

## LEDVD5CH20A-V1

## Compensation of voltage drop

Voltage driver for LED strips for compensated voltage drop in cables (without userinterface circuit board)



### **DATA SHEET**

- Custom embedded Software possible
- Adequate EMC design that enables correct and interference-free operation
- CE mark is attached to the PCB
- RoHS directive 2002/95/EC
- EMC Directive 2014/30/EC

### The power supply

The total requested flow from the diet can be with all five channels at full load up to 100 Amps. If the power wires between power supply and voltage driver no more than 1 to 1.5 meters, it is sufficient 2x 10mm2, 16mm2 is recommended for longer lengths.

#### driver.

Custom made options

**PWM** 

The LuxaLight voltage driver provides the proprietary software options for customer-specific applications, such as connecting a light sensor. The hardware of the voltage driver offers this possibility, but an additional light sensor has to be made and should also be made an extentions in the software here. Customization options will be included in the offer.

For each channel the PWM dimming value

can be set separately. The dimming value is

stored in an EEPROM and the stored values

are directly used when turning on the voltage

### LED indicators

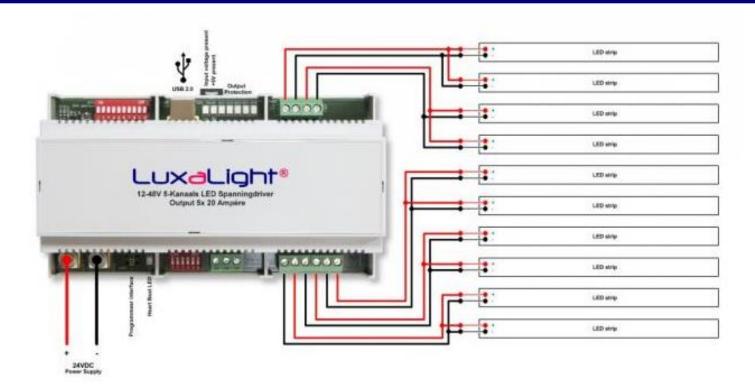
The green LED's at the top indicate that the supply voltage on the print is present. The green flashing LED at the bottom indicates the "heart beat" of the controller as a sign that it is working properly. There are also some red LEDs OUT 1 t / m OUT5, which light up as soon as a voltage output is overloaded. Above a certain value is, moreover, the overloaded channel turned off by software.

#### Channel setup

Each of these five channels (voltage outputs) can be adjusted in luminous intensity level in 256 steps in which a value of 0 corresponds to complete dark and a value of 255 to full brightness. And so, the value of 127 corresponds to half the brightness at 50%.

### LEDVD5CH20A-V1







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# **Specifications**



Input voltage  Maximal input current  Standby current  Own power consumption  Efficiency Output current per channel Output power  Overvoltage protection Short circuit protection PWM frequency No. of brightness steps per channel Color resolution Outputs are EMC filtered Housing, b x h x d IP- class Cooling  12 - 48V 100A (sum of the output currents) 18mA (output sfully dimmed) 5W at 2400W load Approx. 99.8% 20 Ampère up to 24 Volt 12V - 5x 240 Watt = 1200 Watt (20A/channel) 24V - 5x 480 Watt = 2400 Watt (20A/channel) 36V - 5x 540 Watt = 2700 Watt (15A/channel) 48V - 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes 250 Hz 256 (8-bit) 8-bit (16.7 million colors, true-color) Yes -20°C - 40 °C Din rail housing, 159mm x 90mm x 58mm IP20 On circuit board, with coolfan on fan controller		
Standby current Own power consumption Efficiency Output current per channel Output power  Output power  Overvoltage protection Short circuit protection PWM frequency No. of brightness steps per channel Color resolution Outputs are EMC filtered Housing, b x h x d IP- class  18mA (outputs fully dimmed) 5W at 2400W load Approx. 99.8% 20 Ampère up to 24 Volt 12V – 5x 240 Watt = 1200 Watt (20A/channel) 24V – 5x 480 Watt = 2400 Watt (15A/channel) 24V – 5x 540 Watt = 2700 Watt (15A/channel) 48V – 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes 256 (8-bit) S-bit (16.7 million colors, true-color) Yes 18mA (outputs fully dimmed) 5W at 2400W load Approx. 99.8% 20 Ampère up to 24 Volt 12V – 5x 240 Watt (20A/channel) 24V – 5x 480 Watt = 2400 Watt (15A/channel) 36V – 5x 540 Watt = 2700 Watt (15A/channel) 48V – 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes 256 (8-bit) Din rail housing, 159mm x 90mm x 58mm IP20	Input voltage	12 - 48V
Own power consumption  Efficiency Output current per channel Output power  Output power  Overvoltage protection Short circuit protection PWM frequency No. of brightness steps per channel Color resolution Outputs are EMC filtered Housing, b x h x d IP- class  Output current per channel Approx. 99.8%  20 Ampère up to 24 Volt 12V - 5x 240 Watt = 1200 Watt (20A/channel) 24V - 5x 480 Watt = 2400 Watt (15A/channel) 24V - 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes 250 Hz 256 (8-bit) 8-bit (16.7 million colors, true-color) Outputs are EMC filtered Temperature range Housing, b x h x d IP- class IP20	Maximal input current	100A (sum of the output currents)
Output current per channel Output power  Output power  Overvoltage protection Short circuit protection PWM frequency No. of brightness steps per channel Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  Approx. 99.8%  20 Ampère up to 24 Volt  12V – 5x 240 Watt = 1200 Watt (20A/channel) 24V – 5x 480 Watt = 2400 Watt (15A/channel) 24V – 5x 540 Watt = 2700 Watt (15A/channel) 48V – 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes 250 Hz  256 (8-bit) 8-bit (16.7 million colors, true-color) Yes 1P20	Standby current	18mA (outputs fully dimmed)
Output current per channel Output power  Output power  12V - 5x 240 Watt = 1200 Watt (20A/channel) 24V - 5x 480 Watt = 2400 Watt (15A/channel) 36V - 5x 540 Watt = 2880 Watt (12A/channel) 48V - 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes PWM frequency No. of brightness steps per channel Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  120 Ampère up to 24 Volt 12V - 5x 240 Watt = 1200 Watt (20A/channel) 24V - 5x 540 Watt = 2880 Watt (15A/channel) Yes, up to 60 Volts Yes 250 Hz 256 (8-bit) B-bit (16.7 million colors, true-color) Outputs are EMC filtered Temperature range Housing, b x h x d IP- class IP20	Own power consumption	5W at 2400W load
Output power  12V - 5x 240 Watt = 1200 Watt (20A/channel) 24V - 5x 480 Watt = 2400 Watt (20A/channel) 36V - 5x 540 Watt = 2700 Watt (15A/channel) 48V - 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes PWM frequency No. of brightness steps per channel Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  12V - 5x 240 Watt = 1200 Watt (20A/channel) 24V - 5x 480 Watt = 2400 Watt (20A/channel) 36V - 5x 540 Watt = 2700 Watt (15A/channel) 48V - 5x 576 Watt = 2880 Watt (12A/channel) Yes, up to 60 Volts Yes 250 Hz 256 (8-bit) 8-bit (16.7 million colors, true-color) Outputs are EMC filtered Temperature range 12V - 5x 240 Watt = 1200 Watt (20A/channel) 12A/channel Yes, up to 60 Volts Yes 250 Hz 250 Hz 250 (8-bit) Brightness steps per channel 160 Volts Yes 250 Hz 250 Hz 250 (8-bit) 160 Volts Yes 250 Hz 250 (8-bit) 161 Prescription 161 Prescription 162 Prescription 163 Prescription 163 Prescription 164 Prescription 174 Prescription 175 Presc	Efficiency	Approx. 99.8%
24V – 5x 480 Watt = 2400 Watt (20A/channel) 36V – 5x 540 Watt = 2700 Watt (15A/channel) 48V – 5x 576 Watt = 2880 Watt (12A/channel)  Yes, up to 60 Volts  Short circuit protection PWM frequency 250 Hz  No. of brightness steps per channel Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class IP20	Output current per channel	20 Ampère up to 24 Volt
Short circuit protection PWM frequency 250 Hz  No. of brightness steps per channel Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  Yes 250 Hz 256 (8-bit) 8-bit (16.7 million colors, true-color) Yes 256 (8-bit) 000 1000 1000 1000 1000 1000 1000 100	Output power	24V – 5x 480 Watt = 2400 Watt (20A/channel) 36V – 5x 540 Watt = 2700 Watt (15A/channel)
PWM frequency No. of brightness steps per channel Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  250 Hz 256 (8-bit) 8-bit (16.7 million colors, true-color) Yes -20°C - 40 °C Din rail housing, 159mm x 90mm x 58mm IP20	Overvoltage protection	Yes, up to 60 Volts
No. of brightness steps per channel Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  256 (8-bit) 8-bit (16.7 million colors, true-color) Yes -20°C - 40 °C Din rail housing, 159mm x 90mm x 58mm IP20	Short circuit protection	Yes
Color resolution Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  8-bit (16.7 million colors, true-color) Yes -20°C - 40 °C Din rail housing, 159mm x 90mm x 58mm IP20	PWM frequency	250 Hz
Outputs are EMC filtered Temperature range Housing, b x h x d IP- class  Yes  -20°C - 40 °C  Din rail housing, 159mm x 90mm x 58mm  IP20	No. of brightness steps per channel	256 (8-bit)
Temperature range -20°C - 40 °C  Housing, b x h x d IP- class  IP20  -20°C - 40 °C  Din rail housing, 159mm x 90mm x 58mm	Color resolution	8-bit (16.7 million colors, true-color)
Housing, b x h x d IP- class  IP20  Din rail housing, 159mm x 90mm x 58mm	Outputs are EMC filtered	Yes
IP- class IP20	Temperature range	-20°C - 40 °C
	Housing, $b \times h \times d$	Din rail housing, 159mm x 90mm x 58mm
Cooling On circuit board, with coolfan on fan controller	IP- class	IP20
	Cooling	On circuit board, with coolfan on fan controller

### **Compliant**

KvK-nummer: 57580561

BTW-nummer: NL852642209B01

ING bankrekening: 7815975

IBAN: NL87 INGB 0007 8159 75

### **Meets standards:**

- CE mark is attached to the PCB
- RoHS Directive 2002/95/EC
- EMC Directive 2014/30/EC