

Constant Current Dimmable Driver

Model:CC21W150-500 DALI



Model	Output Current	Input Current	Input Power	Output Power Range	PF	Efficiency (typ.)*	Output Voltage	No load Voltage
CC21W150-500 DALI	150mA	0.04A	8.4W	1.35-6.75W	0.88	80%	9-45V	59V Max.
	200mA	0.05A	10.8W	1.80-9.00W	0.91	83%		
	250mA	0.06A	13.2W	2.25-11.25W	0.93	85%		
	300mA	0.07A	15.6W	2.70-13.50W	0.95	86%		
	350mA	0.08A	18.1W	3.15-15.75W	0.96	87%		
	400mA	0.09A	20.6W	3.60-18.00W	0.96	87%		
	450mA	0.10A	23.0W	4.05-20.25W	0.97	88%		
	500mA	0.11A	23.8W	4.50-21.00W	0.97	88%	9-42V	

* Test result @230V, 50Hz, Full Load.

1. Parameters

Category	Item	Technical Norm
Features	Output Type	Constant Current
	Dimming Type	DALI-2 / Touch DIM
	Output Features	Isolation
	IP Grade	IP20
	Insulation Class	Class II (compatible Class)

Input	Rated Input Voltage	220-240VAC
	Range of Input Voltage	198-264VAC
	Range of DC Input Voltage	180-280VDC
	Frequency	0/50/60Hz, Range:0/47-63Hz
	Input Current	≤0.11A (230VAC, full load)
	Input Power	≤23.8W (230VAC, full load)
	Power Factor	≥0.97 (230VAC, full load)
	THD	≤10% (230VAC, full load)
	Standby Power Consumption	≤0.45 W Dim to off, 230VAC
	Inrush Current	≤15A/21us (230VAC, full load)
	Connected quantity of 10A Breaker Connected quantity of 16A Breaker Connected quantity of 20A Breaker	13pcs/type A ; 21pcs/type B ; 33pcs/type C 21pcs/type A; 33pcs/type B ; 53pcs/type C 26pcs/type A; 42pcs/type B ; 67 pcs/type C
Output	Output Voltage Range	9-45VDC@150-450mA 9-42VDC@500mA
	No Load Voltage	59VDC Max.
	Output Current	150-500mA (Factory set current of 150mA)
	Max. Output Power	21 W
	Efficiency	≥88% 230VAC, full load@max current
	Output LF current ripple (< 120 Hz)	±3% (Imax-Imin) / (Imax+Imin)
	Current Accuracy	±5%
	PSTLM	≤1
	SVM	≤0.4
	Starting Time (AC mode)	≤0.8S (230VAC, full load, by DALI system)
	Starting Time (DC mode)	≤0.4S
	Switching over time (AC/DC)	≤0.4S
Control Method	PUSH dimming	PUSH dimming (Max. lead wire length: 20m, same port of DALI)
	DALI function	DALI dimming (Max. lead wire length: 30m) logarithm or linear dimming curve selectable
	Dimming range	DALI dimming: 1%-100%
Protection	Short Circuit Protection	Auto Recovery
	Overload Protection	Auto Recovery (not be hot swap)
	No-load Protection	Auto Recovery
	Insulation voltage	3000V 5mA 60S between P-S
	Insulation resistance	>100M ohm @ 500VDC
	Leakage current	< 700μA, I/P to O/P @230V input

Environment	Ta/Operation Temperature	-20....+45°C
	Ts/Storage Temperature	-20....+80°C
	Tc/Enclosure Temperature	80°C
	Humidity	10%....90%RH
	Atmosphere	86-108KPa
Construction	Connection Method	Push-in Terminal
	Installation	Built-in
	PRI Wire preparation	PVC,VDE certificated,0.5-1.5 [□] ,with 8mm tin
	SEC Wire preparation	PVC,VDE certificated,0.5-1.5 [□] ,with 8mm tin
	DALI Wire preparation	PVC,VDE certificated,0.5-1.5 [□] / 8-9mm
	Dimension	97.5*44*23mm (L*W*H)
Standards	Certification	CE/ENEC/SAA/UKCA/EAC/CB
	Safety Standards	EN61347-1:2015/A1:2021; EN61347-2-13:2014/A1:2017; EN62384:2006/A1:2009; AS 61347.2.13:2018; AS/NZS61347.1:2016; BS EN61347-1:2015/A1:2021; BS EN61347-2-13:2014/A1:2017; IEC 61347-1:2015+A1:2017; IEC 61347-2-13:2014+A1:2016;
	EMC Standards	AS/NZS CISPR 15:2011; AS CISPR 15:2017 ; BS EN IEC 55015:2019+A11:2020; EN 61547:2009; BS EN IEC 61000-3-2:2019; BS EN 61000-3-3:2013+A1:2019;
	Performance	EN 62384
	DALI Performance	EN 62386-101 (DALI-2) EN 62386-102 (DALI-2) EN 62386-207 (DALI-2, including part 251, 252, 253)
	Surge	L/N-Ground:2kV; L-N:1kV
Others	RoHS	complied to 2011/65/EU
	Life Time	50000h Tc=80°C
		75000h Tc=75°C
		100000h Tc=70°C
	Warranty	5years, F.R. <10000ppm

Remark:

- 1.All Parameters, if not specified, are measured at 230VAC/50Hz and 25°C ambient temperature.
- 2.LED Driver is a component of the luminaires. Luminaires and wire layout will affect the EMC, please check the EMC with end products again.
3. Please make sure Tc under Lifetime condition when long term operate under DC input.
4. Light output level in DC operation: (factory default = 100 %, EOFi = 1).

2. Label



KGP Electronics GmbH
Hueckstraße 19
DE-58511 Lüdenscheld

wire preparation
[8-9mm]

PR: 0.5-1.5 °
DALI: 0.5-1.5 °
SEC: 0.5-1.5 °

AM DIMMING

PUSH-CONTROL

CC21W150-500 DALI
Constant Current LED Power Supply

LED Dimmable Driver

PIN1	PIN2	PIN3	I _{rated} [mA]	P _{rated} [W]	U _{rated} [V]	U _N /f _N	I _N [A]	t _a [°C]	t _c [°C]	λ
OFF	OFF	OFF	150	6.7	9-45	220-240VAC 0/50/60Hz Rang of application: 180-280VDC	0.04	45	80	0.88C
OFF	OFF	ON	200	9.0			0.05			0.91C
OFF	ON	OFF	250	11.2			0.06			0.93C
OFF	ON	ON	300	13.5			0.07			0.95
ON	OFF	OFF	350	15.7			0.08			0.96
ON	OFF	ON	400	18.0			0.09			0.96
ON	ON	OFF	450	20.2			0.10			0.97
ON	ON	ON	500	21.0			0.11			0.97

ON-OFF

3
2
1

+ • I₊
- • I₋ SEC

U_{out}=59V
LED Only

EL







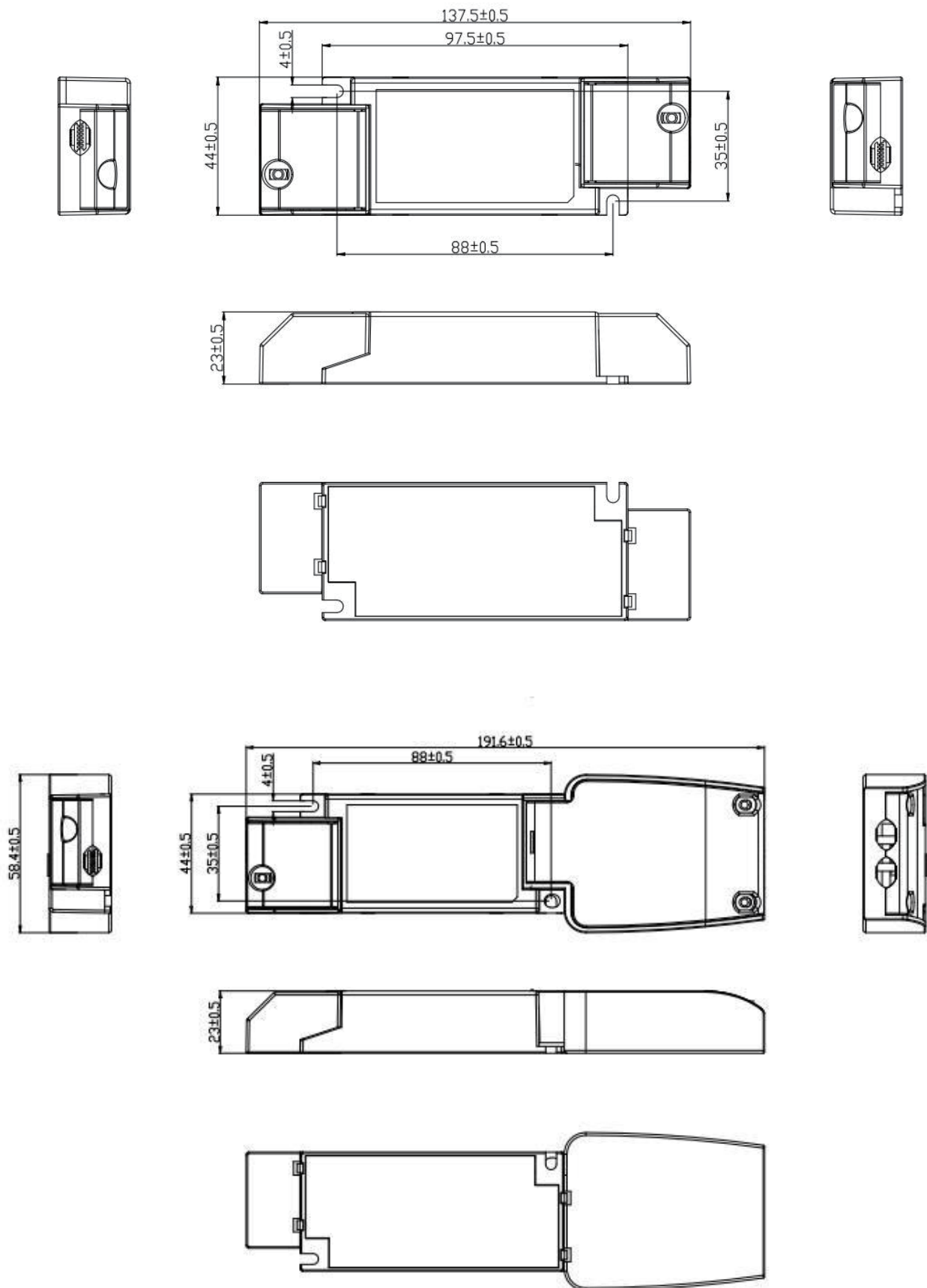




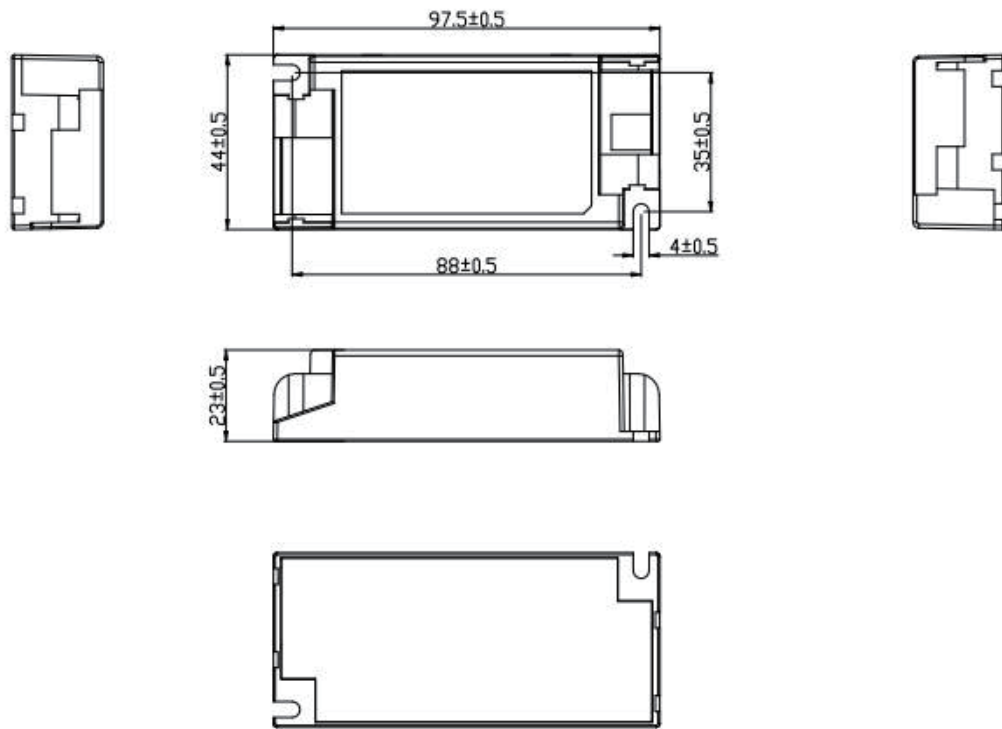
3. Output Current Setting

Output Current	1	2	3
150mA	-	-	-
200mA	-	-	ON
250mA	-	ON	-
300mA	-	ON	ON
350mA	ON	-	-
400mA	ON	-	ON
450mA	ON	ON	-
500mA	ON	ON	ON

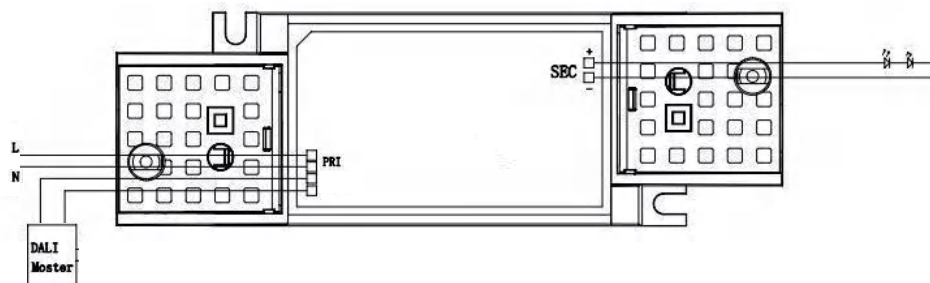
4. Dimension



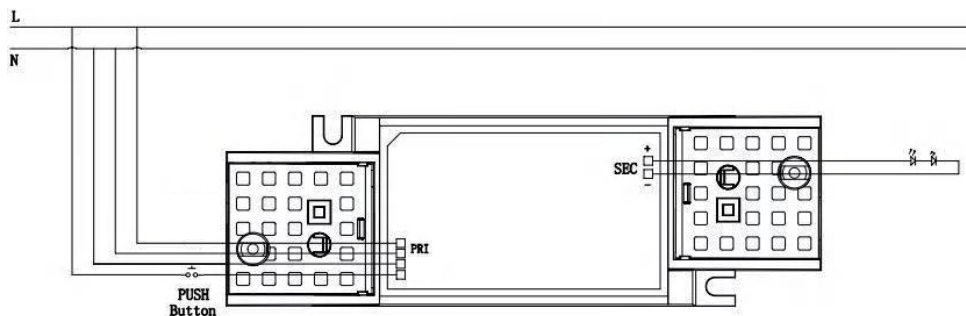
Built in type:



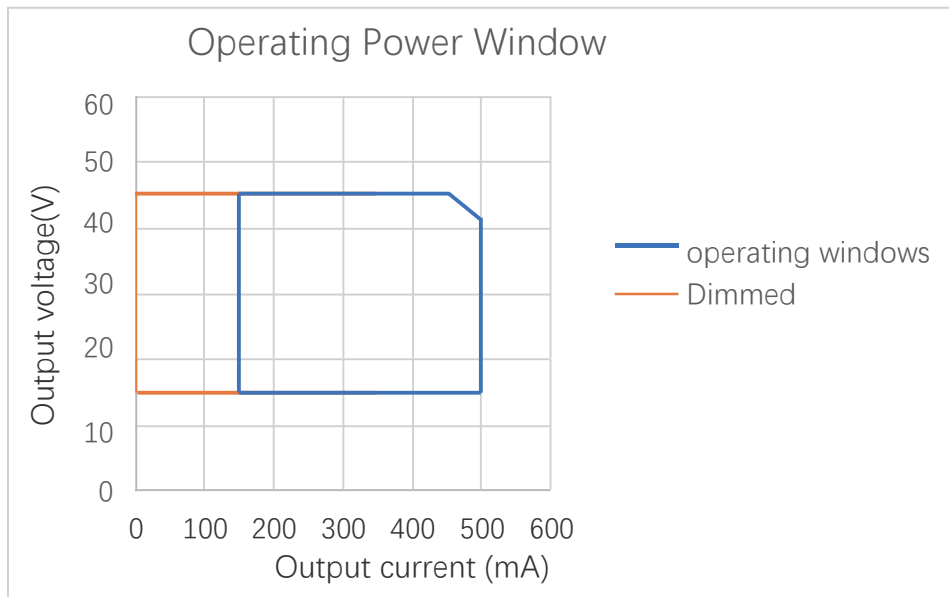
5. Wiring Diagram



Push Dimming



6. Output Power Window



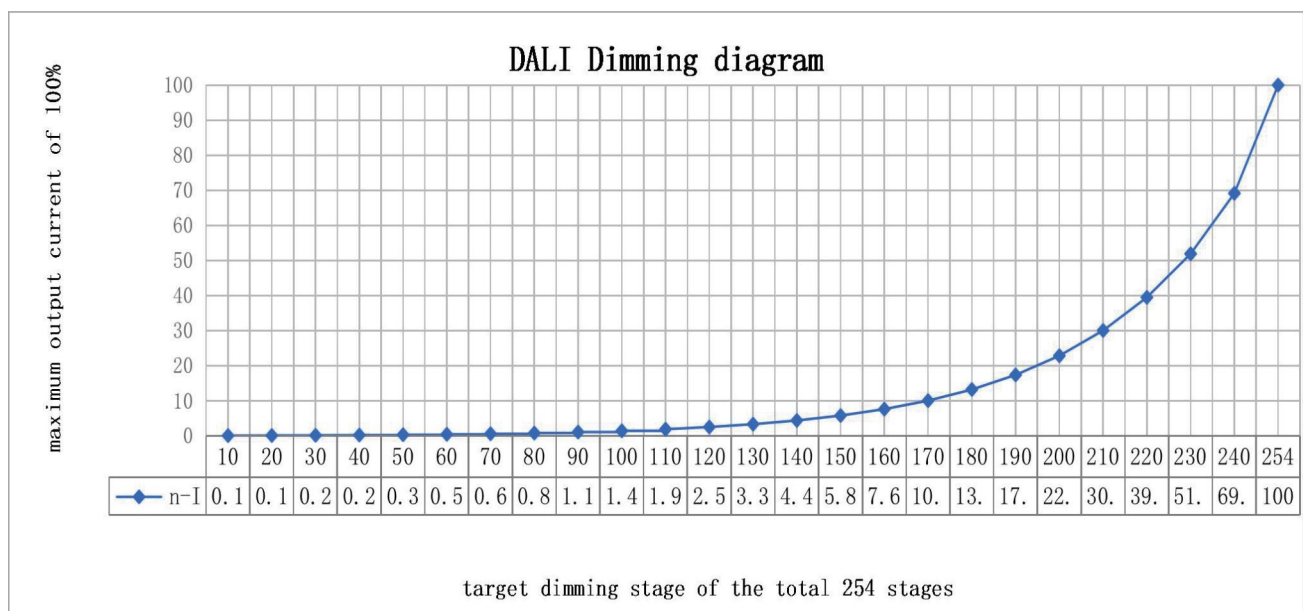
7. DALI dimming curve

formula for DALI dimming.

$$X(n)=10^{\{[(n-1)/(253/3)]-1\}},$$

Here, n means the target dimming stage of the total 254 stages.

X(n) means the percent of the maximum output current



8. Packing information

SC

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
398*230*130	100	0.081	8.12	8.46

Small side cover

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
395*295*125	82	0.104	10.40	10.73

Large side cover

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
395*295*125	48	0.142	14.20	14.53

9. Push Dim :

9.1 On / off:

Short push (120ms-600ms) on the switch

Stepless dimming: long push (> 0.6sec) on the switch

9.2 Power-on memory function

When the LED driver is powered on, it will restore the memory before the LED driver is powered off. (brightness remembers the brightness after the last dimming is stable, and the brightness during dimming is not memorized)

9.3 Light on/off

If the light is on, the light will be off after a short press. If the light is off, the light will be on after a short press. The time range of short press is 120-600mS.

9.4 PUSH Dimming

Press and hold the push switch for a long time, the light will enter the dimming state, if the previous time is dimming, it will automatically turn to dimming the next time. After releasing the reset button, the dimming stops and the current illuminance is maintained. The dimming range is 1%-100%. The default is to dim when the power is first long-press. If the brightness of the power-on is the maximum brightness, the first long-press is to dim. (Long press 0.6-3S to start dimming.)

9.5 Forced synchronization

Long press for 10 seconds to turn on all the lights and turn on the same brightness (50%), and continue to quickly short press will not change. After a short period of time without short press operation, the module exits the synchronization mode, and the short press restores the switch function.

9.6 PUSH Dimming rate

Long press the push switch 10S to switch the dimming rate to 3S, Long press the push switch 20S to switch the dimming rate to 6S, and it can also be changed by MAGIC or production software.

10. REVISION HISTORY

Date	Revision	Remark