



Aeotec

AEOTEC - LED Bulb 6 Multi-White

SKU: AEOEZWA001



Quickstart

This is a **secure Bulb** for **Europe**. To run this device please connect it to your mains power supply.

Getting your LED Bulb up and running is as simple as inserting it into a lamp holder and adding it to your existing Z-Wave network. You'll need to set your Z-Wave hub to accept new products; to do this, please refer to its user manual.

1. Toggle off the wall switch into the OFF position.
2. Remove any existing light bulb and replace it with LED Bulb.
3. Set your Z-Wave gateway to accept or pair new products. (If you are unsure, please refer to your Z-Wave Gateway/Controller instruction manual on how to set your gateway to pair or inclusion mode).
4. With LED Bulb in its fitting, toggle your wall switch ON. LED Bulb's LED will blink 2x times to indicate that it is looking for a Z-Wave network to connect to.
5. After successfully connecting to your network, LED Bulb will blink off then on in about half a second to indicate that it attempted to pair to your network. If a network connection has failed, LED Bulb 6 Multi-White will not react.

Important safety information

Please read this manual carefully. Failure to follow the recommendations in this manual may be dangerous or may violate the law. The manufacturer, importer, distributor and seller shall not be liable for any loss or damage resulting from failure to comply with the instructions in this manual or any other material. Use this equipment only for its intended purpose. Follow the disposal instructions. Do not dispose of electronic equipment or batteries in a fire or near open heat sources.

What is Z-Wave?

Z-Wave is the international wireless protocol for communication in the Smart Home. This device is suited for use in the region mentioned in the Quickstart section.

Z-Wave ensures a reliable communication by reconfirming every message (**two-way communication**) and every mains powered node can act as a repeater for other nodes (**meshed network**) in case the receiver is not in direct wireless range of the transmitter.

This device and every other certified Z-Wave device can be **used together with any other certified Z-Wave device regardless of brand and origin** as long as both are suited for the same frequency range.

If a device supports **secure communication** it will communicate with other devices secure as long as this device provides the same or a higher level of security. Otherwise it will automatically turn into a lower level of security to maintain backward compatibility.

For more information about Z-Wave technology, devices, white papers etc. please refer to www.z-wave.info.



Product Description

The LED Bulb is a switch multilevel device based on Z-wave enhanced 232 slave library of V6.71.01.

This bulb has 2 main color channels available for you to adjust: Warm white and Cold white. You can configure its indication color temperature(2700K~6300K) according to your favor. LED Bulb can be included and operated in any Z-Wave network with other Z-Wave certified devices from other manufacturers and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of the vendor to increase the reliability of the network.

The LED Bulb is a security Z-Wave device(S0 and S2 Unauthenticated), so a security-enabled controller is needed for taking full advantage of all functionality for the LED Bulb. It also supports the Over The Air (OTA) feature for the product's firmware upgrade.

Prepare for Installation / Reset

Please read the user manual before installing the product.

In order to include (add) a Z-Wave device to a network it **must be in factory default state**. Please make sure to reset the device into factory default. You can do this by performing an Exclusion operation as described below in the manual. Every Z-Wave controller is able to perform this operation however it is recommended to use the primary controller of the previous network to make sure the very device is excluded properly from this network.

Reset to factory default

This device also allows to be reset without any involvement of a Z-Wave controller. This procedure should only be used when the primary controller is inoperable.

Turn LED Bulb's wall switch on and wait 1 second. Toggle LED Bulb's wall switch off -> on, off -> on, off -> on, off -> on, off -> on, off -> on (between 0.5 - 2 seconds per re-power).

If successful, the LED Bulb 6 Multi-White will flash twice to indicate that it successfully reset itself to factory defaults. Your LED Bulb 6 Multi-White is now ready to be paired to a new Z-Wave network.

Safety Warning for Mains Powered Devices

ATTENTION: only authorized technicians under consideration of the country-specific installation guidelines/norms may do works with mains power. Prior to the assembly of the product, the voltage network has to be switched off and ensured against re-switching.

Inclusion/Exclusion

On factory default the device does not belong to any Z-Wave network. The device needs to be **added to an existing wireless network** to communicate with the devices of this network. This process is called **Inclusion**.

Devices can also be removed from a network. This process is called **Exclusion**. Both processes are initiated by the primary controller of the Z-Wave network. This controller is turned into exclusion respective inclusion mode. Inclusion and Exclusion is then performed doing a special manual action right on the device.

Inclusion

- 1. Install the device according to the instructions.
- 2. Switch ON the bulb.
- 3. LED Bulb's LED will blink 2x times to indicate that it is looking for a Z-Wave network to connect to.

Exclusion

- 1. Turn on the Bulb.
- 2. Switch the Bulb off and on 3 times in a row (between 0.5 - 2 seconds per re-power).

Auto-Inclusion

Beside the standard inclusion this devices supports the so called **auto inclusion**. Right after powering up the device remains in inclusion state and can be included by (any) gateway without further actions on the device itself. The auto inclusion mode will time out after some time.

Quick trouble shooting

Here are a few hints for network installation if things dont work as expected.

- 1. Make sure a device is in factory reset state before including. In doubt exclude before include.
- 2. If inclusion still fails, check if both devices use the same frequency.
- 3. Remove all dead devices from associations. Otherwise you will see severe delays.
- 4. Never use sleeping battery devices without a central controller.
- 5. Dont poll FLIRS devices.
- 6. Make sure to have enough mains powered device to benefit from the meshing

Association - one device controls an other device

Z-Wave devices control other Z-Wave devices. The relationship between one device controlling another device is called association. In order to control a different device, the controlling device needs to maintain a list of devices that will receive controlling commands. These lists are called association groups and they are always related to certain events (e.g. button pressed, sensor triggers, ...). In case the event happens all devices stored in the respective association group will receive the same wireless command wireless command, typically a 'Basic Set' Command.

Association Groups:

Group Number	Maximum Nodes	Description
1	1	Lifeline

Configuration Parameters

Z-Wave products are supposed to work out of the box after inclusion, however certain configuration can adapt the function better to user needs or unlock further enhanced features.

IMPORTANT: Controllers may only allow configuring signed values. In order to set values in the range 128 ... 255 the value sent in the application shall be the desired value minus 256. For example: To set a parameter to 200 it may be needed to set a value of 200 minus 256 = minus 56. In case of a two byte value the same logic applies: Values greater than 32768 may needed to be given as negative values too.

Parameter 80: Notification

Enable to send notifications to associated devices (Group 1) when the state of LED Bulb is changed.

Size: 1 Byte, Default Value: 1

Setting	Description
0	Nothing
1	Basic CC report

Parameter 81: Adjusting the color temperature in warm white color component.

Size: 2700 Byte, Default Value: 2

Setting	Description
2700 - 4999	in Kelvin

Parameter 82: Adjusting the color temperature in cold white color component.

Size: 2 Byte, Default Value: 5000

Setting	Description
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Technical Data

Dimensions	120 x 60 mm
Weight	130 gr
Hardware Platform	ZM5101
EAN	1220000016101
IP Class	IP 20
Voltage	230 V
Load	9W
Device Type	Bulb
Generic Device Class	Multilevel Switch
Specific Device Class	Routing Multilevel Switch
Firmware Version	02.00
Z-Wave Version	04.3d
Certification ID	ZC10-18036060
Z-Wave Product Id	0x0371.0x0003.0x0001
Frequency	Europe - 868,4 Mhz
Maximum transmission power	5 mW

Supported Command Classes

- Basic
- Switch Multilevel
- Scene Activation
- Scene Actuator Conf
- Switch Color
- Association Grp Info
- Device Reset Locally
- Zwaveplus Info
- Supervision
- Configuration
- Manufacturer Specific
- Powerlevel
- Firmware Update Md
- Association
- Version
- Security
- Transport Service
- Security 2

Controlled Command Classes

- Transport Service
- Security 2

Explanation of Z-Wave specific terms

- **Controller** — is a Z-Wave device with capabilities to manage the network. Controllers are typically Gateways, Remote Controls or battery operated wall controllers.
- **Slave** — is a Z-Wave device without capabilities to manage the network. Slaves can be sensors, actuators and even remote controls.

- **Inclusion** — is the process of adding new Z-Wave devices into a network.
- **Exclusion** — is the process of removing Z-Wave devices from the network.
- **Association** — is a control relationship between a controlling device and a controlled device.
- **Wakeup Notification** — is a special wireless message issued by a Z-Wave device to announces that is able to communicate.
- **Node Information Frame** — is a special wireless message issued by a Z-Wave device to announce its capabilities and functions.