Severn WLD™ Data Sheet

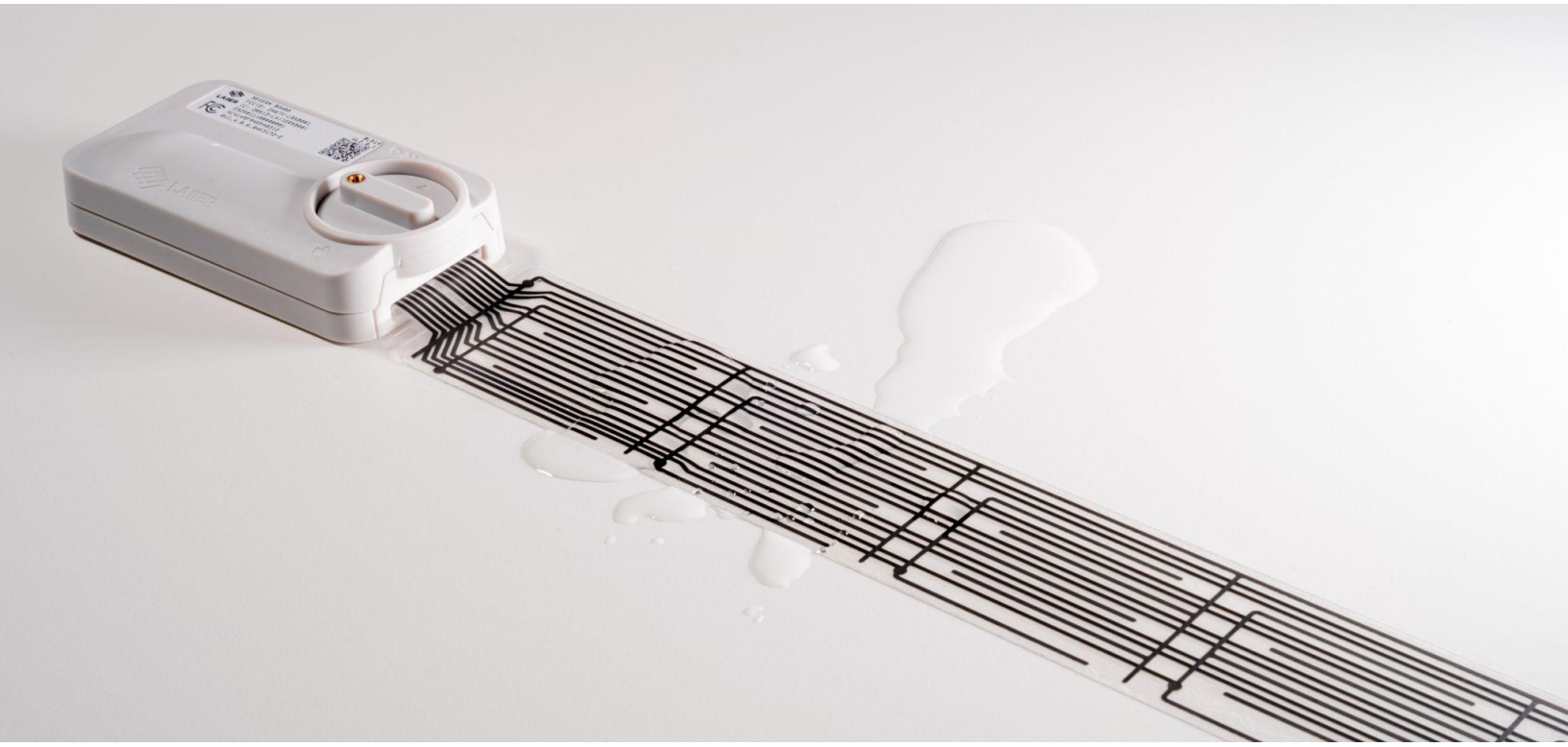
Overview

Severn WLD™ is LAIIER's water leak detection device. The Severn WLD hardware connects to a printed sensor that is split into 12 sections or electrodes. Upon powering up with a single AA Li-SOCl2 cell battery, the device connects to the LoRaWAN® network via OTAA. After running through a self-test, the device enters its run mode.

Within the run mode, the device checks for water on each electrode every minute. It sends a regular or "heartbeat" uplink message by default every 4 hours via LoRaWAN. In its default mode, when it detects the presence of water on 4 or more electrodes, the device sends an emergency uplink message via LoRaWAN.

The threshold, the number of electrode segments that have to be wet to trigger an emergency message, and the regular message time interval can be changed via a LoRaWAN downlink message. The device also reports on its battery status and when its sensor becomes disconnected.

The Severn WLD device also contains a temperature sensor, to report the ambient temperature; and an accelerometer, to report whether the device has been moved.



Features

- Unique form factor: self-adhesive, thin, conformable, and robust.
- Installed within minutes: installed within a minute by an untrained professional.
- High sensitivity: detects as little as two drops of water.
- Pinpoint location: locates where on the sensor the leak is occurring.
- False positive reduction: using the 4 electrodes, you can reduce the number of false positives by reclassifying what constitutes a leak.

Technical specifications

Hardware dimensions	25 × 59 × 110 mm / 0.98 × 2.32 × 4.33 inches
Hardware weight	90g / 3.17oz
Operating temperature range	-20°C to 60°C / 4°F to 140°F
Humidity range	90%RH (non-condensing)
Battery type	AA Li-SOCl2 cell*
Operating voltage	3.6V
Peak current drawn	105mA
Active battery lifetime	6 years**
Enclosure	IP65
Mounting	Self-adhesive
Sensor dimensions	883 × 50mm / 34.76 × 1.97 inches
Sensitivity	Maximum resolution of 0.1ml of water
Wireless communication protocol	LoRaWAN 1.0.3 OTAA
LoRaWAN frequency plan	EU868, US915
Read range	Up to 2km / 1.24 miles***
Radio compliance	Canada, EU, UK, USA

* Using incorrect batteries can damage the device! If you are unsure, please **contact us**.

** The device has a 6-year battery life when operating at room temperature, a good distance from a LoRaWAN gateway, and when sending a regular message every 4 hours.

*** The surroundings of the device can influence the read range.

Discover how LAIIER's approach to water leak detection defends against damage and downtime

[Book a call with our team](#) for a no-obligation conversation.

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