Process Insights™
Premium Insights Into Process

PRODUCT DATASHEET

PCM 1000™

Superior Reliability

Fast And Precise

Maximize Profits

- Measures physical, chemical and compositional properties of liquids, solids and gases

- On-line, in-situ, and at-line monitoring of batch and continuous processes

The **PCM™** 1000 Series FTIR/FT-NIR process analyzers measure physical, chemical and compositional properties of liquids, solids and gases.

- On-line, in-situ, and at-line monitoring of batch and continuous processes
- Displays up to 15 properties at once and measures up to 30 properties per stream
- Optical multiplexing capabilities provide analysis of up to 16 process streams using fiber optic or extractive stream switching
- Utilizes process-proven Diamond 20 Transept™ optical head:
  - Vibration tolerant optical system allows placement of analyzer in hostile industrial environments
  - Absolute optical alignment of components provides for repeatable spectra, allowing calibrations to remain stable indefinitely
- SpectraRTS™ software engineered exclusively for on-line monitoring, allowing use by engineers, maintenance personnel, and chemists
- Communication options including OPC®, Modbus® as well as analog protocols.
- The PCM monitors versatility allows for a wide range of applications including:
  - Chemicals
  - Petrochemicals
  - Polymers
  - General manufacturing
  - Pharmaceuticals
  - Gas analysis

Full chemometric modeling capability including SpectraQuant™, MATLAB® Unscrambler®, & Pirouette®.

The **Diamond 20** analyzer supports on-line systems with process development utilizing the same optical bench as the PCM for instrument to instrument calibration data transfer **SpectraStudio™** a Windows® based data collection and analysis program is designed to provide a high degree of flexibility to users operating in a laboratory environment.

Sampling Flexibility		
Liquids	**Mid IR**	**NearIR**
Transmission Probes:	✔	✔
ATR Probes:	✔	–
Cross-line Probes:	✔	✔
Slip-stream Probes:	✔	✔
Gases		
Gas Cell:	✔	–
Solids		
Diffuse Reflectance:	–	✔

PCM Sampling Flexibility

FT-NIR Cross-Line Probe

FT-NIR Immersion Probe

Mid-IR ATR Diamond Probe

Specifications:

Spectrometer	
Interferometer:	Transept IV™ hermetically sealed module with refractively scanned design
Optical Range:	000–450 cm^{-1} Mid-IR; 12000–1200 cm^{-1} NIR
Detector Options:	DTGS Pyroelectric; InAs; InGaAs; MCT

Analysis Time
30–60 sec. for multiple property predictions

Ambient Environment Conditions
0–38°C standard ambient temperature -20–50°C with optional heating and A/C system

Area Classification
ATEX/CENELEC Zone 1 & 2
NFPA Class 1, Division 1 & 2

Process Control Interface
Modbus, OPC and analog protocols
Fiber optic Ethernet and serial communications options

Utility Requirements –Analyzer and Cell Enclosure
Main power 115/230 VAC 50/60Hz single phase 1500 watts

Instrument – Optical Head and Sample Box	
Dimensions:	220cm H x 97cm W x 46cm D (87"H x 38"W x 18"D)
Weight:	270kg (600 lbs)

SpectraRTS Software Drives Your Process

Automate many aspects of your process
- Control I/O to switch valves and monitor a variety of sample system conditions
- Collect spectra and apply quantitative analysis routines
- Transmit product properties, instrument QC data, and alarms via versatile communications protocols

Implement calibration tools and programming flexibility
- Apply a wide variety of quantitative analysis routines including: SpectraQuant, MATLAB® and Pirouette®
- Utilizes Visual Basic for Applications (VBA) compatible scripting language to achieve total programming flexibility
- Operate the system remotely by using pcANYWHERE™ or Timbuktu® software
- Multi-level password access

Validate and diagnose your system
- Implement on-line validation methods, such as ASTM D6122
- Automatically monitor and trend the system's "health" with Remote R$_x$ software for preventative maintenance scheduling
- Access the on-line help system for quick reference
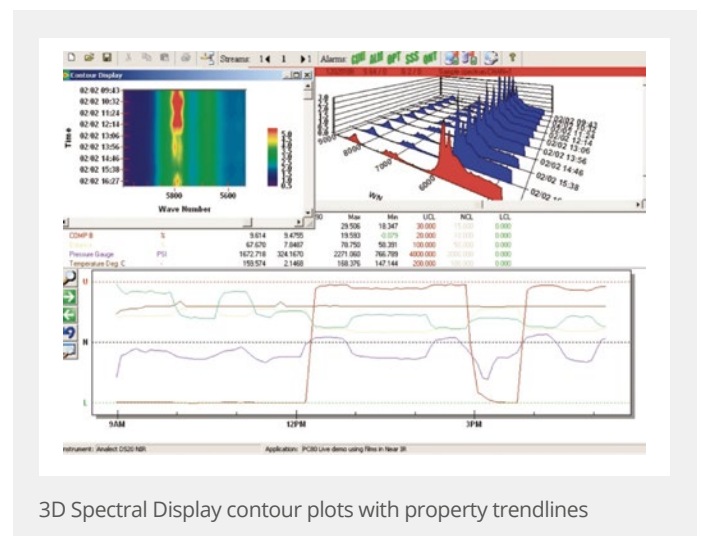
3D Spectral Display contour plots with property trendlines

Process Insights™
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GAIN REAL-TIME INSIGHT INTO YOUR PROCESS

Process Insights manufactures and delivers premium sensors, monitors, detectors, analyzers, instrumentation, and software that are mission-critical to keep your operations, personnel, and the environment safe – every day across the globe.

Get the most reliable, precision analytical technologies available on the market today. We will work to match your needs and budget, and provide the optimal, and most stable process analysis solution for your application.

CENTERS OF EXCELLENCE | PROVIDING PROVEN SOLUTIONS

Process Insights is committed to solving our customers' most complex analytical, process, and measurement challenges everyday.

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For a complete range of products, applications, systems, and service options, please contact us at: **info@process-insights.com**

For a complete list of sales & manufacturing sites, please visit: **https://www.process-insights.com/about-us/locations/**

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REVOLUTIONIZING MEASUREMENT

EVERYWHERE

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