

LED Driver

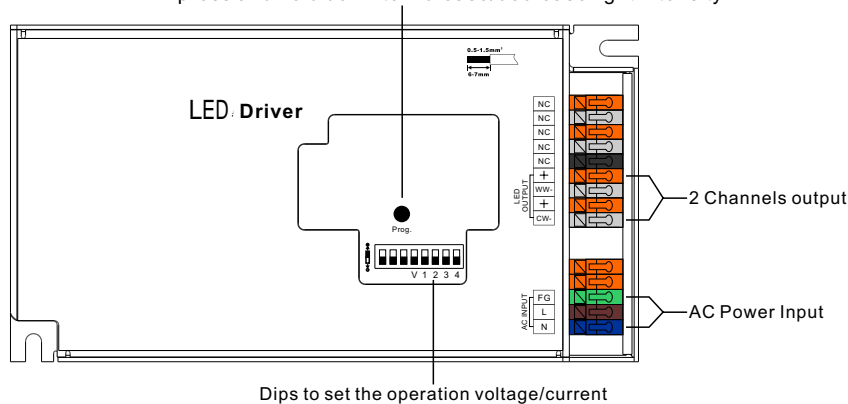
09.ZG910550C.04028



Important: Read All Instructions Prior to Installation

Function introduction

Program Key: short press to switch on/off load,
press and hold down to increase/decrease light intensity



Product Data

Output	LED Channel	2							
	Selectable Current	250mA	300mA	350mA	400mA	450mA	500mA	600mA	700mA
	DC Voltage Range	6-48V	6-48V	6-48V	6-48V	6-48V	6-48V	6-48V	6-48V
	Selectable Current	800mA	900mA	1000mA	1100mA	1200mA	1300mA	1400mA	1500mA
	DC Voltage Range	6-48V	6-48V	6-48V	6-45V	6-41V	6-38.5V	6-36V	6-33V
	Current Tolerance	±3%							
Input	Rated Power	50W max.							
	Voltage Range	100-277V AC							
	Frequency Range	50/60Hz							
	Power Factor (Typ.)	> 0.98 @ 100VAC, > 0.95 @ 230VAC							
	Total Harmonic Distortion	THD ≤ 15% (@ full load / 230VAC)							
	Efficiency (Typ.)	86% @ 230VAC full load							
	AC Current (Typ.)	0.6A @ 100VAC, 0.26A @ 230VAC, 0.23A@277VAC							
	Inrush Current (Typ.)	COLD START 2A max. at 230VAC							
	Leakage Current	< 0.5mA /230VAC							
	Standby Power Consumption	< 0.5W							
Control	Dimming Interface	ZigBee							
	Dimming Range	0%-100%							

Protection	Dimming Method	Pulse Width Modulation
	Short Circuit	Yes, recovers automatically after fault condition is removed
	Over Voltage	Yes, recovers automatically after fault condition is removed
Environment	Over Temperature	Yes, recovers automatically after fault condition is removed
	Working Temp.	-25°C ~ +45°C
	Max. Case Temp.	85°C
Safety & EMC	Working Humidity	10% ~ 95% RH non-condensing
	Storage Temp. & Humidity	-40°C ~ +80°C, 10% ~ 95% RH
	Safety Standards	UL8750, CAN/CSA C22.2 No. 250.13-14, EN61347-1, EN61347-2-13 approved
	Withstand Voltage	I/P-O/P: 3.75KVAC
	Isolation Resistance	I/P-O/P: 100M Ohms / 500VDC / 25°C / 70% RH
Others	EMC Emission	EN55015, EN61000-3-2, EN61000-3-3
	EMC Immunity	EN61547, EN61000-4-2,3,4,5,6,8,11, surge immunity Line-Line 1KV
	MTBF	193.6K hrs min. @ 230VAC full load and 25°C ambient temperature
	Dimension	144x78x38.5mm (L*W*H)

Output Current

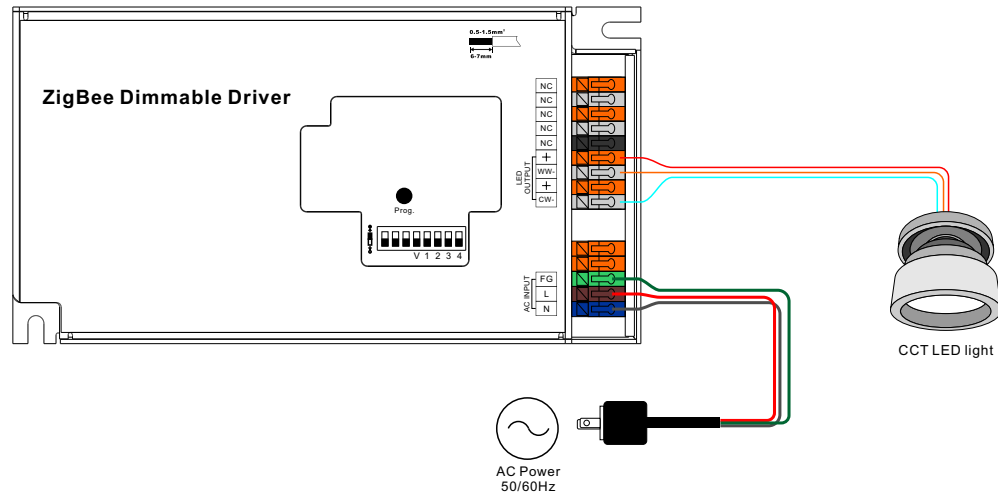
Select the correct output current before wiring to LED light by DIP Switches .Please make sure the power to the driver is disconnected before selection of the output current.

Dips to set the voltage and operation current

Operation current Selection		1	2	3	4	1	2	3	4
Voltage Selection If output LED voltage > 16V DC ● If output LED voltages≤16V DC ○	250mA	●	●	●	●	800mA	○	●	●
	300mA	●	●	●	○	900mA	○	●	○
	350mA	●	●	○	●	1000mA	○	●	●
	400mA	●	●	○	○	1100mA	○	●	○
	450mA	●	○	●	●	1200mA	○	○	●
	500mA	●	○	○	○	1300mA	○	○	○
	600mA	●	○	○	●	1400mA	○	○	●
	700mA	●	○	○	○	1500mA	○	○	○

- Dimmable LED driver for tunable white, 2 channel constant current output
- Output current level selectable from 250mA to 1500mA by DIP switches
- Class II power supply, full isolated metal case, built-in active PFC function
- PF > 0.95, Efficiency > 86%, low standby power < 0.5W
- Built-in ZigBee dimming interface based on ZigBee 3.0, supports Touchlink commissioning
- Compliant with Safety Extra Low Voltage standard
- Short circuit, over load, over temperature protection
- Deep and smooth dimming to 0.1%, flicker free, no noise
- Enables to control ON/OFF, light intensity and CCT of connected CCT LED lights
- Can directly pair to a compatible ZigBee remote via Touchlink without coordinator
- Supports find and bind mode to bind a ZigBee remote directly without coordinator
- Compatible with universal ZigBee gateway products
- Compatible with universal CCT ZigBee remotes
- Waterproof grade: IP20, suitable for indoor LED lighting applications
- 5 years warranty

Wiring Diagram



Operation

1. Do wiring according to connection diagram correctly.

2. This ZigBee device is a wireless receiver that communicates with a variety of ZigBee compatible systems. This receiver receives and is controlled by wireless radio signals from the compatible ZigBee system.

3. Zigbee Network Pairing Through Coordinator (Added to a ZigBee Network)

- 1) By factory default, the device does not belong to any ZigBee Network, and connected light will flash twice after powered on then stay solid on.
- 2) Before Pairing to current ZigBee Network, please make sure to remove the device from previous Network that it was paired to. (from your ZigBee Controller or hub interface or by factory reset)
- 3) From your ZigBee Controller or hub interface, choose to add lighting device and enter Pairing mode as instructed by the controller.
- 4) The device will be set to network pairing mode after powered on and connected light will flash twice, 15 seconds timeout, re-power on to set it to network pairing mode again for another 15 seconds.
- 5) After the device is paired to the ZigBee network successfully, the connected light will blink 6 times and then stay solid on, then the device will appear in your controller's menu.
- 6) The lighting device is now paired to the ZigBee network and can be controlled by ZigBee controller or hub interface.

4. Pair a ZigBee remote to the device Through Touchlink

- 1) The device can TouchLink with a ZigBee remote and be controlled by the remote.
- 2) The device can TouchLink with a remote directly without ZigBee Hub or TouchLink with a remote after the device and the remote are both added to the same ZigBee network.
- 3) Set the device to touchlink commissioning: power on the device, if it has already been added to a zigbee network, Touchlink commissioning will start immediately, 180 seconds timeout, if it has not been added to any network, Touchlink commissioning will start after 15 seconds, 165 seconds timeout. Re-power on the device to set it to touchlink commissioning again if timeout.
- 4) The device is to be discovered and paired via Touchlink commissioning by the remote.

5) Bring the remote within 10cm of the dimmer.

6) Set the remote to start Touchlink commissioning procedure. (please refer to its user manual to learn how).

7) There shall be indication on the remote that the remote is paired to the device via Touchlink successfully and the connected light with the device will blink twice.

Note: 1) Directly TouchLink (both not added to a ZigBee network), each device can pair with 1 remote.

2) TouchLink after added to a ZigBee network, each device can pair with max. 30 remotes.

3) For Philips Hue & Amazon Echo Plus, add remote and device to network first then TouchLink.

4) Philips Hue lights will enable TouchLink Commissioning after re-powered on.

5. Form a Zigbee Network & Add Other Devices to the Network (No Coordinator Required)

- 1) The device can form a zigbee network itself without a coordinator and add other devices to the network.
- 2) Short press the "Prog." button 4 times (Or re-power on the device 4 times) continuously to enable the device to form a zigbee network, connected light will blink twice.
- 3) The device will enable other devices to pair to the network, 180 seconds timeout, repeat previous step.
- 4) Set another device or remote into network pairing mode and search network. (please refer to its manual)
- 5) There shall be indication on the device or remote that network pairing is successful.
- 6) Pair more devices and remotes to the network as you would like.
- 7) Once added to the network, bind the devices and remotes through touchlink. (please refer to their manuals)
- 8) Then the devices can be controlled by the remotes.

Note: 1) Each device can bind and be controlled by max. 30 remotes.

2) Each remote can bind and control max. 30 devices.

6. Pair to a ZigBee remote directly Through Find and Bind Mode

- 1) Short press the "Prog." button 3 times (Or re-power on the device (initiator node) 3 times) continuously to start find and bind mode (the connected light flashes slowly), enable it to find and bind target. 180 seconds timeout if there is no target, repeat the operation.
- 2) Set the remote (target node) into find and bind mode, and enable it to find and bind initiator. (Please refer to its user manual to learn how)
- 3) There shall be indication on the remote that the remote bind the device successfully and can control it then.

7. Binding Between the Device and ZigBee Remotes Through Coordinator

Once the device and compatible remotes are paired to the same network, from your ZigBee controller or hub interface, choose to bind the device to the remote as instructed by the controller. Then the device can be controlled by the remote.

Note: 1) Each device can bind with max. 30 different remotes simultaneously.

2) Philips Hue & Amazon Echo Plus do not support this function, please use TouchLink to bind.

3) Each device can bind to multiple groups (max. 30) simultaneously.

8. Unbinding Between the Device and ZigBee Remotes Through Coordinator

Once the device and compatible remotes are bound, from your ZigBee controller or hub interface, choose to unbind the device from a remote as instructed by the controller.

9. Factory Reset the Device (Removed From a ZigBee Network)

From the ZigBee Controller or Hub Interface

From your ZigBee controller or hub interface, choose to remove or reset the lighting device as instructed. The connected light will blink 3 times to indicate successful reset.

Manual

Short press "Prog." key for 5 times continuously (or re-power on the device for 5 times continuously), the connected light will blink 3 times to indicate successful reset.

Factory Reset Through A ZigBee Remote (Touch Reset)

- 1) Make sure the device is added to a network, the remote can be added to the same network or does not belong to any ZigBee network.
- 2) Re-power on the device to start TouchLink Commissioning, 180 seconds timeout, repeat the operation.
- 3) Bring the remote within 10cm of the device.
- 4) Set the remote to start Touch Reset procedure to reset the device. (please refer to its user manual to learn how).
- 5) There shall be indication on the remote indicator for successful reset.

Note: All configuration parameters will be reset after the device is removed from the network.

10. ZigBee Clusters the device supports are as follows:

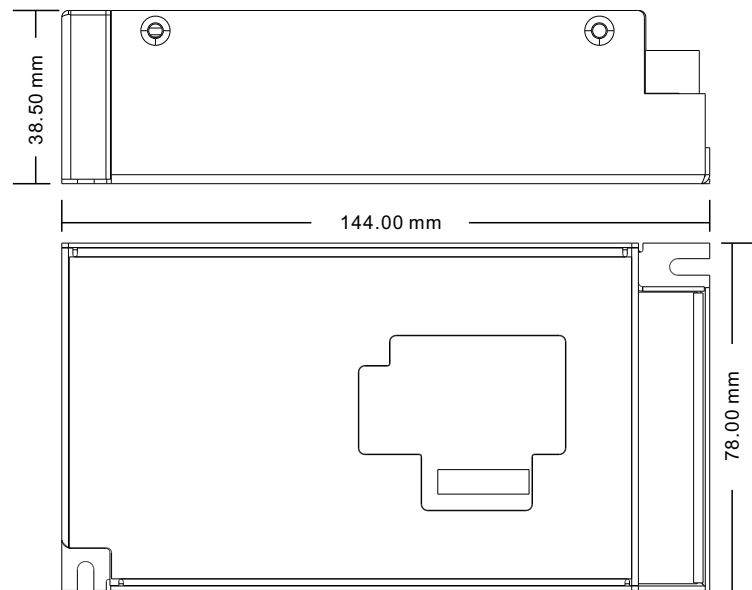
Input Clusters

- 0x0000: Basic
- 0x0003: Identify
- 0x0004: Groups
- 0x0005: Scenes
- 0x0006: On/off
- 0x0008: Level Control
- 0x0300: Color Control
- 0x0b05: Diagnostics

Output Clusters

- 0x0019: OTA

Product Dimension



FCC Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.