

## *Ion Mobility Spectrometer (IMS, GC-IMS)*

The Ion Mobility Spectrometer v2.0 (IMS, GC-IMS) from STEP Analytics USA provides real-time monitoring of *Airborne Molecular Contamination (AMC)* in semiconductor processing, *Ambient Air Monitoring* and *Process Gas Monitoring*.

The STEP Analytics USA Analyzers (IMS, GC-IMS) are designed for continuous monitoring of all the contaminants of industry applications in ultra-low ppb ranges.

The STEP Analytics USA IMS system can analyze *total acids* or *total amines* at far lower concentrations than traditional analyzers and react in real-time. This includes monitoring of *acids, bases, ammonia* and *organic compounds* in a continuously operating IMS gas analyzer for single or multi-component contaminants in ambient air, stack gas, air handlers or DUV process tools.

US NRC classified as End user Exempt device, with no end user license or periodic wipe tests required.



**Detection Principle**

Ion Mobility Spectrometry (IMS), or Gas Chromatography-IMS (GC-IMS) Tritium ( $^3\text{H}$ ) 2.7 mCi (100 MBq)

**Ionization Source**

**Measurable Compounds**

Ammonia, Acrylonitrile, Acetonitrile, Arsine, Butylamine, Bromine, BTX, BisCMME, Chlorine, Chlorine Dioxide, CMME, Dimethylamine, Ethylene Oxide, HCFC's, HFC's, HFPO, Hydrogen Chloride, Hydrogen Iodide, Hydrogen Fluoride, Hydrogen Peroxide, Isocyanates, Methyl Bromide, Methyl Iodide, N-Methyl-2-pyrrolidone (NMP), PFIB Phosgene, Phosphine, Sulfur Dioxide, Sulfur Trioxide, Triethylamine, TDI, Vinyl Chloride. **Contact STEP Analytics USA if your compound of interest is not listed.**

**Sensitivity**

Low ppb range

## PRODUCT SPECIFICATIONS

- \*Part number: IMS-25R or GC-IMS-25R
- \* Rack-mounted enclosure: IMS: 482.7mm L x 434.5mm W x 138.45mm H (19" L x 17.2" W x 5.5" H)  
GC-IMS: 482.7mm L x 434.5mm W x 180mm H (19" L x 17.2" W x 7" H)
- \* Weight: IMS: 8.5kg (18.74lbs)  
GC-IMS: 10.5kg (23.15lbs)
- \* Operating Range: 0°C to 50°C (32° to 122°F)  
-40°C to +50°C (-40° to +122°F) (NEMA4X)
- \* Moisture: 0% to 90% Relative Humidity
- \* Classification: Rated for General Purpose, 19" Rack-Mounted NEMA4X (IP67) Enclosure (available separately)
- \* Warm-up Time: 20 minutes (30 minutes GC-IMS)
- \* Measurement Time: IMS-Adjustable in 1 second increments to max of 1 minute (max 2 minutes GC-IMS)
- \* Carrier Gas: No Carrier Gas Required
- \* Data Output (front panel):
  - \* Integrated 7" touchscreen graphic display
  - \* 2x USB interface (Keyboard/Mouse)
- \* Connectors (back panel):
  - \* Fault alarm
  - \* Trigger in
  - \* Alarm out available (DO. 24VDC)
  - \* 4-20mA (self or loop powered)
  - \* RS-232/485
  - \* Ethernet
  - \* OPC DA/ UA upon request
  - \* Separate span/Zero/Sample gas connectors available separately
- \* Power: \*110-220 VAC 50-60Hz

