Wireless Light Sensor R311G Datasheet

Wireless Sensor Network Based on LoRa Technology

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Wireless Light Sensor

Introduction

R311G has the built-in light sensor. It can be used for detecting ambient light intensity and can send the ambient illumination value wirelessly. Its wireless communication method complies with the LoRa protocol standard.

Main Characteristic

- 2 sections 3.0V CR2450 button batteries in parallel

- Compatible with LoRaWAN protocol

- Adopt SX1276 wireless communication module

- Illumination Range: 1-3000LUX

- Illumination Accuracy: <15%

- Compatible with LoRaWAN™ Class A

- Frequency hopping spread spectrum

- Configuration parameters can be configured through third-party software platforms, data can be read and alarms can be set via SMS text and email (optional)

- Applicable to the third-party platforms: Actility/ThingPark, TTN, MyDevices/Cayenne
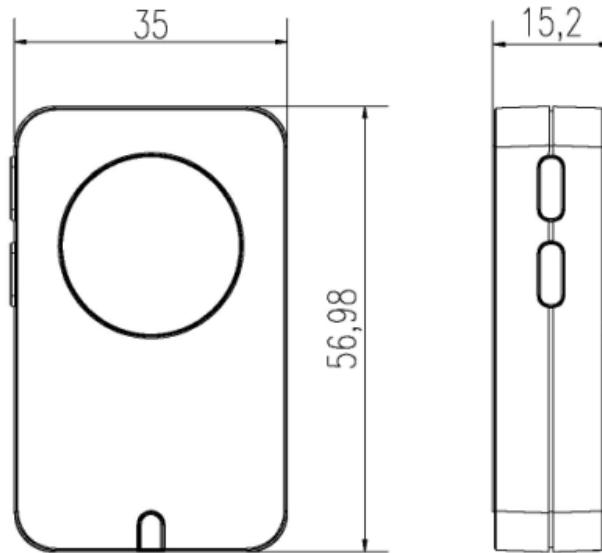
- Low power consumption and long battery life

Note*: Battery life is determined by the sensor reporting frequency and other variables, please refer to http://www.netvox.com.tw/electric/electric_calc.html

On this website, users can find battery life of various models in different configurations.

Application

- Smart agriculture

- Light intensity detecting area

![netvox logo]

Wireless Light Sensor

Dimension

Electric

Input Power	2 x 3.0V CR2450 button batteries in parallel (The capacity of each CR2450 battery is 620mah.)
Work Voltage Range	DC 2. 4 V to 3.0V
Standby Current	12uA/3.0V
Emission Current (max)	120mA / 3.0V
Receiving Current (max)	11mA/ 3.0V
Battery Measurement Accuracy	± 0.1V
Illumination Accuracy	<15%

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Frequency

Frequency Range	863MHz-928MHz 470MHz-510MHz
TX Power	US915　　20dbm AS923　　16dbm AU915　　20dbm CN470　　19.15dbm EU868　　16dbm KR920　　14dbm IN865　　20dbm
Receiving Sensitivity	-136dBm (LoRa, Spreading Factor=12, Bit Rate = 293bps) -121dBm (FSK, Frequency deviation=5kHz, Bit Rate=1.2kbps)
Antenna Type	External antenna
Communication Distance	10 km (visible linear obstacle-free transmission distance, actual transmission distance depending on the environment)
Data Transfer Rate	0.3kbps to 50k bps
Modulation Method	LoRa/FSK (Note: choose one of them)
Supportable LoRaWAN Frequency	EU863-870,US902-928,AU915-928,KR920-923,AS923-1, AS923-2,AS923-3,IN865-867,CN470-510 (Note: The frequency band is optional and needs to be configured before shipment)

Physical

Dimension	57 mm x 35 mm x 15.2 mm
Weight	32.3g
Environment Humidity	<90 %RH (No condensation)
Operating Temperature	-20°C to 55 °C
Storage Temperature	-40°C to 85 °C