

**Lightricity** empowers sustainable IoT sensors through light energy harvesting technology. We offer off-the-shelf, easy-to-integrate, PV-powered sensors. Test **4EvAirSense** with this customizable evaluation kit, explore use cases and validate the technology to have the confidence that it meets your expectations.

## Features

- Monitor air quality wirelessly and customize with different sensing options.
- Sustainable, ultra-low power IoT environmental sensor powered by photovoltaic panel.
- Compatible with both BLE and LoRa gateways.

## Product Description

Option 1: 4EvAirSense and Mobile App



Option 2: 4EvAirSense, BLE/LoRa Gateway & Dashboard



## Sustainable with Low Carbon Footprint

Most IoT sensors have a product life of 10 years, while batteries last for as little as a year, meaning multiple battery replacements and huge battery waste. The environmental impact is significant, from the carbon footprint of manufacture and maintenance of devices and batteries to the waste and toxic chemicals produced from battery disposal. 4EvAirSense introduces a more sustainable IoT sensing solution with carbon footprint reduced more than 50%.

## Easy-to-use and Maintenance-free

4EvAirSense is powered by our light energy harvesting technology that converts light sources to energy with over 30% efficiency, 6 times more efficient than other light harvesting technologies. PV has a long lifetime and provides near infinite energy source for the sensor, even in extremely low indoor light, so you never need to worry about changing batteries.

### Sensor Specifications

Wireless communication protocol    BLE5.0 or LoRa  
 Operational temperature                0 °C to +45 °C  
 Enclosure dimensions                    110 mm x 70 mm x 20 mm  
 Sensing options                            CO<sub>2</sub>, light; Optional: temperature, humidity, air pressure

	BLE	LoRa
Wireless range	Up to 100 m (LoS), 20 m typical	Up to 15 km (LoS), 10 km typical
Minimum operating conditions	100 lux with EXL1 (1 cm <sup>2</sup> ) PV	200 lux with EXL2 (2.5 cm <sup>2</sup> ) PV
Transmission rate (Self-adaptive based on ambient light level and battery level)	2 min - 10 min	10 min - 90 min

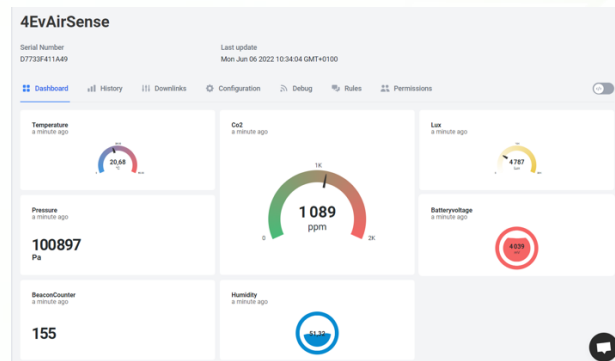
### Lightricity Mobile App

A Lightricity App is available for the collection and visualization of sensor data. The app can be run on any phone with Android OS and can communicate with any BLE IoT devices including those on the iBeacon protocol. The app allows you to see real-time data and visualize historical data.



### Lightricity Dashboard

The dashboard is a IoT platform that can be accessed on both computers and phones. It can connect to any IoT device so you can view and manage all your sensor data in one place. The platform helps you realise Industrial IoT use cases, such as real-time dashboards, and historical data analytics.



### Gateway Specifications

#### BLE Gateway

Power supply                                DC 5.0V, 1A, Micro-USB  
 Communication                            BLE & Wi-Fi / Ethernet

#### LoRa Gateway

Power supply                                Socket or USB-C (900mA)  
 Communication                            LoRaWAN & Wi-Fi