystallography. The IC Plus is available in 4 different electrode lengths to allow optimisation of the detector energy range and fit the physical space constraints of complex end stations.

The shortest electrode lengths give a compact intensity monitor that does not absorb a large fraction of the beam, ideal for protein crystallography experiments where the end station is typically very crowded and scatter should be minimized. The longer electrode lengths yield more accurate measurements at higher energies and might be more suited to certain spectroscopy applications.

Specifications

Window aperture	10(h) x 50(w) mm
Windows	70µm conducting polymer
Body material	Aluminium alloy
Electrode gaps	10, 14, 18mm
Electrodes	Gold plated with guard rings
Electrode lengths	10, 50, 150, 300mm
Body lengths	39, 85, 185, 335mm
Working pressure	0.7 - 1.3 Bar Abs
Operating potential	Upto 1.7kV

Ordering information

IC Plus 10, electrode length 10mm, dimensions 98(w) x 39(l) x 66(h)mm	YMC-0010
IC Plus 50, electrode length 50mm, dimensions 102(w) x 85(l) x 66(h)mm	YMC-0001
IC Plus 150, electrode length 150mm, dimensions 102(w) x 185(l) x 66(h)mm	YMC-0002
IC Plus 300, electrode length 300mm, dimensions 102(w) x 335(l) x 66(h)mm	YMC-0003
Adapter plate, IC Plus/Prime to ISO80	YMC-0008
Adapter plate, IC Plus/Prime to IC Plus/Prime	YMC-0021

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