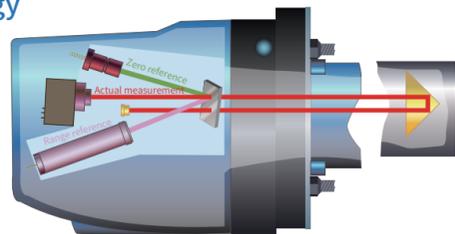


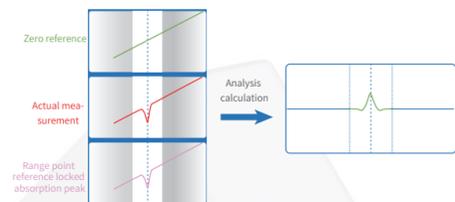
Unparalleled Calibration Free Technology

- Built-in constant temperature reference chamber:**
- Locking the absorption peak to ensure long-term reliability;
 - Zero-point reference gas chamber reduces light source or circuit noise, improving lower limit measurement and reliable stability.



System optical path description:

- ① → Laser transmitter;
- ② ← The emitted light passes through the measurement environment to the probe end, reflected by the mirror for analysis;
- ③ ← The transmitted light is reflected back to the zero-reference gas chamber for analysis after passing through the mirror;
- ④ ← The transmitted light is reflected back to the span point reference gas chamber for analysis after passing through the mirror.

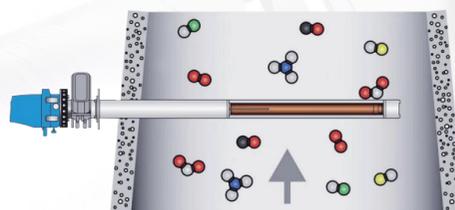


Why In-situ Measurement is Your Top Choice



Adopting a single-ended installation design, it utilizes an in-situ measurement with a plug-in probe. The probe, being part of the instrument, extends into the flue gas. The emitted laser beam is reflected back to the detector by a reflector, with integrated design completing light calibration inside the factory, eliminating the need for on-site optical path adjustment.

- Fast process control saves raw materials and increases production;
- Quick response eliminates hazardous situations;
- Provides real, representative concentrations of the measured gas;
- Samples require no pretreatment, eliminating the most common factors of measurement error;
- Combining the laser source and detector into one;
- No need for focusing.



We take pride in assisting customers to achieve success and are proud to work together with customers to create a better future

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CI-PC66 In-situ Laser Gas Analyzer

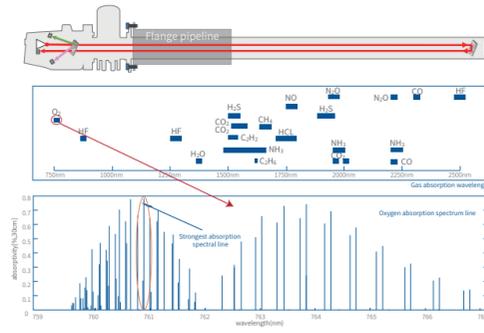
Search for a forward-looking TDL technology that requires no focusing, no sampling, automatic calibration, and direct measurement to meet the requirements of process measurement.

We need such a gas analyzer



TDL Laser Technology

TDL diode laser spectroscopy is the main technology used in high-end gas analyzers, with the advantage of excellent measurement selectivity. When measuring gases, it activates the characteristic wavelength of gas atoms in the near-infrared region. The laser diode modulates the light beam at the absorption peak, with the high-energy light beam being absorbed by the gas atoms it passes through, thus attenuating itself. The laser beam collides with gas atoms in the measuring probe, attenuating with gas concentration.



Industrial Process Gas Analyzer

Online gas analyzer for in-situ installation; Online gas analyzer designed for in-situ installation The PC66 highly reliable gas analyzer is designed to provide fast response measurements for various gases in industrial processes; The tunable diode laser (TDL) analyzer requires no sampling or pre-treatment, helping to reduce downtime and improve process safety at lower ownership costs. TDL gas analyzers are available for O₂, CO, HCl, H₂O, NH₃, and HF.

Product Features and Advantages

No Cross-interference

By using laser wavelengths that match the measured gas, there is no interference from other gases, making it easy to detect specific components in mixed gases.

Completed in less than 2 seconds

Providing measurement values within 2 seconds enables users to quickly take action and adjust processes.

Advantages in high dust conditions

Suitable for high dust conditions with concentrations up to 30g/m³, overcoming the limitations faced by conventional TLD in-situ cross-path systems.

No need for focusing

With a unique reflective optical path design, the laser source and detector are located in the same device, allowing the laser beam to be fully reflected onto the detector.

Wide range of measurement parameters

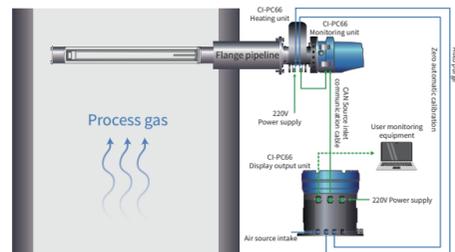
TDL laser technology can measure oxygen, carbon monoxide, ammonia, moisture, hydrogen chloride, hydrogen fluoride, etc..

Simple construction

No moving parts, no consumable components → maintenance-free; Only laser irradiation during detection → suitable for high temperature, strong corrosion, and high dust environments.

Advanced EPC Purge Technology

- Optimizes purge flow rate for optimal protection;
- Digital closed-loop control ensures highly precise, repeatable, and reliable control, preventing contamination of the optical system;
- Stepless pressure adjustment provides stable purge air pressure for the optical system;
- Automatic backflush filter ensures smooth sampling gas flow and reduces maintenance of the gas path.



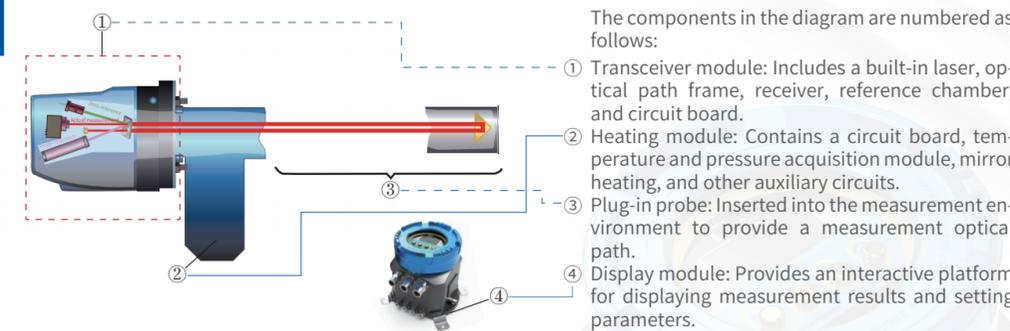
Technical Specifications

Linearity error	<±1% FS
Repeatability	≤2%
Zero drift	≤±2%FS/7d
Range drift	≤±2%FS/7d
Response time	0.2~120s(adjustable)
Output signal	Two sets of 4-20mA
Output 1	Concentration
Output 2	Light transmittance
Alarm Output	
Quantity	2 sets
Relaycontact capacity	DC 24V,0.2A
Communication	RS485(standard)/RS232(optional)
Operating Environment	
Instrument TEMP.	-20~+55°C
Probe TEMP.	-20~+400°C
Power supply	AC 100~240V,50/60Hz
Dust concentration	≤30g/m ³
Power Consumption	
Measurement unit	<60VA
Probe unit	<100VA
Display unit	<20VA

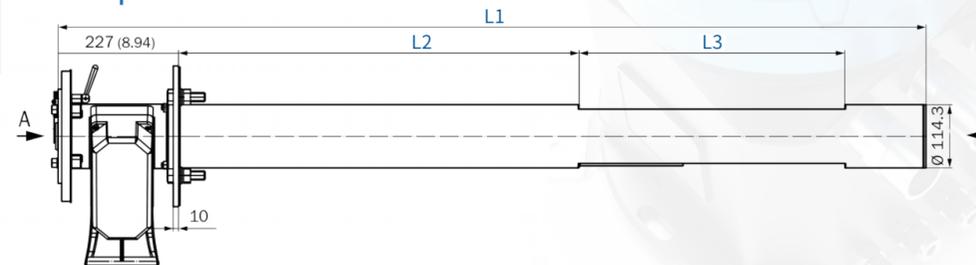
Measured Data

Gas	Measuring range	Detection limit	Company	Selection code
O ₂	0-3%	0.1%	Vol%	A
	0-25%Vol%			
CO	0-5000ppm	1ppm	ppm	C
HF	0-2ppm	0.1ppm	ppm, mg/m ³	J
	0-2000ppm			
H ₂ O	0..5Vol%/	0.01%	Vol%	K
	0-40Vol%			
HCL	0-10ppm	0.3ppm	ppm, mg/m ³	M
	0-3000ppm			
NH ₃	0-10ppm	0.3ppm	Vol%,ppm, mg/m ³	N
	0-5000ppm			
NH ₃ /H ₂ O	0-10ppm /	0.3ppm	Vol%, ppm, mg/m ³	NK
	0-5000ppm /			
	0..5Vol%/	0.01%		
	0-40Vol%			

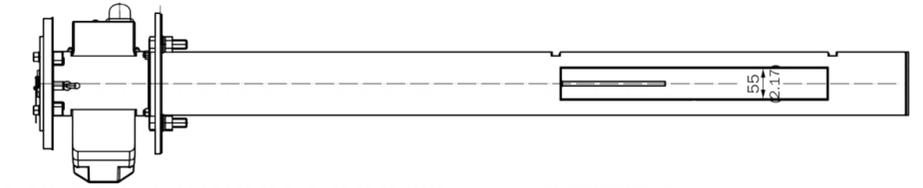
Instrument Composition



Probe Specifications



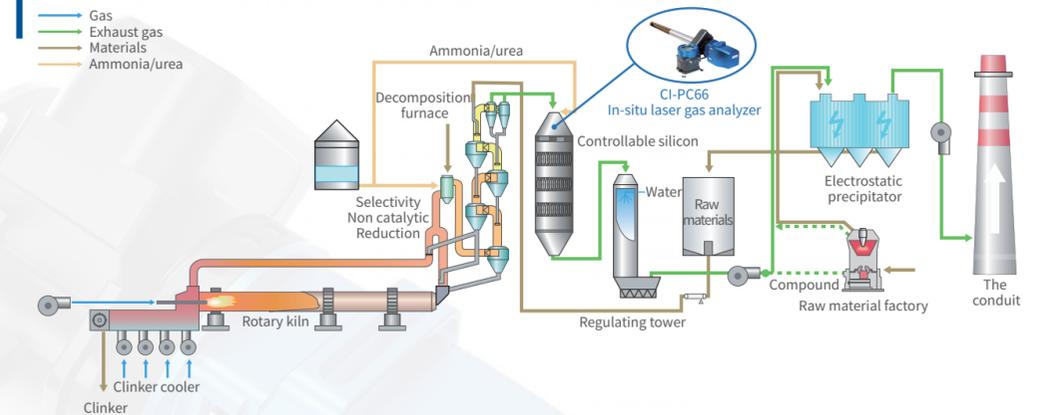
Probe Specifications



PC66 Measurement probe	L3							Weight
	250	500	750	1000	1250	1500		
Probe length	L1	L2						About 21
900	1644	1005	755	505	255	...	About 24	
1500	2128	1489	1239	989	739	489	239	About 30

All length dimensions are in mm, all weight units are in kg, different lengths of probes can be customized according to requirements. Special dimensions are also available: L3 is the filter size, the optical path is 23mm longer than the filter, but the optical interface is longer.

Flowchart



Application

- Measuring oxygen concentration in combustion heaters to enhance safety and lifecycle management;
- Measuring CO concentration during burning process;
- Reducing emissions (in-situ type) or optimizing processes.

Main Target Markets

Petroleum, natural gas, petrochemical, chemical, power, steel, ceramics, and other industries.