SEMICONDUCTOR, LCD/OLED DISPLAY MANUFACTURING & INDUSTRIAL GASES

Accurate monitoring of moisture and impurity contamination

Moisture contamination in semiconductor manufacturing is a major cause of defects and process variations, significantly impacting yield.

This makes moisture analysis essential, both for cleanroom areas where semiconductor wafers are produced and stored, and for the ultra-high purity gases used in manufacturing processes.

A variety of methods are available for measuring moisture from high levels to trace amounts. Many manufacturing applications rely on trace measurements of water vapor to ensure process quality is maintained.

5910

MEASURES: H_2O

RANGE
0 to 150 ppbv
Trend indication to 1000 ppbv

ACCURACY
±100 ppbv or ±10% of the reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: QCM

5920

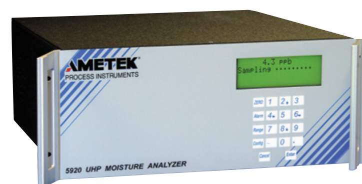
MEASURES: H_2O

RANGE
0 to 150 ppbv
Trend indication to 1000 ppbv

ACCURACY
±1 ppbv or ±10% of the reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality



TECHNOLOGY: QCM

ta7000

MEASURES: H_2, CO, CO_2, CH_4, NMHC

RANGE
0 to 199.9 ppbv

ACCURACY
±1 x LDL or ±10% of reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: GC-RGD/FID

ta5000

MEASURES: CO, CO_2, H_2, CH_4, NMHC

RANGE
RGD: 0-3 ppmv
FID: 0-5 ppmv

ACCURACY
±1 x LDL or ±10% of reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: GC-RGD/FID

5800

MEASURES: H_2O

RANGE
0.02 to 100 ppmv
Indicates trend to 1000 ppmv

ACCURACY
±20 ppbv or ±5% of the reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: QCM

5830

MEASURES: H_2O

RANGE
0 to 100 ppmv
Indicates trend to 1000 ppmv

ACCURACY
±20 ppbv or ±10% of the reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: QCM

3050-AMS

MEASURES: H_2O

RANGE
0.035 to 100 ppmv
Indicates trend to 1000 ppmv

ACCURACY
±0.035 ppmv or ±10%, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: QCM

3050-AM

MEASURES: H_2O

RANGE
0.1 to 100 ppmv
Indicates trend to 1000 ppmv

ACCURACY
±0.1 ppmv or ±10%, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: QCM

To find out more or request a quote, visit our website today

3050-RM

MEASURES: H_2O

RANGE
0.1 to 2,500 ppmv
Readout capability in ppmw, lb/mmscf, mg/Nm³, and dew point temperature in °C or °F

ACCURACY
±0.1 ppmv or ±10%, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: QCM

2850

MEASURES: H_2O

RANGE
0.1 to 1000 ppmv

ACCURACY
±0.05 ppmv or ±5% of the reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: QCM

ta3000

MEASURES: CO, CO_2, H_2, CH_4, NMHC

RANGE
RGD: 0-3 ppmv
FID: 0-5 ppmv

ACCURACY
±10 ppbv or ±10% of reading, whichever is greater

PROCESS
Gas Purification

APPLICATION
Quality

TECHNOLOGY: GC-RGD/FID

TM2000

MEASURES: O_2

RANGE
0.1 ppmv O_2 to 100% O_2

ACCURACY
± 1% of reading or 0.02% absolute, whichever is greater

PROCESS
Air Separation, Inert Gas Purity (N_2, Ar, CO_2 , He, etc.), Blanket/Purge Gases, Glove Box Applications, Cryogenic Gas Generation, Atmospheric Oven/Furnace Control, UV Curing Ovens

APPLICATION
Trace Oxygen Monitoring for Quality Control of Inert Gas and High Purity Streams

TECHNOLOGY: ZrO_2

LC-D

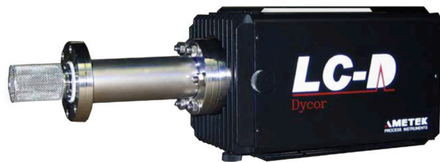
MEASURES: All components m/z 1-300

RANGE
Total Pressure ≤10^{-5} torr

ACCURACY
Source sensitivity (Faraday cup): 2 x 10-4 amps per Torr at detector (measured with nitrogen at mass 28) with peak width = 0.5 at 10% height and 1 x 10-3 amps emission current

PROCESS
Chemical Vapor Deposition, Physical Vapor Deposition, Rapid Thermal Processing

APPLICATION
Quality



TECHNOLOGY: Mass Spectrometer

CG1000

MEASURES: O_2

RANGE
0.1 ppmv O_2 to 100% O_2

ACCURACY
±2% of reading or 0.05% absolute, whichever is greater

PROCESS
Rapid Thermal Processing (RTP), Air Separation, Inert Gas Purity (N_2, Ar, CO_2 , He, etc.), Blanket/Purge Gases, Glove Box Applications, Cryogenic Gas Generation, Atmospheric Oven/Furnace Control, UV Curing Ovens

APPLICATION
Trace Oxygen Monitoring for Quality Control of Inert Gas and High Purity Streams

TECHNOLOGY: ZrO_2

Dymaxion

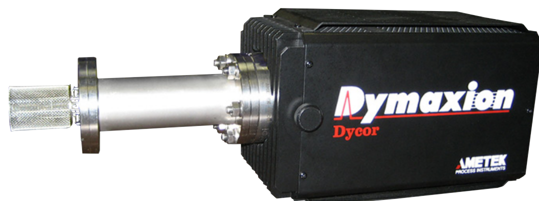
MEASURES: All components m/z 1-300

RANGE
1-100, 1-200, 1-300 AMU

ACCURACY
Source sensitivity (Faraday cup): 2 x 10-4 amps per Torr at detector (measured with nitrogen at mass 28) with peak width = 0.5 at 10% height and 1 x 10-3 amps emission current

PROCESS
Chemical Vapor Deposition, Physical Vapor Deposition, Rapid Thermal Processing

APPLICATION
Quality



TECHNOLOGY: Mass Spectrometer

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