# FOOT DIMMER

## **Device Manual**



#### FEATURES

- FOOT DIMMER
- DC Input: 12-24 Vdc voltage variant
- DC Input: 12-24-48 Vdc current variant
- Command: push-button
- Adjusting the brightness of white light or monochromatic color
- Voltage outputs for R loads
- Current outputs for R-L-C loads
- Typical Efficiency > 95%
- Adjusting the brightness up to completed off
- Soft Start and Soft Stop
- Optimized output curve
- 100% functional test 5 years waaranty

### > CONSTANT VOLTAGE VARIANTS (common anode)

Application: Dimmer

CODE (*)	Input Voltage	Output	Channel	Command	
DLC1224-1CV-PE	12-24 Vdc	1 x 5A	1	N.O. push button	

## > CONSTANT CURRENT VARIANTS (common anode)

Application: Dimmer

CODE (*)	Input Voltage	Output	Channel	Command	
DLC1248-1CC350-PE	12-48 Vdc	1 x 350mA	1	N.O. push button	
DLC1248-1CC500-PE	12-48 Vdc	1 x 500mA	1	N.O. push button	

(\*) The technical data are refer only to the characteristics of the electronic board inside the foot dimmer. **POWER SUPPLY AND CABLE ON REQUEST.** 

## > **PROTECTIONS**

		Current Variant	Voltage Variant
ОТР	Over temperature protection <sup>1</sup>	$\checkmark$	×
OVP	Over voltage protection <sup>2</sup>	$\checkmark$	$\checkmark$
UVP	Under voltage protection <sup>2</sup>	$\checkmark$	$\checkmark$
RVP	Reverse polarity protection <sup>2</sup>	$\checkmark$	$\checkmark$
IFP	Input fuse protection <sup>2</sup>	✓	✓
SCP	Short circuit protection	✓	×
ОСР	Open circuit protection	$\checkmark$	×
CLP	Current limit protection	$\checkmark$	×



<sup>&</sup>lt;sup>1</sup> Thermal Protection on the output channel in case of high temperature. The thermal intervention is detected by constant current LED driver regulation (>150°C) <sup>2</sup> Only control logic protection

DALCNET S.r.I, Registered office: Via dei Laghi, 31 – 36077 Altavilla Vicentina (VI) – Italy Headquarters: Via A. Meucci, 35 – 36040 Brendola (VI) – Italy VAT: IT04023100235 – Tel. +39 0444 1836680 - <u>www.dalcnet.com</u> – info@dalcnet.com



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## > TECHNICAL SPECIFICATIONS

		Variant			
		Constant voltage <sup>3</sup>	Constant	current <sup>3</sup>	
Supply voltage		DC min: 10,8 Vdc DC max: 26,4 Vdc	DC min: 10,8 Vdc max: 52,8 Vdc		
Input current		Max 5A	Max 0,5A		
Output voltage		Vin	Min: Vin/4 Max Vin-0,9V		
Output current		5 A	350 mA	500 mA	
Absorbed nominal power <sup>4</sup>	@12V	60W	4,2W	6W	
	@24V	120W	8,4W	12W	
	@48V	-	16,8W	24W	
Power loss in stand by mode		< 500mW	< 500mW		
Type of load		R	R – L – C		
Thermal shutdown <sup>5</sup>		-	150°C		
D-PWM dimming frequency		250Hz	250Hz		
D-PWM resolution		16 bit	16 bit		
D-PWM range		1-100 %	1 - 100 %		
Storage Temperature		min: -40 max: +60 °C	min: -40 max: +60 °C		
Ambient temperature		min: -10 max: +40 °C	min: -10 max: +40 °C		
Maximum temperature at Tc point <sup>6</sup>		55°C	90°C		
Protection grade		IP20	IP20		
Mechanical dimension of case		D: 65mm – H 32,1mm			
Casing material		Plastic	Plastic		
Weight		42g	43g		

## > MECHANICAL DIMENSION



<sup>&</sup>lt;sup>3</sup> The technical data are referred only to the characteristics of the electronic board inside the foot dimmer without the power supply.

<sup>&</sup>lt;sup>4</sup> Maximum value, dependent on the ventilation conditions.

<sup>&</sup>lt;sup>5</sup> Thermal protection on the output channel in case of high temperature is detected by constant LED driver regulation (>150°C) <u><sup>6</sup> See indications in the chapter "Test Point" on page 3.</u>



# Device Manual

## > PUSH DIMMER FEATURE

#### N.O. PUSH BUTTON

The intensity and the status change (ON/OFF) are controlled by the N.O. push button.

Button	Function	Intensity		
1		Click	On/Off	
		Double Click	Maximum intensity	
		Long pressure (>1s) from OFF	Turn ON at 1% (Nightly Time), then dimmer up/down	
		Long pressure (>1s) from ON	Dimmer up/down	

## > TEST POINT

Constant voltage Variant	Constant current Variant		
Tc=55°C with Ta=40°C.	Tc=90°C with Ta=40°C.		
At ambient temperature equal to Ta= 25°C $\rightarrow$ Tc=40°C.	At ambient temperature equal to Ta= $25^{\circ}C \rightarrow Tc=75^{\circ}C$ .		
NOTE:	NOTE:		
The measurement was performed for the DLC1224-1CV-PE version.	The measurement was performed for the DLC1224-1CC500-PE version.		

## **TECHNICAL NOTE**

Installation:

- Installation and maintenance must be performed only by qualified personnel in compliance with current regulations.
- The product must be installed inside an electrical panel protected against overvoltages.
- The use of the product in harsh environments could limit the output power.
- The product must be installed in a vertical or horizontal position with the cover / label upwards or vertically; Other positions are not permitted. It is not permitted to bottom-up position (with the cover / label down).
- Keep separated the circuits at 230V (LV) and the circuits not SELV from circuits to low voltage (SELV) and from any connection with this product. It is absolutely forbidden to connect, for any reason whatsoever, directly or indirectly, the 230V mains voltage to the bus or to other parts of the circuit.

Power Supply:

- For the power supply use only a SELV power supplies with limited current, short circuit protection and the power must be dimensioned correctly.
- In case of using power supply with ground terminals, all points of the protective earth (PE = Protection Earth) must be connected to a valid and certified protection earth.
- The connection cables between the power source "low voltage" and the product must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. Use double insulated cables.
- Dimension the power supply for the load connected to the device. If the power supply is oversized compared with the maximum absorbed current, insert a protection against over-current between the power supply and the device.
- For the constant current output, the voltage of LED module (Vf) must be less of 5V at the voltage of power supply.

Outputs:

• The length of the connection cables between the product and the LED module must be less than 10m; the cables must be dimensioned correctly and they should be isolated from every wiring or parts at voltage not SELV. It is suggested to use double insulated shielded and twisted cables.