

The SAHARA

Particulate Matter (PM_{2.5}) and CO₂ Sensor

The SARAHA is a sensor, that is measuring Particulate Matter and CO₂ in indoor spaces. The Sahara is produced by LightFi Ltd



SPECIFICATIONS

CO₂ DETECTION

Method	Dual channel, non-dispersive infrared (NDIR)
Units	ppm
Range	400 ppm to 5,000 ppm
Resolution	±1 ppm
Accuracy	± 50ppm +3% of measured value
Response time	< 30 seconds (diffusion)
Sampling rate	10 seconds

POWER

Input	USB 5V; and 24V AC or DC (optional)
Consumption	<1W



OPERATIONAL ENVIRONMENT

Temperature	-10 °C to +50 °C 14F to 122F
Humidity	0 % RH to 95 % RH non-condensing
Expected lifetime	5 years

PM DETECTION

Method	Laser Optical Dust
Outputs	PM _{2.5}
Units	µg/m ³
Range	1 µg/m ³ to 999 µg/m ³
Resolution	±1 µg/m ³
Accuracy	<100: ±10µg/m ³ ; 100 – 500: ±10% µg/m ³
Response time	1 second
Sampling rate	10 seconds

DATA OUTPUT

Type	Wireless, 2.4GHz radio
Range	Up to 100m (unobstructed)
Protocol	Bluetooth Low Energy
Integration	Received by LightFi's Air app for viewing life data

PHYSICAL

Dimensions	77 x 77 x 31 mm 3 x 3 x 1.2 in
Weight	90 g 3.2 oz
Ingress protection	IP30
Mounting	Double sided adhesive
Material, colour	ABS plastic, matt white
Interface	1 LED (red, amber, green) for CO ₂
Certification	CE, ROHS