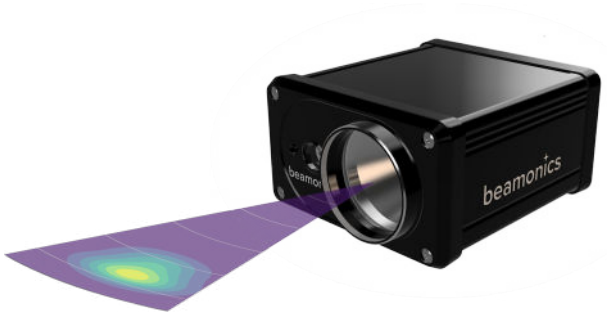
TDLAS — BM-V-2 BeamSight

beamonics

Precision Photonics

Features

- Remote stand-off analysis of gases
- Quantification of gases in real time
- Portable or stationary configurations
- Detection range: 30 m or 100 m with reflector
- Integrated battery powered or externally powered
- Weight: 0.7 kg (fixed) - 1.0 kg (battery powered)



Description

The BM-V-2 BeamSight is a compact and innovative tool for remote analysis of gases. Unlike traditional analyzers, the BM-V-2 BeamSight provides true stand-off detection schemes, capable of analyzing gas concentrations from a large distance.

The true remote-detection schemes mean that commissioning is alignment free and in a back-reflection setup, with no need for long cables or complex mechanical constructions. This offers innovative means to monitor a large area with a single system or to provide measurement results from a safe distance from potentially hazardous gases.

The analyzer is based on the Beamonics proprietary Remote TDLAS platform and is inherently both calibration-free and of low-maintenance. Additionally, the analyzer does not suffer from sensor-poisoning effects and can continuously measure the entire range from very low background level concentrations up to atmospheric saturation levels.

The BM-V-2 BeamSight comes in two configurations: one for fixed installations, and one for battery-powered portable applications. These two configurations make the BM-V-2 BeamSight ideal for both portable applications, including rover or drone mounted applications, and fixed installations.

The BM-V-2 BeamSight is delivered in an integration-ready state with several interfaces, including USB, UART, and I^2C.

Target gases include CH_4, CO_2, CO, HF, H_2S and NH_3.

Examples of gases

Gas	Detection precision (ppm•m)[a)]
HF	0.05
CO	15
CO_2	40
CH_4	15
H_2S	25
NH_3	15

[a)] Under standard test conditions: Range = 10 m, t = 0.5 s, P = 1 atm, T = 300 K, largest of 1% relative and specified precision

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Analyzer characteristics

Parameter	Symbol	Min	Typical	Max
Detection distance	R	0.2 m	30 m	100 m*
External supply voltage	V_{in}	9 VDC	12 VDC	24 VDC
Power consumption**	P	4.0 W	4.6 W	5.0 W
Weight (fixed installation)	m_f		0.7 kg	
Size (fixed installation) (l × w × h)	S_f		147 mm × 111 mm × 84 mm	
Weight (battery powered)	m_b		1.0 kg	
Size (battery powered) (l × w × h)	S_b		147 mm × 111 mm × 184 mm	
Operating battery life	t_b		5 h	
Operating temperature	T_{op}	-10 °C		50 °C

**With reflecting surface | **Depending on if display is equipped, 100 mA laser diode under ambient conditions.*

Interfaces

Interface	Description
USB	Mini USB
Expansion connector	I²C, UART, GPIO
Power	DC-plug or board-to-board connector
Display	Resistive touch

Other

Parameter	Description
Humidity (non-condensing)	40% @ 50 °C / 80% @ 30 °C
IP classification	IP44
Analysis laser (IR)	Laser Class I
Aim laser (visible)	Laser Class IIIa
CE-marked EU directives	2014/35/EU, 2012/19/EU, 2011/65/EU, EN61000-6-2:2005, EN61000-6-2:2019, EN61000-6-4:2007, EN61000-6-4:2019 (preliminary)