

# Leedarson LED Bulb RGBW

## Quick User Guide



# Product Introduction

## 1.1 Basic Information

CONTROL YOUR LIGHTS FROM ANYWHERE in the world from the palm of your hand. The RGBW Retrofit produces beautiful high quality light that you can tune, dim, and control from your smartphone or tablet. Easy to setup, bulbs fit into your standard household sockets - no need for installation by an electrician. A wireless network is required to operate bulbs.

SET LIGHT SCENES: Create rich indirect light scenes in your home in thousands of colors and 2700-6500K white. Schedule to turn on the lights so you don't come home to a dark house. Set automated timers, or program the bulb to gradually increase brightness in the morning like the sunrise for a more pleasant, natural alarm.

MORE PLEASANT LIGHT: RGBW + Tunable White can make you feel better and more productive-select a natural daylight color for reading and concentration, or a warm white or candlelight when it is time to relax. RGBW capability allows customized light settings from thousands of colors for any ambiance or mood.

SAVE ENERGY: Lightify bulbs use up to 84% less energy than traditional incandescent bulbs and last up to 20,000 hours making them a smart choice for energy conscious homes.

SECURITY: As a Security Enabled Z-Wave Plus Product. The bulb provided confidentiality, authentication and replay attack robustness through AES-128. A Security Enabled Z-Wave controller can be used in order to fully utilize the product.

## 1.2 Special notes for Connected Bulbs

### Line Voltage Dimmer

Leedarson does not recommend the use of a line voltage dimmer with connected bulbs. The reason is that each connected bulb contains a radio and by reducing, or removing, power through a line voltage dimmer may cause the connected bulb to not function properly.



For dimming, Leedarson recommends using a compatible App (i.e., Leedarson's LDS App) or a compatible wireless switch that uses the same wireless protocol as the bulb.

## 1.3 Devices Inclusion and Exclusion

If your switch or fixture is OFF, or is turned OFF, then control and communication from the App, or wireless switch, to the LED Bulb is lost.



### Inclusion/Excluded Procedure

The following are the general procedures for the Z-Wave bulb to be “included/ excluded “into the network:

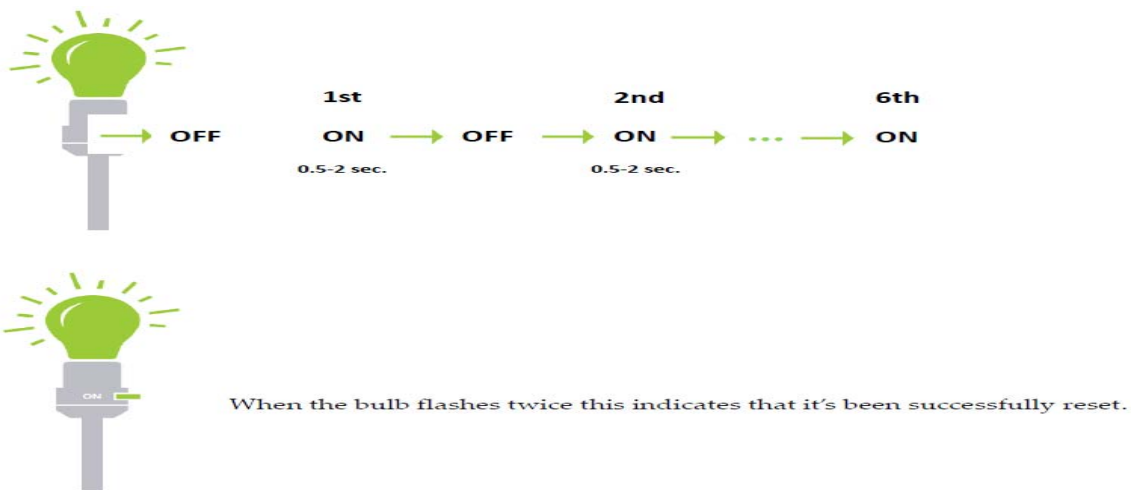
1. Screw the RGBW bulb into a standard E26 socket.
2. Turn on the bulb with your wall switch to apply power to the bulb.
  - a) If you’re not using a wall switch, then use your alternate method to apply power to the bulb.
3. Activate the “included/excluded” mode on your Z-Wave controller or gateway.
  - a) This may also be done through your associated app, if your ecosystem has that capability.
4. Toggle the wall-switch, from OFF, then to ON.
  - a) Or use your alternate method to toggle power from OFF, then to ON.
5. The LED bulb will flash once if it has been successfully “included/ excluded” into your Z-Wave network.

Note: If you are using 3<sup>rd</sup>party Z-Wave Controller or Gateway, please refer to 3<sup>rd</sup>Party’s instruction on how to add a new device to your network.

Note 2: If the bulb will not join the network after repeated attempts, please use the Factory Reset procedures to clear the bulb’s settings.

## 1.4 Factory Reset Procedure

Physically switch the bulb on and off six (6) times for intervals of 0.5-2seconds. After the 6<sup>th</sup>time, the bulb will flash twice indicating that it’s successfully reset. A factory default is performed when the bulb is excluded from the Z-Wave network. Please use this procedure only when the network primary controller is missing or otherwise inoperable.

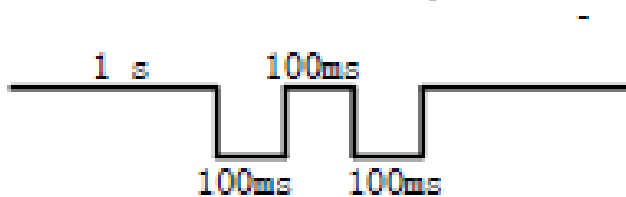


## 1.5 Behaviors of the bulb

This bulb has some behaviors to indicate users the status of the bulb.

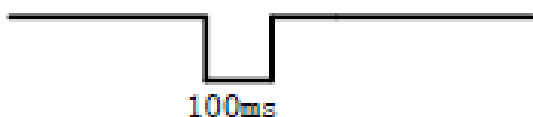
### 1.6 Factory Reset mode

The bulb will flash twice when it is powered on in reset mode or factory mode.



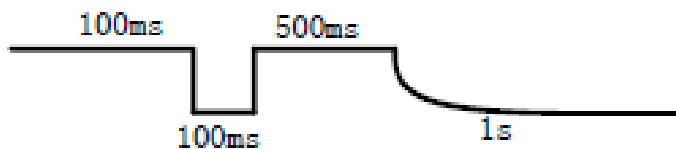
### 1.7 Add for inclusion

The A19 bulb will flash once when it has been included into the network.



### 1.8 Remove for exclusion

The A19 bulb will flash once and then dim to 5% when it has been excluded outside the network. If you want the bulb to be re-included, you need re-power the bulb, and then execute the inclusion process.



## 1.9 Technical Parameter

|                        |                |
|------------------------|----------------|
| Protocol               | Z-Wave         |
| Frequency              | 908.42MHz      |
| Communication Distance | 40m(LOS)       |
| Modulation Mode        | FSK(BFSK/GFSK) |
| Power(W)               | 9              |
| Voltage(V)             | 120            |
| CCT(K)                 | 2700-6500      |
| CRI                    | 80             |
| Beam Angle             | 240            |
| Dimensions(mm)         | 120*60/118*60  |

## 2 Z-Wave Specific

Add for inclusion, Remove for exclusion. This product can be included and operated in any Z-Wave network with other Z-Wave certified devices from other Manufactures and/or other applications. All non-battery operated nodes within the network will act as repeaters regardless of vendor to increase reliability of the network.

### 2.1 Device Specification

| Device Type         | Role Type       |
|---------------------|-----------------|
| Light Dimmer Switch | Always On Slave |

### 2.2 Command list

| Network Type            | Node Info                          |    |
|-------------------------|------------------------------------|----|
| Security<br><br>Network | COMMAND_CLASS_BASIC                | V1 |
|                         | COMMAND_CLASS_VERSION              | V2 |
|                         | COMMAND_CLASS_COLOR_CONTROL        | V1 |
|                         | COMMAND_CLASS_SWITCH_MULTILEVEL    | V2 |
|                         | COMMAND_CLASS_ASSOCIATION_GRP_INFO | V1 |
|                         | COMMAND_CLASS_ASSOCIATION          | V2 |
|                         | COMMAND_CLASS_ZWAVEPLUS_INFO       | V2 |

|  |                                     |    |
|--|-------------------------------------|----|
|  | COMMAND_CLASS_MANUFACTURER_SPECIFIC | V2 |
|  | COMMAND_CLASS_POWERLEVEL            | V1 |
|  | COMMAND_CLASS_CONFIGURATION         | V1 |
|  | COMMAND_CLASS_FIRMWARE_UPDATE_MD    | V2 |
|  | COMMAND_CLASS_DEVICE_RESET_LOCALLY  | V1 |
|  | COMMAND_CLASS_ALL_SWITCH            | V1 |
|  | COMMAND_CLASS_SECURITY              | V1 |

## 2.3 Documentation For Association Command Class

This association group is only used for Z-Wave plus lifeline communications.

| Number of Association Groups | Maximum Supported Nodes For Association Groups |
|------------------------------|------------------------------------------------|
| 1                            | 1                                              |

## 2.4 Documentation For Configuration Command Class

| Parameter                                                                                            | Number of Bytes | Default Value | Function Description                                                                                  |
|------------------------------------------------------------------------------------------------------|-----------------|---------------|-------------------------------------------------------------------------------------------------------|
| 0x01<br>( This Parameter is not set and it can only be used for the Configuration Get command.)      | 1               | NA            | It was used to get the temperature of NTC.                                                            |
| 0xFF<br>( This Parameter is not readable and it can only be used for the Configuration Set command.) | 4               | NA            | Value=0x88888888, Default=1, Size=4<br>Reset to factory configuration and removed the Z-Wave network. |
|                                                                                                      |                 |               | Value=0x88000000, Default=1, Size=4<br>Reset Configuration parameter to default value.                |

## 2.5 Z-Wave Plus Info Command Report

| Parameter           | Value                                              |
|---------------------|----------------------------------------------------|
| Role Type           | 5(ZWAVEPLUS_INFO_REPORT_ROLE_TYPE_SLAVE_ALWAYS_ON) |
| Node Type           | 0 (ZWAVEPLUS_INFO_REPORT_NODE_TYPE_ZWAVEPLUS_NODE) |
| Installer Icon Type | 0x0600(ICON_TYPE_GENERIC_LIGHT_DIMMER_SWITCH)      |
| User Icon Type      | 0x0600(ICON_TYPE_GENERIC_LIGHT_DIMMER_SWITCH)      |

## 2.6 Manufacturer Specific Report Commands

| Parameter         | Value |
|-------------------|-------|
| Manufacturer ID 1 | 0x03  |
| Manufacturer ID 2 | 0x00  |
| Product Type ID 1 | 0x00  |
| Product Type ID 2 | 0x03  |
| Product ID 1      | 0x00  |
| Product ID 2      | 0x03  |

## 2.7 Version Report Commands

| Parameter                   | Value (HEX)                        |
|-----------------------------|------------------------------------|
| Z-Wave Library Type         | 0x03                               |
| Z-Wave Protocol Version     | 0x04                               |
| Z-Wave Protocol Sub Version | 0x26                               |
| Firmware 0 Version          | Firmware Version Upper 8 bits 0x02 |
| Firmware 0 Sub Version      | Firmware Version Lower 8 bits 0x00 |
| Hardware Version            | 0xFF                               |
| Number of firmware targets  | 0x00                               |