

tec5

MEMBER OF THE NYNOMIC GROUP

PROGAZE_{lean}



**Versatile Process Spectrometers
for UV, VIS, NIR, and Raman Applications**

PROGAZE^{lean}

Optimized for Process Analytics

The PROGAZE^{lean} series is an exceptionally versatile spectrometer series, as all conceivable components and accessories are fully integrated into one device. This provides complex systems in an industrial-grade housing.

Outstanding optical properties and sophisticated data processing methods situate the lean series within the high-end range of process spectrometers.

Superior performance and a high degree of standardization between devices ensure robust calibrations and transferability of methods or models from system to system.

Quick and reliable measurement data is generated and available in real-time. Consequently, applications such as qualitative and quantitative analysis or the determination of film thickness, color evaluation, and many more can easily be addressed.



Highly Flexible

The PROGAZE^{lean} series is available in different versions for UV, VIS, NIR, or Raman applications.

A range of variants with options for e.g. integrated computing power, interfaces, or power supplies ensure to meet individual requirements.

For multi-channel operation, the lean systems feature up to 4 channels for illumination and detection, respectively.

Probes and Measurement Heads

The PROGAZE product family offers a variety of probes for precise and reliable measurements in industrial applications and harsh environments:

- Immersion probes
- Contact and non-contact measurement heads
- Flow cells, Transflection and ATR probes
- Raman probes

In addition application-specific adaptations and fully customized solutions are available on request. For easy integration, industry-specific adapters and flanges are provided.



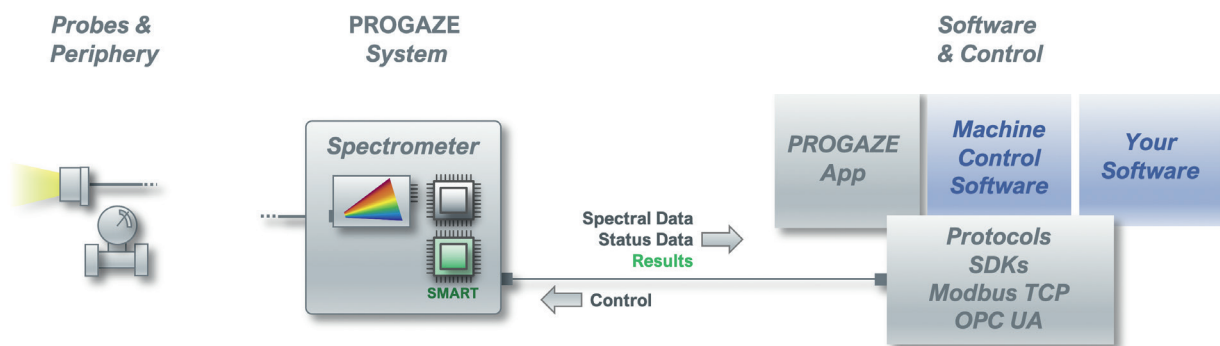
Configurable to Your Needs

UV, VIS, NIR, and Raman spectrometer with a variety of wavelength ranges and dedicated illumination sources are available for various applications and requirements.

	PROGAZE <i>lean</i>	Multichannel	Multiplexing	Smart	Software	On-board MVA	PCS ready
UV Spectroscopy	✓	✓		✓	✓	✓	✓
VIS Spectroscopy	✓	✓		✓	✓	✓	✓
NIR Spectroscopy	✓		✓	✓	✓	✓	✓
Raman Spectroscopy	✓		✓	✓	✓	✓	✓

Smart Inside

In addition to standard system operation via an external software application, the SMART versions with on-board microprocessors permit autonomous stand-alone operation.



Data Processing and Evaluation

All PROGAZE_{lean} systems comprise:

- Full control of periphery
- On-board data pretreatment
- Condition monitoring functions

For system operation, an appropriate application software (PROGAZE_{soft}) is provided. Alternatively, standardized protocols and SDKs enable a fast and easy integration into your software application.

PROGAZE_{lean} are equipped with an integrated microcontroller for Linux (SMART). This enables full real-time data evaluation on the device itself, including:

- Commercially available prediction engines (chemometrics, color evaluation, etc.)
- Script languages (Python, R, etc.)

The required model and workflow procedures can be stored in an access-protected memory.

Future-proof Interfaces

To transfer the acquired data to any automation layer or control software, the PROGAZE system offers various communication interfaces and protocols, e. g.:

- Classic (4 ... 20 mA, Digital I/O etc.)
- Fieldbus (Modbus, Profibus etc.)
- Advanced Standards (OPC-UA)

These future-proof interfaces also give convenient access to modular automation, such as MTP, or client/ broker based concepts.

All probes and additional external periphery (e. g., temperature sensors or pressure sensors) can be controlled and monitored directly via the PROGAZE interface.

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