Constant Voltage LED Driver

CVPD2-2CH-240-24-L20
CVPD2-2CH-240-48-L20

Product description

The CVPD2 series is an indoor constant voltage LED DALI driver. Its input voltage range is 198-264Vac, with a conversion efficiency of up to 94%. It adopts a fanless design and works at -20°C~+45°C for natural cooling. The temperature range of the chassis, ultra-high power factor, ultra-low total harmonic distortion, low standby power consumption, and all-round protection functions not only greatly improve the reliability of the product, but also ensure the product life cycle. This series of products is designed for LED lighting design and used in indoor lighting. Suitable for various application environments in almost all indoor places where LED lamps can be installed. Comply with DALI2.0 standard (IEC 62386-101, 102, 207, 209), innovative thermal management technology, intelligent protection of power supply life.

Standards

EN61347-1
EN61347-2-13
EN61547
EN55015
EN61000-3-2
EN61000-3-3
EN62384
EN62493
IEC 62386-101,102,207

Characteristics

- AC input range (220-240VAC)
- With active PFC function
- IP20
- DALI-2.0 DT6/DT8 dimming driver
- Built-in press dimming function
- Dimming range 1-100%
- Suitable for dry indoor environments
- Protection type: short circuit/over temperature/over voltage protection
- Plastic shell, filled with glue inside
- Comply with world lighting equipment safety regulations
- 5 years warranty

Specifications

Model		CVPD2-2CH-240-24-L20	CVPD2-2CH-240-48-L20
Output	turn on time(S)	<0.5	
	output power(W)	240	
	output voltage(V)	24	48
	output voltage tolerance	≤±5%	
	ripple voltage(mV)	240	480
	Line Regulation	1%	
	Load Regulation	3%	
	working current range(A)	1-10	0.5-5
	SVM	0.1	
	Pst	0.1	
	dimming type	YES	
	dimming range	1-100%	
Input	rated DC supply voltage(Vdc)	NA	
	rated supply voltage(Vac)	220-240	
	voltage range(Vac)	198-264	
	line frequency(Hz)	50/60	
	input current(A)	1.4	
	efficiency (TYPE)	93%@full load	94%@full load
	average efficiency(TYPE) 3 (TYPE)3	92%	93%
	no load power consumption(W)	≤0.5W	
	power factor	0.95@full load	
	Displacement factor	0.95	
	THD(typ.) THD（）	5%	
	inrush current(Ipk) （Ipk）	60A/440uS	
	Leakage current (mA)	0.7@240Vac 60Hz	
Protection	short circuit protection	hiccup mode, restart automatically after fault correction.	
	over load protection	exceed maximum rated load times 1.6	
	Over voltage protection	Latch off,power on again after fault correction	
	Over temperature protection	Latch off,power on again after fault correction	
	surge capacity	L-N: 1KV	
	Withstand voltage	Input-Output:3000V/5mA/1min	
	Ta(C)	-20...45(See derating curve)	

Ambient and Life	Tc max.(C)	max.90
	Storage Temperature(C)	-30...80
	ambient humidity range	5%...85%RH, Not condensing
	nominal life-time(hrs)	50'000@Ta
Other	dimensions (L×W×H)(mm)	334.8mm * 41.5mm * 27.5mm
	weight(g)	550
	casing material	Plastics
	housing colour	
	type of protection	IP20
	protection class	class II
	certificate	

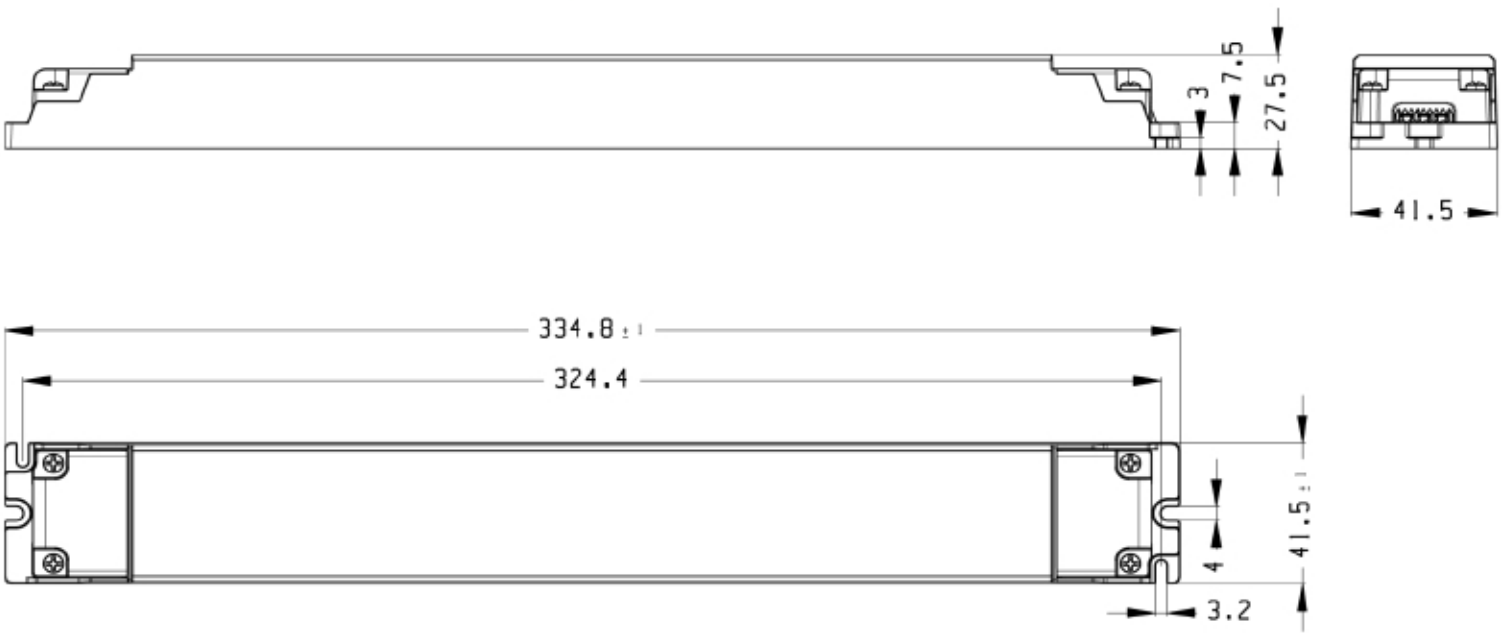
Note

1.Tolerance:includes set up tolerance, line regulation and load regulation.
2.Tested at full load,230Vac.Refer to"Power Factor" and "EFFICIENT"curve graphs.
3.Calculate the model's average efficiency for each test voltage by testing at 100%, 75%, 50%, and 25% of rated current and then computing the simple arithmetic average of these four values.
4.All parameters NOT specially mentioned are measured at nominal voltage input, rated load and 25 of ambient temperature.
5.The power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment manufacturers must re-qualify EMC Directive on the complete installation again.

Function	Press time
Status no change	<0.05 sec.
Push ON/OFF	0.1-1 sec.
Long press to dim down or up	1.5-10 sec.
Long press in the off state, dimming from the minimum value	>1 sec.

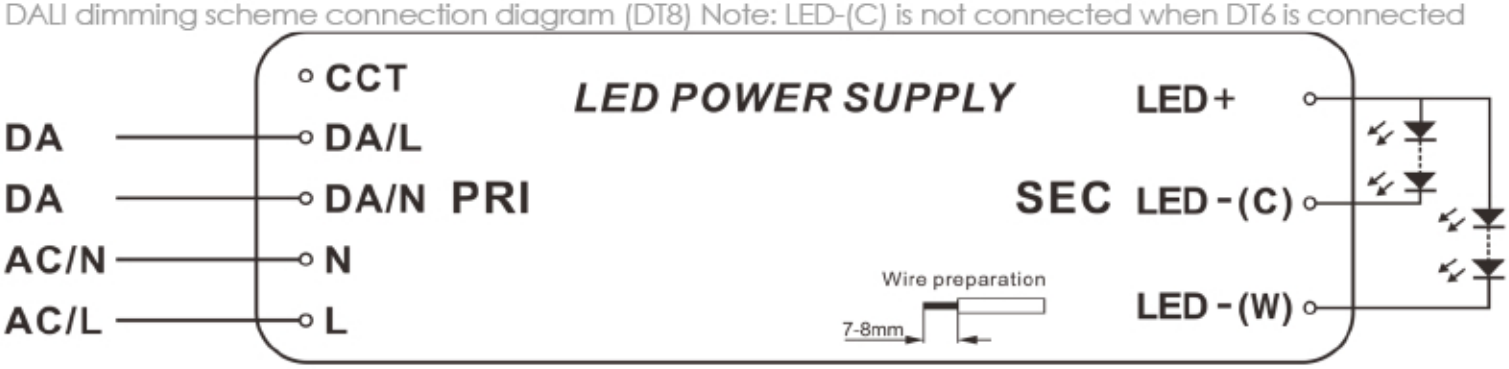
PUSH button dimming/color temperature adjustment.
Dimming: long press .
Switch: short press.
Dimming memory: When the light is turned off and turned on again, the light will return to the previously adjusted brightness level.
Each long press will adjust the brightness in the opposite direction.
Long press for more than 15S is a synchronization function, and all devices will be adjusted to 50%. Press and hold again to adjust the dimming brightness downward. (DT8 color temperature will be unified to 4500K, and long press again will adjust the color temperature downward.)

Dimensions(mm)

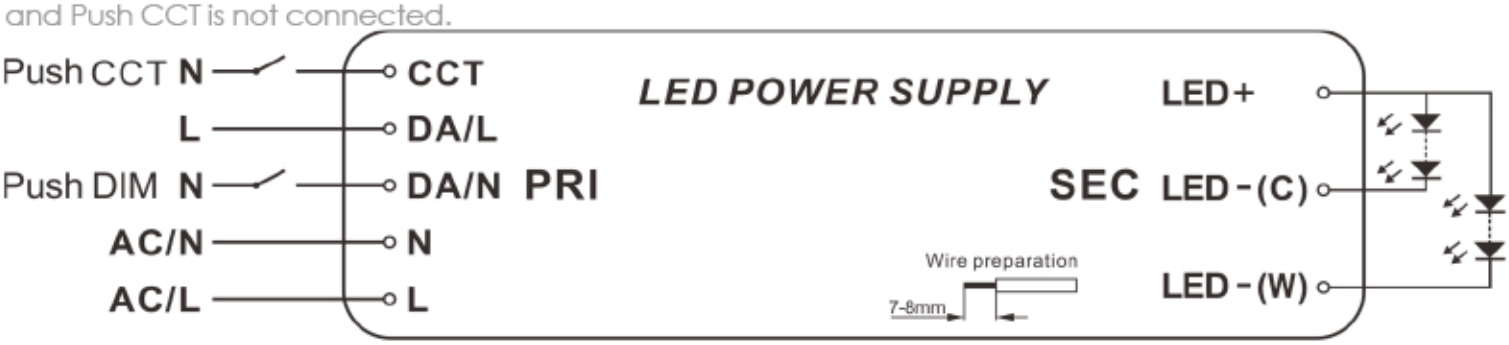


Wiring Diagram

DALI dimming scheme connection diagram (DT8) Note: LED-(C) is not connected when DT6 is connected



PUSH dimming scheme connection diagram (DT8) Note: When DT6 is connected, LED-(C) is not connected and Push CCT is not connected.



AC	H03VVH2-F 2*0.75mm2
DALI	H03VVH2-F 2*0.75mm2
DC	H05VVH2-F 2*1.0mm2

Electrical curves

Fig. 1 Output load-Temperature curve

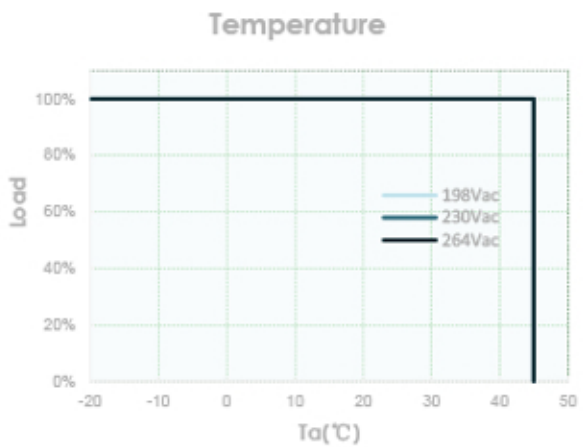


Fig. 2 Static characteristic curve

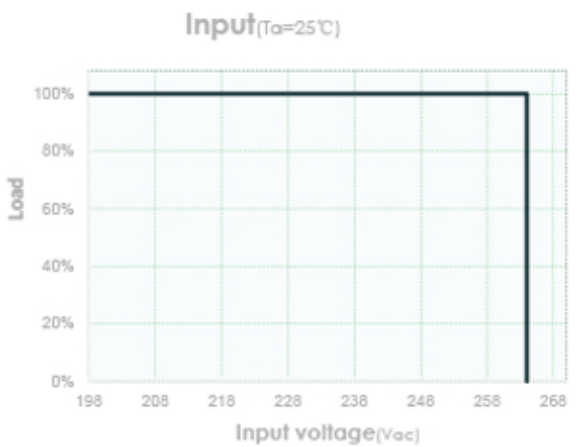


Fig. 3 I-V curve

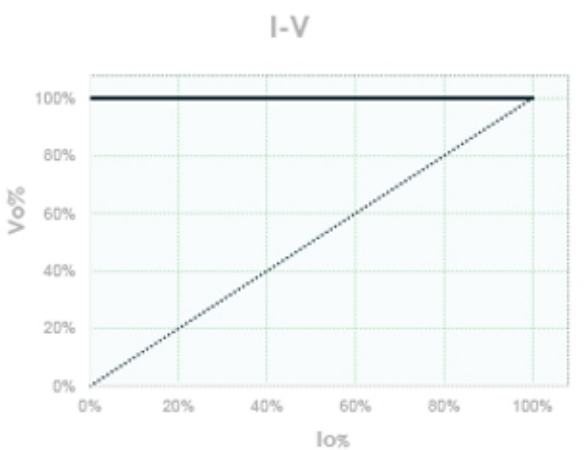


Fig. 4 Power factor characteristic curve

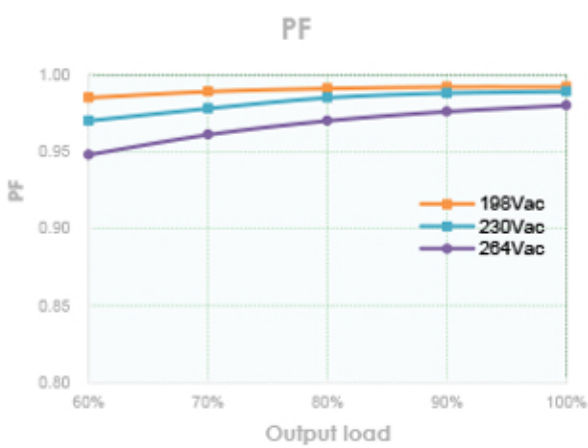


Fig.5 Total harmonic distortion curve（THD）

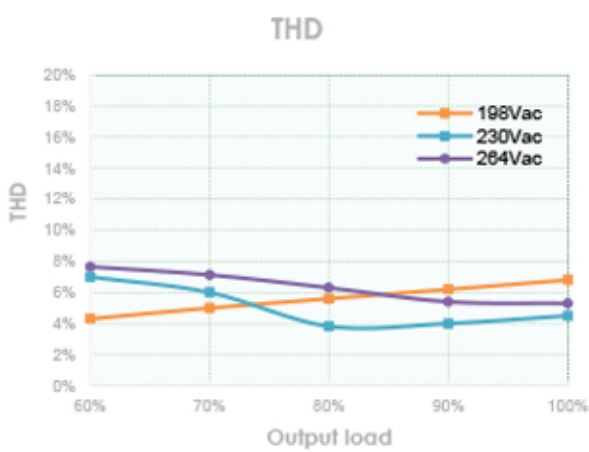
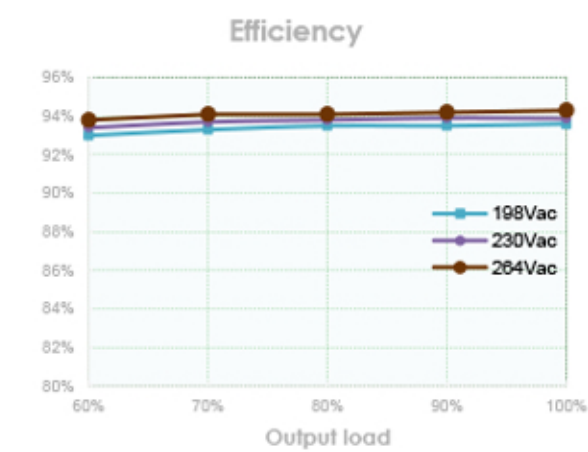


Fig.6 Efficiency-Load curve



MCBS

MCBS / Model	B10	B13	B16	B20	C10	C13	C16	C20
CVPD2-2CH-240-24-L20	3	3	4	5	3	4	5	7
CVPD2-2CH-240-48-L20	3	3	4	5	3	4	5	7

Package

Model	Carton quantity(pcs)	Carton dimension(mm)	G.W./CTN(kg)
CVPD2-2CH-240-24-L20			
CVPD2-2CH-240-48-L20			

Revision history

Date	Rev.	Remark
2023.11.14	A3	Version update
2023.12.18	A4	Push diagram added