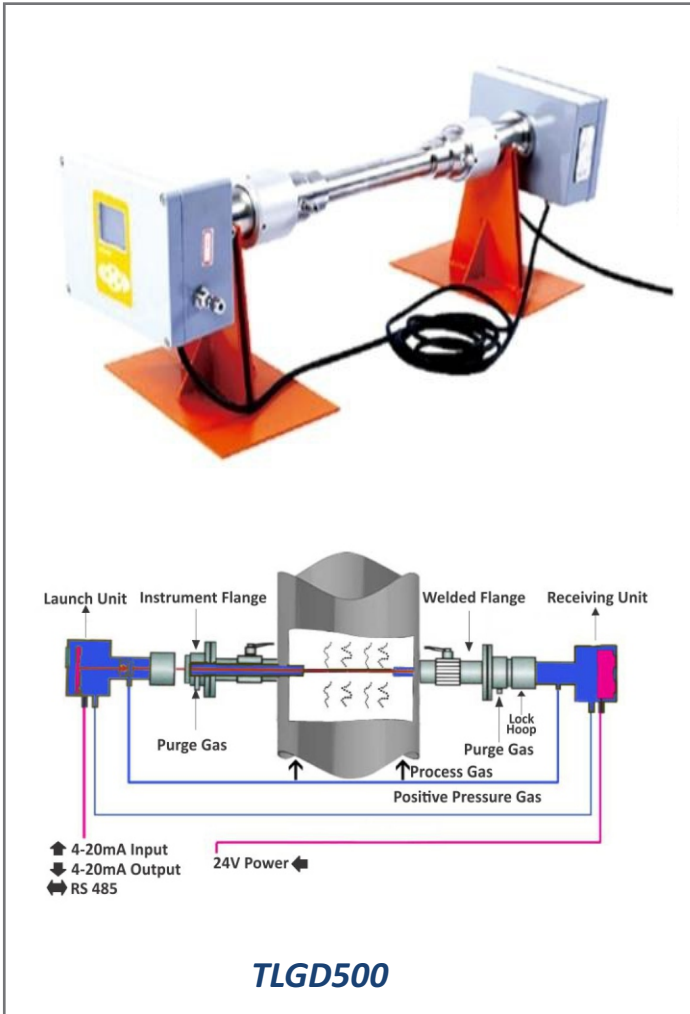


## TLGD 500 Series Laser Gas Analyzer

MODULATE LASER (TUNABLE) WAVELENGTH BY USING THE CURRENT AND TEMPERATURE TO SCAN THE SPECIFIC ABSORPTION PEAK OF THE MEASURED GASES (NO BACKGROUND GAS ABSORPTION) AND THEN GET THE SECOND HARMONIC OF THE GAS ABSORPTION. BY USING THE SECOND HARMONIC INFORMATION AND BROADENING OF THE GAS, THE CONCENTRATION OF THE GAS CAN BE CALCULATED.



## TLGD 500

### Laser Gas Analyzer

The TLGD500 Series Laser Gas Analyzer Is Developed Aiming At Industrial On-line Analyzing and Online Environmental Monitoring. Based on the Semiconductor Laser Absorption Spectroscopy (DLAS) Technology, It Is Developed with Features of a integrated design and high level of Integration.

With various type of the TLGD500 series laser gas analyzer, including in-situ probing type, by-pass type, multi-channel and disc-mounted type, etc., gases like O<sub>2</sub>, CO, NH<sub>3</sub>, CO<sub>2</sub>, CH<sub>4</sub>, H<sub>2</sub>O, HC, HF etc., can all be analyzed. The concentration analyzing of target gases includes the macro-analysis and micro-analysis.

### Technical Characteristics

- The TDLAS technology is adopted for in-situ online gas analyzing
- Double-proof probe design negates positive pressure purge, with no addition data processing unit, a simple compact structure and high reliability
- Using high-power lasers, no fiber coupling, suitable for harsh working conditions (such as excessive dust)
- Using the patented technology of spot light path adjustment, easy for on-site installation

## Technical Specifications

Technical Data	linearity error	$\leq \pm 1\%FS$
	Span drift	$\leq \pm 1\%FS / 6 \text{ months}$
	Repeatability	$\leq 1\%$
	Calibration period	$\leq 1 \text{ time} / 6 \text{ month}$
	Explosion-proof Grade	Ex d IIC T6
	Protection levels	IP 66
Response Time	Warming-up time	$\leq 15 \text{ min}$
	Response time (T90)	$\leq 1s$
Interface Signals	Analog outputs	2-wire 4-20mA signal input (Isolated, max. load 750 $\Omega$ )
	Relay output	3-wire relay(24V,1A)
	Digital Communication	RS485/RS232/GPRS
	Analog inputs	2-way 4-20mA input (temperature-pressure compensation)
Laser Safety Standard	GB 7247.1-2001(idt IEC 60825-1:1993)	
Operating Conditions	Storage Temperature	$-30^{\circ}C \sim + 60^{\circ}C$
	Ambient temperature	$-40^{\circ}C \sim + 80^{\circ}C$
	EMC	IEC 6100-4-2, IEC 6100-4-3, IEC 6100-4-4, IEC 6100-4-5, IEC 6100-4-11
	Gas jet	0.3~ 0.8MPa Industrial nitrogen inlet and purification instrument gases etc.
	Consumption	$< 20W$
	Power	24V DC(18-36V DC), 220V AC

## Gas Detec on Limit

Detection Gas Type	Detection Limit	Detection Range
O <sub>2</sub>	0.01%Vol.	(0-1)%Vol.,(0-100)%Vol.
CO <sub>2</sub>	10 PPM	(0-1000)PPM,(0-100)%Vol.
H <sub>2</sub> S	20 PPM	(0-2000)PPM,(0-100)%Vol.
HCl	0.1 PPM	(0-50)PPM,(0-100)%Vol.
NH <sub>3</sub>	0.1 PPM	(0-10)PPM,(0-100)%Vol.
C <sub>2</sub> H <sub>2</sub>	0.1 PPM	(0-10)PPM,(0-100)%Vol.
CO	10 PPM	(0-1000)PPM,(0-100)%Vol.
H <sub>2</sub> O	0.3 PPM	(0-50)PPM,(0-100)%Vol.
HF	0.02 PPM	(0-5)PPM,(0-10000)PPM
HCN	0.3 PPM	(0-30)PPM,(0-1)%Vol.
CH <sub>4</sub>	0.4 PPM	(0-40)PPM,(0-100)%Vol.
C <sub>2</sub> H <sub>4</sub>	0.6 PPM	(0-60)PPM,(0-100)%Vol.

Remark1: The test conditions for 1m optical path, the gas pressure 1bar, gas temperature 300K

Remark2: By increasing the optical path, proportionally lower detection limit

Note : Images shown are indicative only. Specifications and Features will vary with application. There may be changes overtime due to continuous development process.  
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