Wireless Controlled 0 -10V Dual Channel Dimming AC Device

WCA2CS is a wireless controlled dual channel dimming module powered by 110-277V AC and controlled or monitored via mobile device or cloud platform.

Key Features

- **Analog 2Channel** (0-10V) independent **output** to control intensity and color
- **Analog 2Channel** (0-10V) independent **input** to integrate with third party motion and light sensors
- **BLE4.2** based non-flooding intelligent **Mesh**
- Zero downtime Over the Air firmware **(OTA)** updates
- **External Sensor** interface
- Load control upto **5A**
- Power Factor (with load) **>0.9**
- Integrated Load **Power measurement**
- **Auxiliary** (12V / 1.4W) power out

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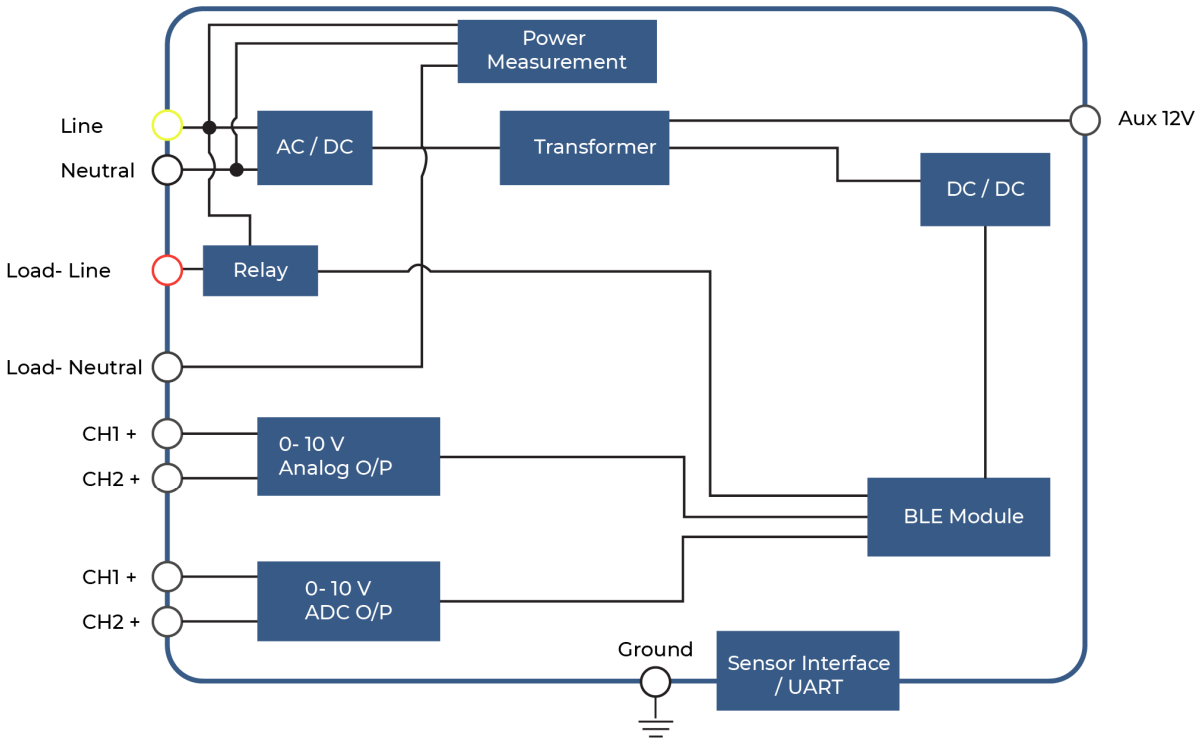
1. Block Diagram



2. Specifications

Electrical	Symbol	Min	Typ.	Max.	Unit.	Remarks
Input Voltage	Vin	110		277	Vac	Rated Input voltage
Input Current	Iin1		60	100	mA	@ Max RF transmitting
Power consumption	Watt		1.0	3	W	Active Power
Input Frequency	F	50	-	60	Hz	
Protection Class	-		Built-in Class II			Suitable for class I and II luminaries
Inrush Current			20		A	
Surge transient Protection				3	kV	@Line to Line: Bi-Wave
Leakage Current				0.5	mA	@Rated input voltage
Aux power				12V	120mA	
Sensor Interface	UART					

Analogue Dimming Output

Dimming Output1	Vadimo1	0		10	V	Max output tolerance ±5%
Dimming Output2	Vadimo2	0		10	V	Max output tolerance ±5%
Output Current				15	mA	For dimming max output
Dimming Range		0		100	%	
Dimming Resolution			8		bit	100 steps
Dimming Curve			Linear			
Cut Off Voltage			1		V	Programmable

Bluetooth

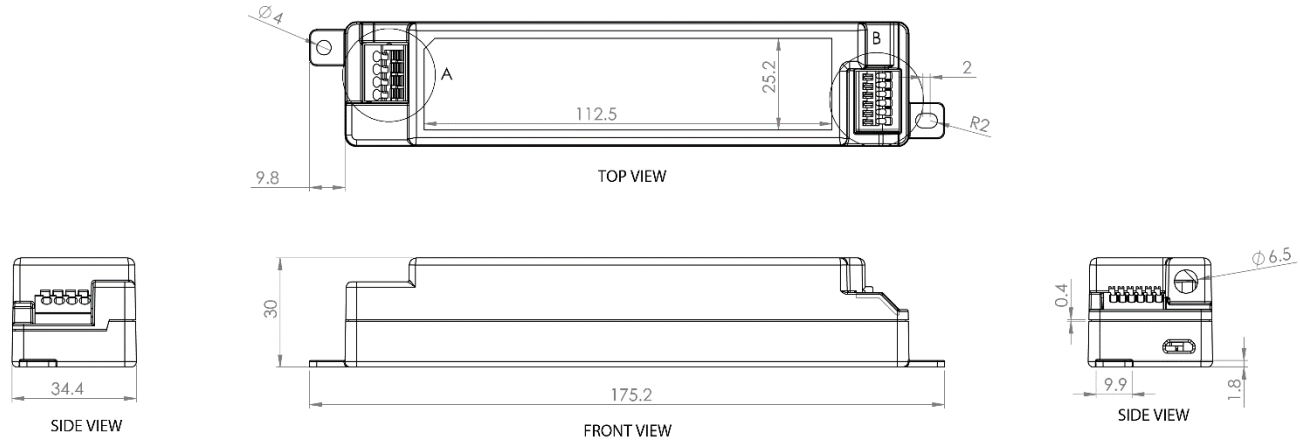
Frequency Range	2400		2483.5	MHz	
TX Power	6	8		dBm	Conductive
Frequency Drift(Max)	-25		25	kHz	dF2
Frequency Deviation	±225		±275	kHz	
Carrier Frequency offset		30	150	kHz	
TX current			48	mA	Total current@ Max Tx power
Receive Frequency	2400		2483	kHz	
Rx Current			-37	mA	Total Current @Rx Mode
Receiver Sensitivity	-86		-75	dBm	

Environmental	Symbol	Min	Typ.	Max.	Unit.	Remarks
Ambient Temperature	t_a	-20		50	°C	
Storage Temperature	t_s	-20		70	°C	
Relative Humidity				85	%	
IP Rating			IP20		-	Indoor use only
Dimensions			175*34*30		mm	L x W x H (mm)
Net Weight		80	90	100	g	T.B.D

Dimming	Type	Note
Dimming Control 1	0 – 10V	Analog

3. Device Dimensions (mm)

Case Material : 5VA



4. Connector Description

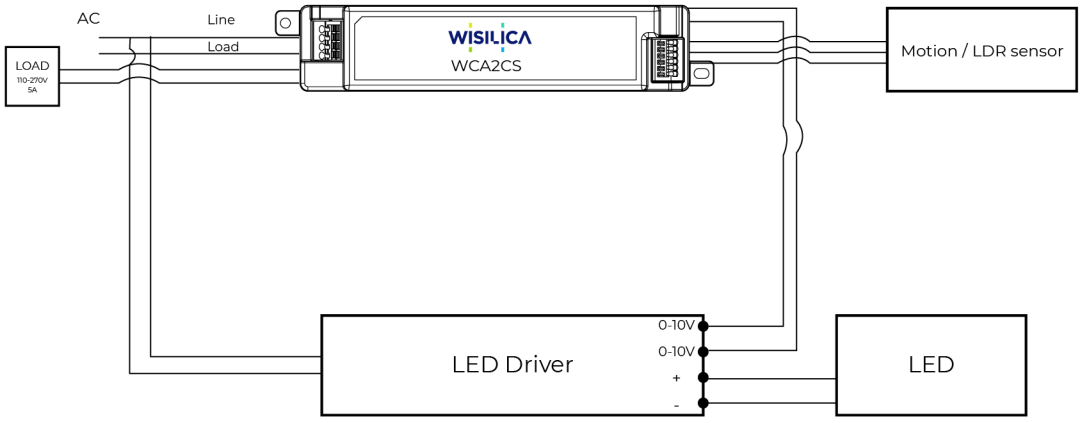
PIN	SYMBOL	COLOR	DESCRIPTION
1	Neutral Line	Black	AC Input Neutral
2	Neutral Load	Grey	110-277V ~(Line)
3	Line	Yellow	110-277V /5Amps
4	Load	Red	110-277V /5Amps

PIN	SYMBOL	COLOR	DESCRIPTION
1	ADC input	Grey	CH1 0 to 10V ADC INPUT
2	ADC input	Grey	CH2 0 to 10V ADC INPUT
3	RX	Grey	UART
4	TX	Grey	UART
5	GND	Grey	12V Ground Output
6	12V	Grey	Supports up to 1.4W

5. Wire Description

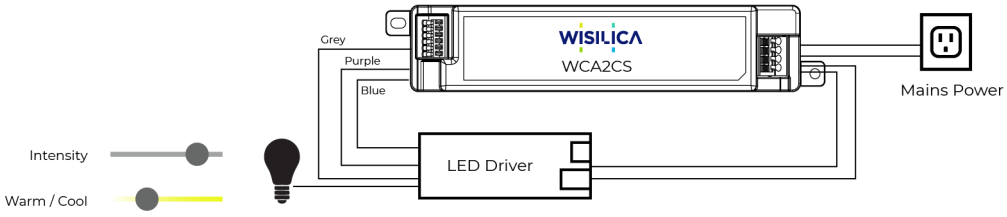
PIN	SYMBOL	COLOR	DESCRIPTION
1	CH1+	Purple	CH1 0 to 10V Analog Output
2	CH2+	Blue	CH2 0 to 10V Analog Output
3	GND	Grey	12V Ground output
4	12V	Red	12V

6. Wiring Diagram

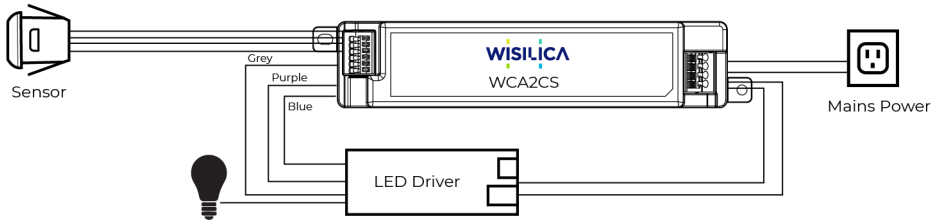


7. Use Cases

1. Controlling Intensity and CCT of LED bulb



2. Controlling LED bulb with Sensor Inputs



3. Controlling external load upto 5A

8. User Precautions

- Observe the correct polarity of output terminal.
- Avoid input voltage exceeds the maximum rating, which will cause damage to the circuit and result in malfunction
- Static electricity or surge voltage may damage the components inside LED Driver, to avoid this please follow the proper anti-electrostatic working process.

9. 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.
- Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.
- 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.

10. RF Exposure Information

- The device has been evaluated to meet general RF exposure requirement. The device can be use d in portable exposure condition without restriction.