OL0119-G3X BLE CO₂ Traffic Light & Gas Meter Item Number: 220321077XXXXXX

▲ Safety and warning instructions

This electronic module must not be used if the safety of persons in the associated application depends on the correct functioning of the module.

💯 Technical data		
Power supply	 1 x Lithium-ion polymer rechargeable battery, 1.3Ah, 3.7V, permanently installed. External DC power supply 5V/1A at built-in USB Micro-B socket for charging or continuous operation. Charging time for a fully discharged battery is approx. 8 hours 	
Battery runtime	1 - 2 months, depending on usage type and device option	
Measurement method	•NDIR (Non-Dispersive-InfraRed) CO ₂ Sensor •MOX Gas Sensor ¹ •MEMS relative humidity and temperature ^{1.2}	
Measurement channels and range	•CO ₂ : 0ppm 5000ppm •IAQ ¹ : 0 500 •Rel. humidity ^{1.2} : 0% 100% •Temperature ^{1.2} : -40°C 85°C	
Measuring accuracy at 25°C ambient temperature	 •CO₂ : ± (50ppm +3% of reading) in the range 400ppm - 2000ppm ± (50ppm +5% of reading) Out of range The defined accuracy is based on data moving average ≥ 5 •IAQ¹ : ± 15%¹ Inter-Instrument-Agreement •Rel. humidity^{1.2} : ± 3% •Temperature^{1.2} : ± 0.5°C 	
NDIR sensor lifetime	>15 years with proper use of automatic self-adjustment	
NDIR calibration	 Factory adjusted and linearized Continuously temperature compensated Additional automatic cyclic self-adjustment of the CO₂ sensor over the entire lifetime 	
MOX Gas Sensor lifetime ¹	> 10 years in typical indoor ambient air	
MOX Gas Sensor calibration ¹	Automatic continuous self-adjustment of the IAQ	
Limit values for CO ₂ Traffic Light function	Green < 1000ppm Yellow 1000 - 1999ppm Red ≥ 2000ppm (Default EWS (Epidemic Warning Standards) level 1)	Limit values can be adjusted according to factory default or with the help of an app via Bluetooth; During a respiratory diseases pandemic, it is recommended to set the EWS to level 3.
Display on the device (CO ₂ only)	Area backlit in red, green or yellow realizes the traffic light function. Pulsed in case of battery operation, otherwise continuous lighting. Acoustic alarm when the upper limit is exceeded (can be switched off).	
Display via app	Continuous display of all internal measured values with additional color display of the limit values	
Measuring frequency (factory settings)	•20s for measurements Display for green measuring range (also corresponds to "ready for operation") every 60s. Display for yellow measuring range every 30s. Display for red measuring range (+acoustic message) every 15s.	
USB port for charging the battery	Side access to Micro-B socket for power	
Housing, mounting	ABS plastic, acrylic table stand, wall mounting via integrated opening for screws	
Weight (without stainless base)	approx. 120g	
Dimension	99mm Ø, 31mm depth	
Protection class	IP30 (with wall mounting or use of acrylic table stand).	
range Ta	Storage -40°C - 70°C Operation 0°C - +50°C	
RoHS/ CE		
Compliant	Yes	

1.Device option OL0119-G32 2.Device option OL0119-G31 3.Device option OL0119-G30



English Manual







Available device options

Type designation	Features	
OL0119 - G32 / G31 / G30	CO ₂ Traffic Light with color display of the current CO ₂ concentration depending on threshold values. Acoustic alarm when the highest threshold is exceeded (can be switched off). Rechargeable battery operation (results in "flashing" display) for 1-2 months per full charge. Recharging via external USB DC power supply. Continuous operation via external USB DC power supply is possible, then the display changes from "flashing mode" to continuous light. Under battery operations: when the battery power is less than 10%, OL0119 will flash blue light. Please recharge the battery as soon as possible to ensure normal operations. The device works as a Bluetooth Beacon so that the internal CO ₂ measurement values and setting of internal parameters can be read on any number of smartphones via a freely available app.	
OL0119 - G32 / G31	High level version. In addition to the CO ₂ sensor, a MOX gas sensor for IAQ ¹ , VOC ¹ measurements is integrated as well as the measurement of rel. humidity ^{1.2} \sim temperature ^{1.2} and WBGT.	

Scope of delivery and accessories

The standard scope of delivery includes the device incl. the acrylic table stand. The app is freely available.

■USB cable and DC power supply can be ordered optionally.

Intended use

- ■The limit values for the assignment of the CO₂ concentration to the color display are preset ex works. If the highest limit value is exceeded, an acoustic warning signal can also be generated in addition to the color red.
- The device has a switch on the side with 3 positions. In the uppermost position the device is switched off, in the other two positions it is witched on, whereby in the lowest position the acoustic alarm is switched off.
- ■All parameters relevant for operation, such as limit values, measuring frequency and warning signals, are preset ex works, but can be individually adjusted via Bluetooth using an app if required.
- The power supply comes from a permanently integrated LiPo rechargeable battery. This can be recharged by an external DC power supply via the integrated USB socket. The device can also remain connected to the external DC power supply in continuous operation
- ■In pure battery operation, the display on the device always flashes only briefly. The color and flashing frequency are determined by the current CO₂ concentration according to the preset limit values. This operating mode results in maximum energy efficiency and thus long battery life. Nevertheless, the system reacts quickly when limit values are exceeded. If required, the external power supply can also remain continuously connected to the instrument. In this operating mode, the display then changes from flashing to continuous operation. Otherwise, all functions remain unchanged.
- The internal CO₂ sensor has a very high basic accuracy. To realize this, the measurements are continuously temperature compensated. In addition, the CO₂ Traffic Light also implements an algorithm for continuous self-adjustment over the entire service life so that the traffic light is maintenance-free. In order for the self-adjustment to work effectively, it must be ensured that the device is repeatedly exposed to unpolluted ambient air for several minutes over a period of 7 days. This usually happens automatically if the room in which the CO₂ Traffic Light is located is ventilated according to the general recommendations. The basis for the self-adjustment is the value of 400ppm CO₂ which can generally be assumed for the ambient air. The results of the continuous self-adjustment are also stored retentively in the device and are thus available even if the device is switched off in between via the switch on the side.

However, it should be noted that the self-adjustment is only ever renewed in a fixed 7- day rhythm. During these 7 days, the device must remain switched on continuously.

If the device is switched off during this period, the 7-day cycle starts again from the beginning with the next switch-on. In extreme cases, i.e., when the device is switched on and off regularly, a new selfadjustment would therefore never take place! If this cannot be avoided or it cannot be ensured that the device comes into contact with unpolluted ambient air in this 7-day cycle, then a manual adjustment can also be carried out at any time with the aid of the app.

◆ 羽澤光徑 <u>http://www.winglobal.com.tw/en/</u> **OPTO4L** <u>https://www.opto4l.com/</u>