

# LED PUSH Dimmer DW (Dynamic White) - User Manual



Item No.: LC-011-002

## 1. Product Description

With this Dimming Modul it is possible to control and adjust dynamic white LED's. The Push Dimmer DW adapts with PWM (Pulse-Width Modulation) frequency technology with an input voltage of 12-24VDC and a max output current of 2x8A. The Dimmer can be operated with one or two Push Dim Buttons to dim or to switch on/off.

## 2. Specifications

Input Voltage	12-24VDC
Max. Output Current	2x8A
Max. Output Power	96W x 2 channels (12V) / 192W x 2 channels (24V)
Grey Scale	4096 each channel
Output Signal	PWM Constant Voltage mit ~980 Hz
Dimensions (L x B x H)	176 x 46 x 30mm
Gewicht	145g

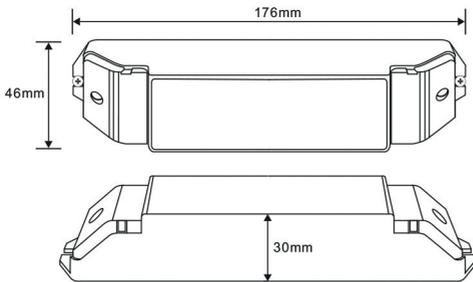
## 3. Beschreibung

1. Input Voltage 12-24VDC
2. 2 Output channels, each channel have 4096 Grey Scales.
3. Static and color changing modes selectable
4. Power loss memory function
5. Over current protection, short circuit protection.

## 4. Safety warnings

1. To avoid installed the product in minefield, strong magnetic field and high voltage area.
2. To ensure the wiring is correct and firm avoiding short circuit damages to components and cause fire.
3. Please install the product in a well ventilated area to ensure appropriate temperature environment.
4. The product must be worked with DC constant voltage power supply.  
Please check the consistence of input power with the product, if the output voltage of the power comply with that of the product.
5. Connect the wire with the power on is forbidden. Ensure proper wiring first then check to ensure no short-circuit, then power on.
6. Don't repair it by yourself whenever an error occur. Contact the supplier for any inquiry.

## 5. Dimensions



## 6. Operation instructions

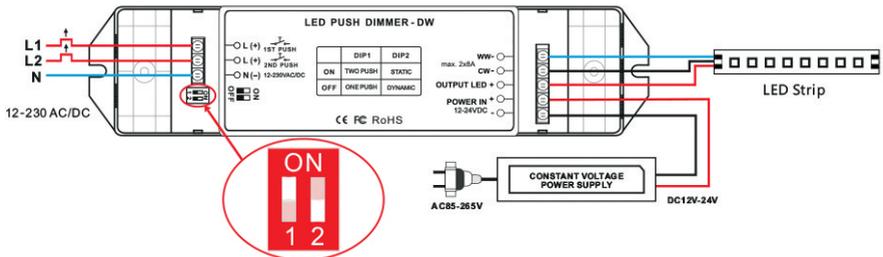
	DIP1	Explanation	DIP2	Explanation
ON	TWO PUSH	Two PUSH Operation	STATIC	Static Dimm Mode Color unchanged, Brightness changed
OFF	ONE PUSH	One PUSH Operation	DYNAMIC	Dynamic Dimm Mode Lightcolor changes with the dimming

Note: The Static or Dynamic transfer function of DIP2 only suitable for one PUSH operation mode, not for the two PUSH operation mode.

## Two-Push Operation: DIP1 (ON) & DIP2 (ON or OFF).

The dimmer can be driven by 2 standard switches.

The first button is for the Warm White and the second button for the Cold White LED's.



By short pressing one of the two buttons (<0,5 sec.) to switch the respective light color on or off. By double pressing from one of the two buttons (2x <0,5 sec.) when turned on the light, you can switch between the fix color and dynamic color mode.

### FIX COLOR MODE:

By long pressing the button, the brightness can be dimmed from 1-100%. The first button dims the WW (Warm White) channel, the second switch dims the CW (Cold White) channel.

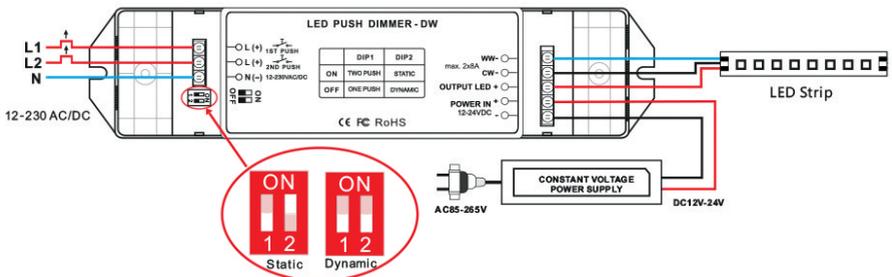
By long pressing again the button, the brightness of each color counterclockwise change.

The desired color of light can be turned on/off and thus you can adjust the light color as desired by briefly pressing the corresponding button. Both channels can not be dimmed with one button.

### DYNAMIC COLOR MODE:

By short pressing one of the two buttons, no matter which one, you can switch the light on or off. By pressing the Warm White button, the speed of color graduation (alternating between Warm White - Cold White) can be changed. By pressing the Cold White button, the brightness can be adjusted.

**One-Push Operation:** The dimmer can be driven by one of the two buttons. At One-Push Operation you can select with the DIP2 switch between Static and Dynamic Dimm Mode.



## STATIC MODE - DIP1 (OFF) & DIP2 (ON):

By pressing the button briefly (<0,5 sec.) to turn the LED on or off.

Briefly, double pressing the button switches between Fix Color Mode and Dynamic Color Mode.

If you hold down the button when the light is turned off the light dims up from 1% towards 100% and pressing long again the light dims down from 100% towards 1%. This allows you to adjust the brightness of each mode (Fix Color Mode and Dynamic Color Mode).

In both modes, the brightness can be set separately, because the dimmer for both modes can store different brightness. Once you have set the brightness, you must wait for 5 seconds and then the dimmer will automatically exit the brightness mode and you can press the button to make further setting. During the 5 seconds, only with long press button the light can dimmed up or down or just by briefly pressing, switched on or off.

## FIX COLOR MODE:

By long pressing the button, the color of light between Warm White and Cold White can be adjusted continuously, in which case the brightness is not changed.

If one of the two light colors was solely selected, it lights upto 100%. If a mix has been selected from two color lights the light to 100%, however, the colors in the desired adjusted mix (e.g. 50% to 50%, or 70% to 30%, etc.)

## DYNAMIC COLOR MODE:

In Dynamic Color Mode, you can change the speed in one cycle between 0,5 sec. and 120 sec.

Sub-cycle is defined as the transition from one color to another color.

The division is made in 10 steps and looks like this:

1 = 0,5 sec. | 2 = 1 sec. | 3 = 2 sec. | 4 = 3 sec. | 5 = 5 sec. | 6 = 10 sec. | 7 = 15 sec. | 8 = 30 sec.  
9 = 60 sec. | 10 = 120 sec.

By flashing the LEDs indicate whether that is the next speed level.

This flashing long on consecutively until one other at Level 1 or Level 10 has come.

By re-pressing, the speed can be changed again in the opposite direction.

## DYNAMIC MODE - DIP1 (OFF) & DIP2 (OFF):

In this mode, the light color is changed dynamically when dimmed. the lower the brightness the warmer the light color and there are two different dimming modes to choose from as in the following graphics depicted.

By double press (2x <0,5 sec) you can back and forth between the two dimming modes.

Dimming Mode 1 when set to maximum value: Cold White 100%, Warm White 0%.

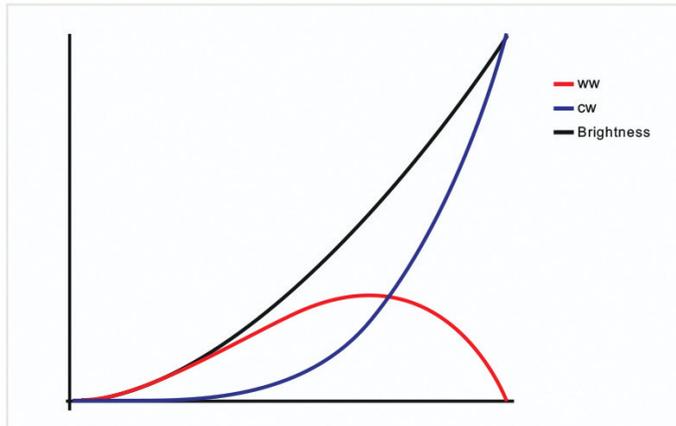
Dimming Mode 2 when set to maximum value: Cold White 100%, Warm White 100%.

By long pressing the button, the brightness from 1-100% and from 100-1% can be dimmed.

By again long pressing the button, the brightness changes in the opposite direction.

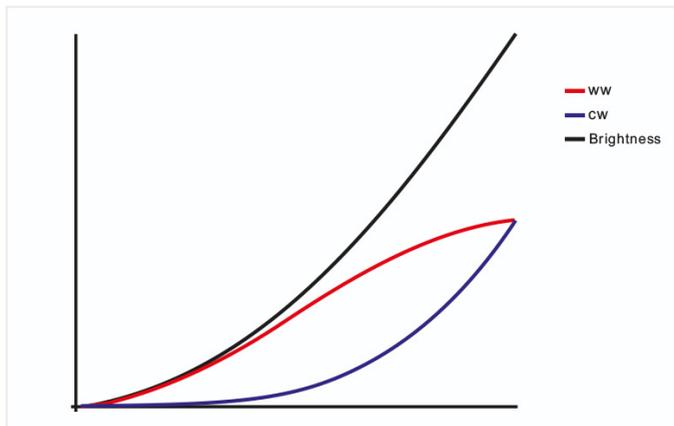
As already mentioned, the light color changes dynamically during dimming.

Dimming  
Mode 1



Dimming down beginning with Cold White 100% and Warm White 0% (here is Cold White dimmed down and Warm White dimmed up and towards the end Warm White is dimmed as against 1%)

Dimming  
Mode 2



Dimming down beginning with Warm White 100% and Cold White with 100% (here is Cold White dimmed faster than Warm White and towards the end Warm White is dimmed as against 1%)

# 7. Conjunction Diagram

Push Dimmer DW in conjunction with PWM Repeaters DW for power extension:

The Push Dimmer DW can be driven with keyed phase and neutral or it is also possible instead of the phase, the positive potential of the power supply to grope and to connect the negative potential of the power supply to terminals instead of the neutral.

