ALTA
by MONNIT®

The Leading Enterprise Internet of Things Solution

Wireless Light Meter

General Description

The ALTA Wireless Light Meter measures the intensity of light from 0–82,000 lux (luminescence/unit area).

- Measures the amount of light present
- Can alert upon immediate detection of light or a change in light intensity
- Highly sensitive photodiode

Principle of Operation

The ALTA Wireless Light Meter uses a highly sensitive photo-diode to detect and measure the intensity of light around the device. The sensor is also capable of alerting upon detection of a change in lighting conditions. The sensor returns a value in "lux" to the iMonnit Online Sensor Monitoring and Notification System. The data is stored in the online system and can be reviewed and exported as a data sheet or graph. Notifications can be set up through the online system to alert the user when light is present or not with the ability to only notify within time of day parameters. Perfect for light sensitive applications like museum and art gallery light monitoring
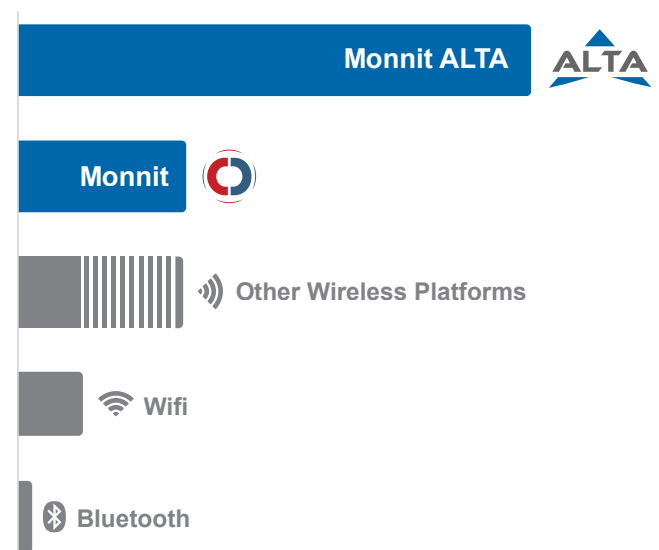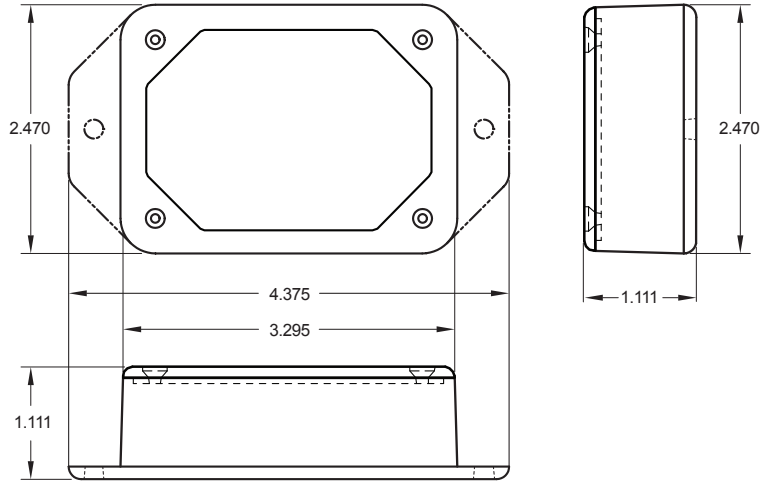
Example Applications

- Art gallery light metering
- Museum light metering
- Greenhouse and agricultural light monitoring
- Facilities lighting/energy management
- Business light monitoring
- Home light monitoring
- Many additional applications

Features of Monnit ALTA Sensors

- Wireless range of 1,200+ feet through 12+ walls *
- Frequency-Hopping Spread Spectrum (FHSS)
- Improved interference immunity
- Improved power management for longer battery life ** (12+ years on AA batteries)
- Encrypt-RF® Security (Diffie-Hellman Key Exchange + AES-128 CBC for sensor data messages)
- Onboard data memory stores up to 512 readings per sensor:
  - 10-minute heartbeats = 3.5 days
  - 2-hour heartbeats = 42 days
- Over-the-air updates (future proof)
- Free iMonnit basic online wireless sensor monitoring and notification system to configure sensors, view data and set alerts via SMS text and email

 * Actual range may vary depending on environment.

** Battery life is determined by sensor reporting frequency and other variables. Other power options are also available.

Wireless Range Comparison

Monnit ALTA

Monnit

Other Wireless Platforms

Wifi

Bluetooth

Dimensions: 2.470, 4.375, 3.295, 1.111, 2.470, 1.111

ALTA Commercial AA Wireless Light Meter | Technical Specifications

Supply voltage	2.0–3.8 VDC (3.0–3.8 VDC using power supply) *
Current consumption	0.2 µA (sleep mode), 0.7 µA (RTC sleep), 570 µA (MCU idle), 2.5 mA (MCU active), 5.5 mA (radio RX mode), 22.6 mA (radio TX mode)
Operating temperature range (board circuitry and batteries)	-18°C to 55°C (0°F to 130°F) using alkaline -40°C to 85°C (-40°F to 185°F) using lithium **
Optimal battery temperature range (AA)	+10°C to +50°C (+50°F to +122°F)
Max Light Level	0–82,000 Lux
Integrated memory	Up to 512 sensor messages
Wireless range	1,200+ ft non-line-of-sight
Security	Encrypt-RF® (256-bit key exchange and AES-128 CTR)
Weight	3.7 ounces
Certifications	900 MHz product; FCC ID: ZTL-G2SC1 and IC: 9794A-G2SC1. 868 and 433 MHz product tested and found to comply with: EN 300 220-2 V3.1.1 (2017-02), EN 300 220-2 V3.1.1 (2017-02) and EN 60950

 * Hardware cannot withstand negative voltage. Please take care when connecting a power device.
 ** At temperatures above 100°C, it is possible for the board circuitry to lose programmed memory.
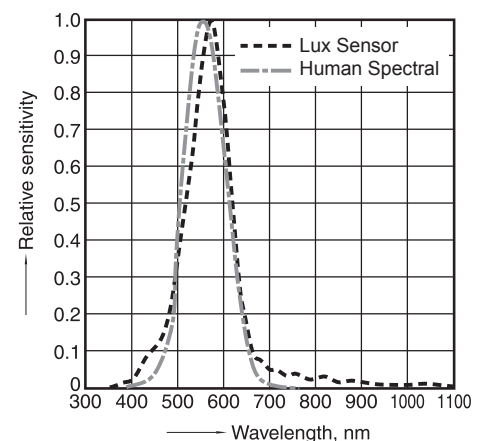
Power Options

The standard version of this sensor is powered by two replaceable 1.5 V AA sized batteries (included with purchase).

This sensor is also available with a line power option. The line powered version of this sensor has a barrel power connector allowing it to be powered by a standard 3.0–3.6 V power supply. The line powered version also uses two standard 1.5 V AA batteries as backup for uninterrupted operation in the event of line power outage.

Power options must be selected at time of purchase, as the internal hardware of the sensor must be changed to support the selected power requirements.

Relative sensitivity vs. wavelength
Ambient Temperature: 25°C (77°F)

Legend: Lux Sensor, Human Spectral

Y-axis: Relative sensitivity (0 to 1.0)
X-axis: Wavelength, nm (300, 400, 500, 600, 700, 800, 900, 1000, 1100)

Commercial Grade Sensors

Monnit commercial grade sensors are designed for applications in ordinary environments (normal room temperature, humidity and atmospheric pressure). Do not use these sensors under the following conditions as these factors can deteriorate the product characteristics and cause failures and burnout.

- Corrosive gas or deoxidizing gas: chlorine gas, hydrogen sulfide gas, ammonia gas, sulfuric acid gas, nitric oxides gas, etc.
- Volatile or flammable gas
- Dusty conditions
- Low-pressure or high-pressure environments
- Wet or excessively humid locations
- Places with salt water, oils chemical liquids or organic solvents
- Where there are excessively strong vibrations
- Other places where similar hazardous conditions exist

Use these products within the specified temperature range. Higher temperature may cause deterioration of the characteristics or the material quality.

For more information about our products or to place an order, please contact our sales department at 801-561-5555.

Visit us on the web at www.monnit.com.

Monnit Corporation
3400 South West Temple
Salt Lake City, UT 84115
801-561-5555
www.monnit.com