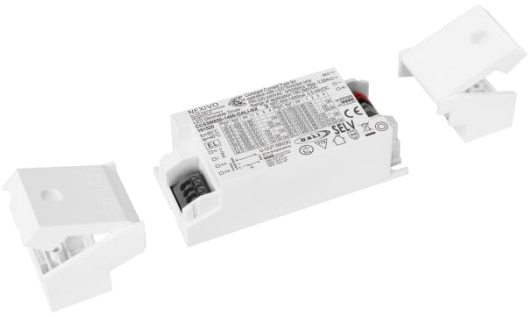
NEXIVO
by KGP Electronics GmbH

CC53W650-1400-DALI-NX

Constant Current Dimmable Driver

Model:CC53W650-1400-DALI-NX



Model	Item Code	Output current	Input current	Input power	Output power range	PF	Efficiency	Output voltage	No load voltage
CC53W650-1400-DALI-NX	161520	650mA	0.13A	32.10W	1.60-28.60W	0.96	89%	2.5-44V	59V Max.
		700mA	0.14A	34.60W	1.80-30.80W	0.96	89%		
		750mA	0.15A	36.60W	1.90-33.00W	0.97	90%		
		800mA	0.16A	39.10W	2.00-35.20W	0.97	90%		
		850mA	0.17A	41.50W	2.10-37.40W	0.97	90%		
		900mA	0.18A	44.00W	2.30-39.60W	0.97	90%		
		950mA	0.19A	46.40W	2.40-41.80W	0.97	90%		
		1000mA	0.20A	48.80W	2.50-44.00W	0.98	90%		
		1050mA	0.22A	51.90W	2.60-46.20W	0.98	89%		
		1100mA	0.23A	54.40W	2.80-48.40W	0.98	89%		
		1150mA	0.24A	56.80W	2.90-50.60W	0.98	89%		
		1200mA	0.26A	59.30W	3.00-52.80W	0.98	89%		
		1250mA	0.26A	59.00W	3.10-52.50W	0.98	89%	2.5-42V	
		1300mA	0.26A	58.40W	3.30-52.00W	0.98	89%	2.5-40V	
		1350mA	0.26A	59.10W	3.40-52.70W	0.98	89%	2.5-39V	
		1400mA	0.26A	59.80W	3.50-53.20W	0.98	89%	2.5-38V	

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

1. Parameters

Category	Item	Technical Norm
Features	Output Type	Constant Current
	Dimming Type	Amplitude (DALI-2)
	Output Features	Isolation
	IP Grade	IP20

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	Insulation Class	Class II
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
	Overvoltage protection	2h@380VAC, 48h@320VAC
	Input Current	≤0.26A
	Input Power	≤59.80W
	Power Factor	≥0.98 (230VAC ， full load)
	THD	≤10% (230VAC ， full load)
	Standby Power Consumption	≤0.45W Dim to off, 230VAC
	Inrush Current	≤10.1A/16us (230VAC，full load)
	Connected quantity of 10A Breaker Connected quantity of 13A Breaker Connected quantity of 16A Breaker Connected quantity of 20A Breaker	19pcs/type A ;30pcs/type B ;49pcs/type C 25pcs/type A ;40pcs/type B ;64pcs/type C 30pcs/type A;49pcs/type B ;79pcs/type C 38pcs/type A;61pcs/type B ;99pcs/type C
Output	Output Voltage Range	2.5-44VDC@650-1200mA, 2.5-42VDC@1250mA 2.5-40VDC@1300mA, 2.5-39VDC@1350mA 2.5-38VDC@1400mA
	No Load Voltage	59VDC Max.
	Output Current	650-1400mA (Factory set current of 650mA)
	Max. Output Power	53.2W
	Efficiency	≥90% @750-1000mA,230VAC
	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	Secondary PUSH dimming	Secondary PUSH dimming (Max. lead wire length：20m, same port of DALI）
	PUSH-button	Max parallel connections qty for Push-dim 15
	DALI function	DALI dimming (Max. lead wire length：300m） 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

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CC53W650-1400-DALI-NX

Environment	Ta/Operation Temperature	-20….+40℃
	Ts/Storage Temperature	-20….+85℃
	Tc/Enclosure Temperature	85℃
	Humidity	10%.... 90%RH
	Atmosphere	86-108KPa
Construction	Connection Method	Push-in Terminal
	Installation	Build-in & Independent
	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 ,8mm
	SEC Wire preparation	0-0.8±0.05m (The EMC test results were achieved at approximately 0.8 meters) (the length required by the standard). If there are any data differences, please test according to the length required by the standard)
	Dimension	97*43*30mm (L*W*H)
Standards	Certification	CE
	Safety Standards	EN61347-1:2015/A1:2021; EN61347-2-13:2014/A1:2017;
	Performance	EN62384
	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	compliedto2011/65/EU
	Life Time	50000h Tc=85℃
		75000h Tc=80℃
		100000h Tc=75℃
	Warranty	5years ， F.R. < 10000ppm

Remark:
1.All Parameters, if not specified, are measured at 230VAC/50Hz and 25℃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).
5.During the PUSH DIM test, the number of parallel connections must be less than 15PCS.
6.When the lamps and the power supply are connected in a common ground state, there is no residual light phenomenon when the output voltage is above 12V, but there is residual light phenomenon when the output voltage is below 12V.

Distance	15m	30m	50m
Cable selection	0.5mm²	0.75mm²	1.0mm²

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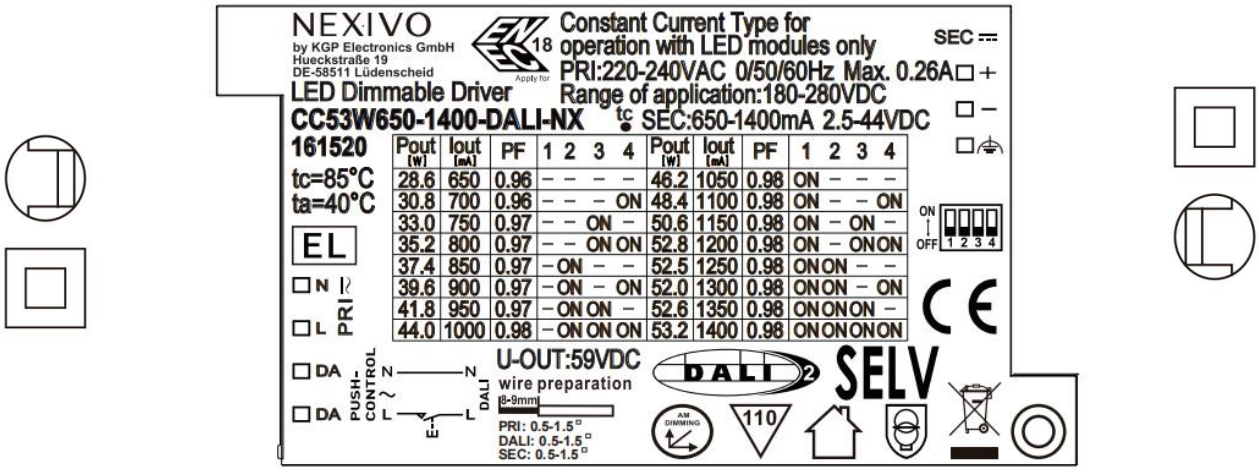
2. Label

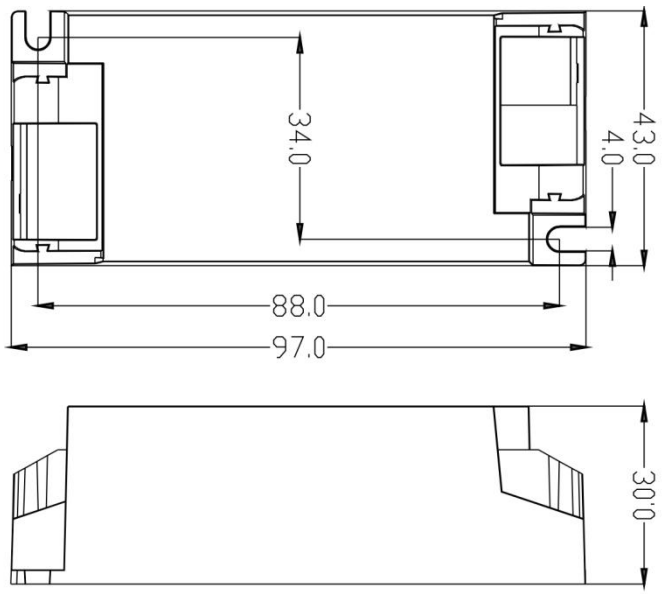


3. Output current setting

Output Current	1	2	3	4
650mA	-	-	-	-
700mA	-	-	-	ON
750mA	-	-	ON	-
800mA	-	-	ON	ON
850mA	-	ON	-	-
900mA	-	ON	-	ON
950mA	-	ON	ON	-
1000mA	-	ON	ON	ON
1050mA	ON	-	-	-
1100mA	ON	-	-	ON
1150mA	ON	-	ON	-
1200mA	ON	-	ON	ON
1250mA	ON	ON	-	-
1300mA	ON	ON	-	ON
1350mA	ON	ON	ON	-
1400mA	ON	ON	ON	ON

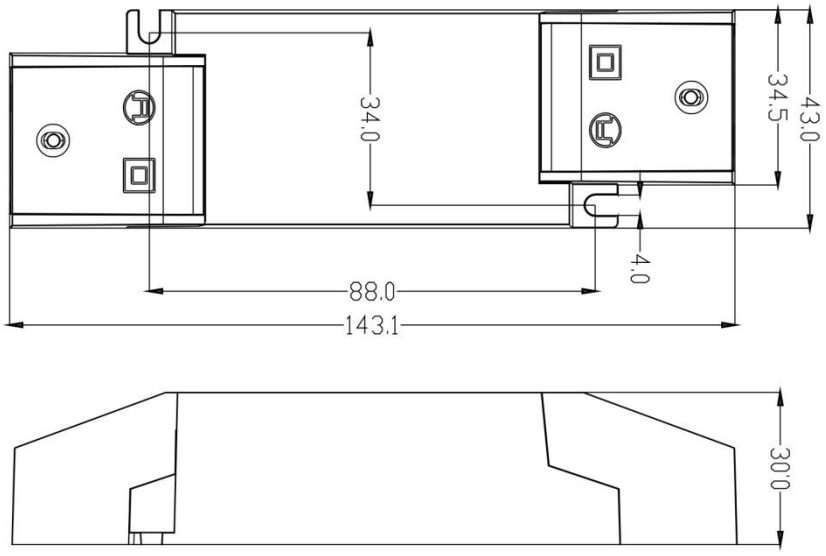
4. Dimension（Unit：mm）

Built in type:

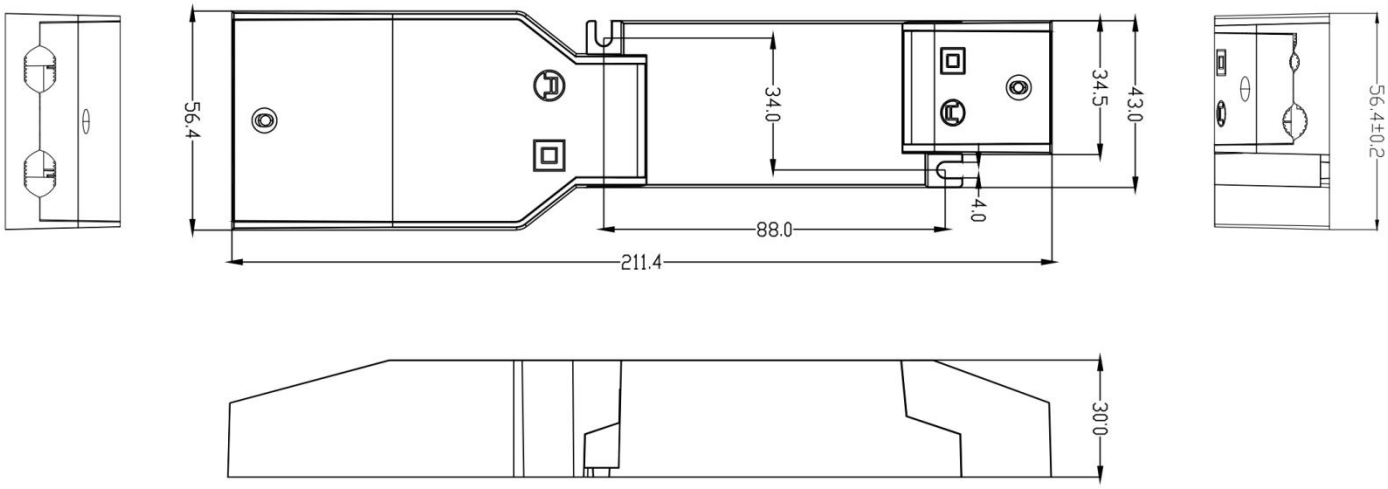


Compatible Small Strain reliefs::SR_CC_44-53-60
Compatible Large Strain reliefs:SR_CC_44-53-60_5POL

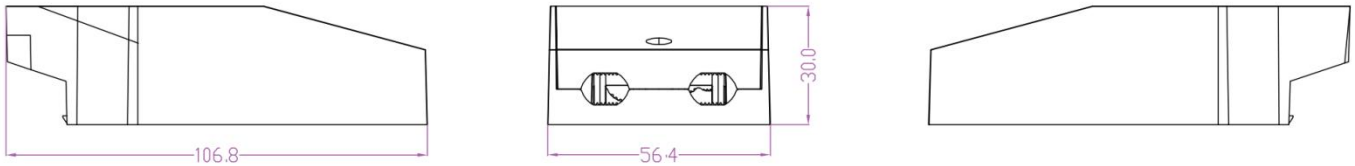
Small Strain reliefs



Large Strain reliefs



Large Strain reliefs specifications



Tolerance for dimensions ± 0.1 mm

*Unless otherwise stated in the driver datasheet (for independent installation). Note! Tc max temperature of the driver shall not be exceeded.

Mechanical, Operating & Storage Conditions

Driver cross-section dimensions: 55.4-57.4 x 29.0-31.0 mm

Wire size: 0.5 - 2.5 mm²

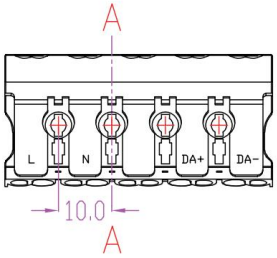
Ambient temperature range: -20…+50 °C

Storage temperature range: -20…+85 °C

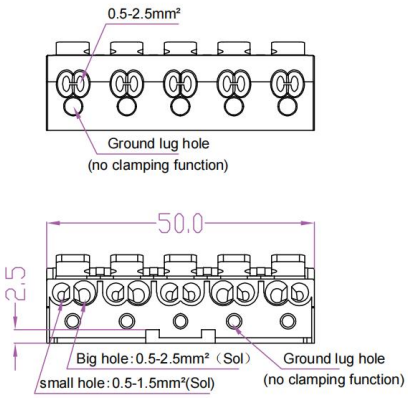
Assembly temperature range: +5...+30 °C

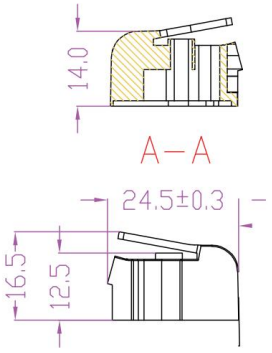
Do not store in wet or humid environment!

Terminal



5 - pole connector for DA / CC drivers with LC-SRB-LOOP





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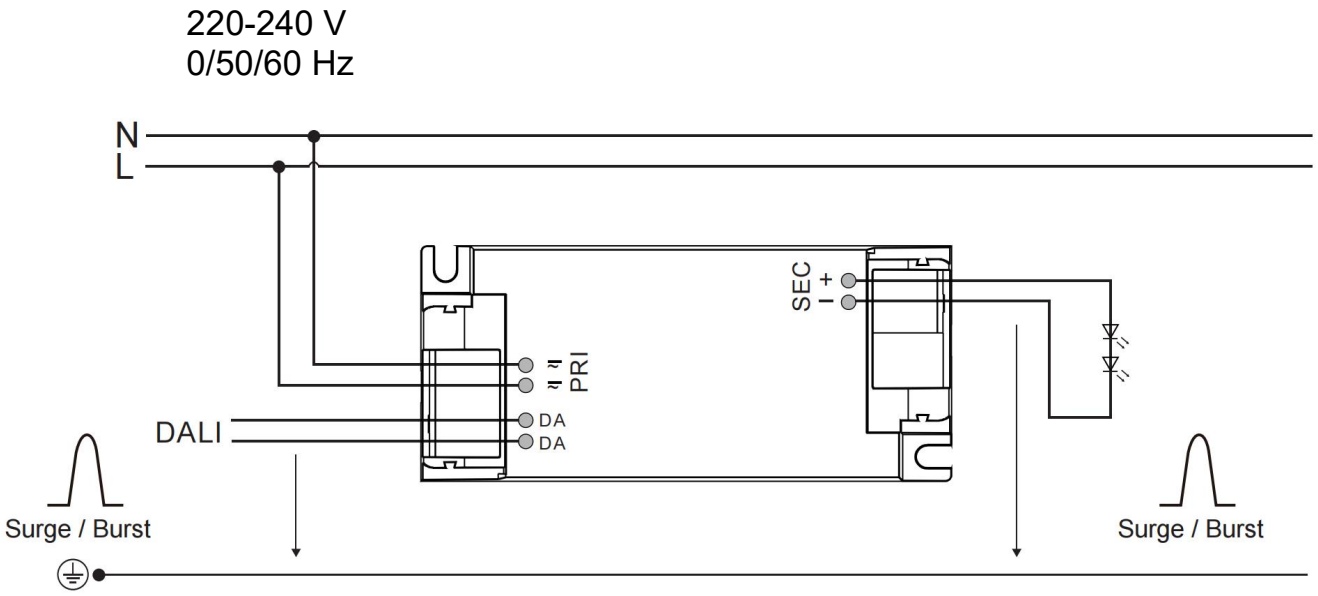
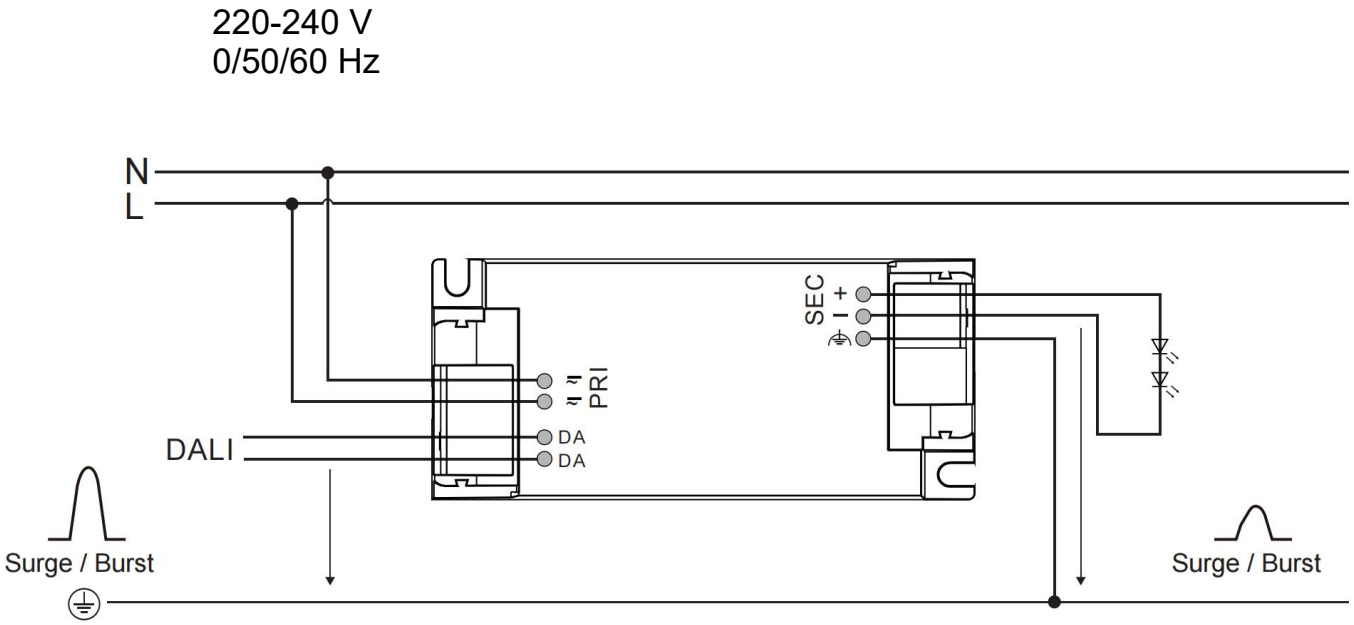
5. Wiring Diagram

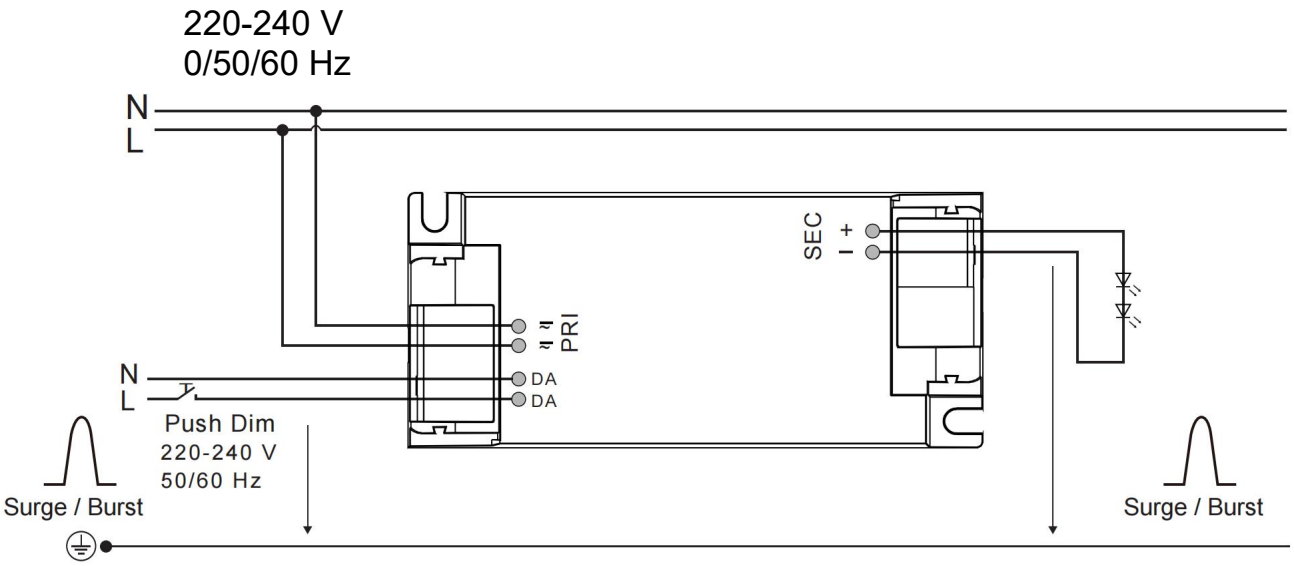
Figure: Voltage peaks for LED driver without earthing (Above) and with earthing (Below)

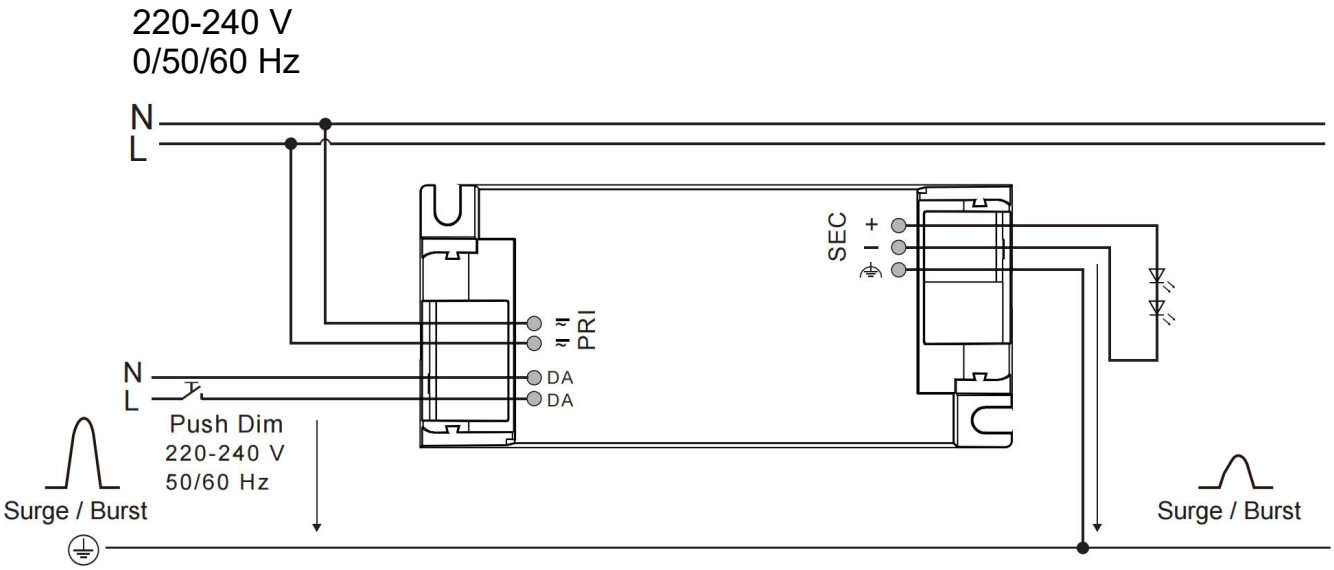




Push Dimming

Figure: Voltage peaks for LED driver without earthing (Above) and with earthing (Below)





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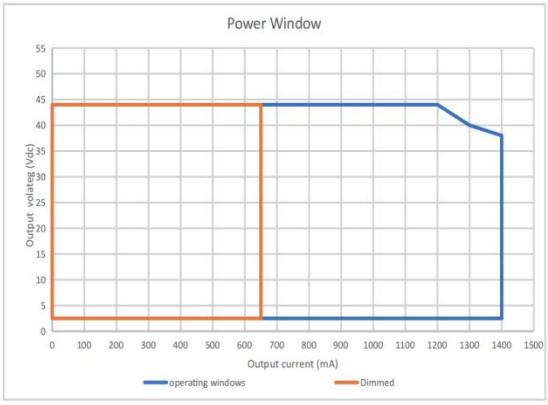
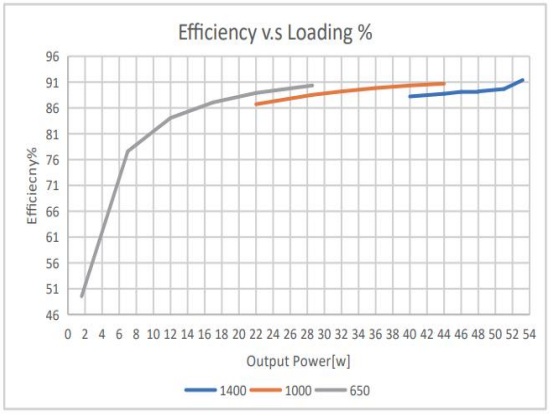
6. Electrical values

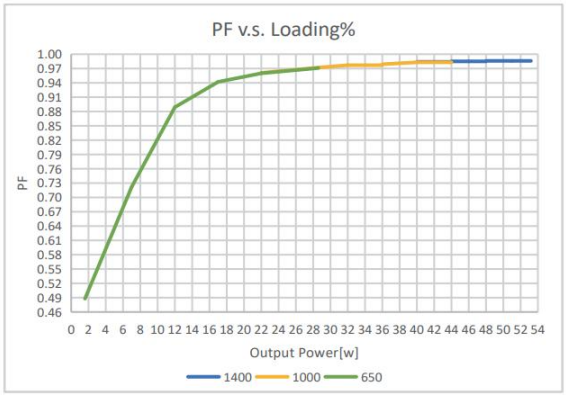
1. Operating power windows



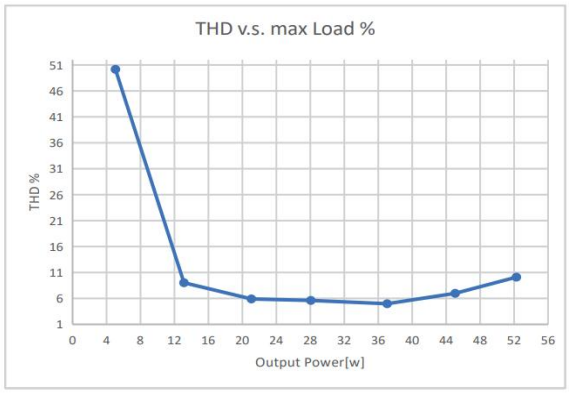
2. Effciency v.s. Load



3. PF v.s. Load

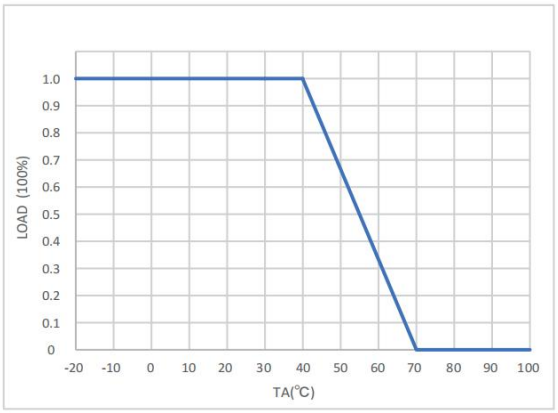


4.THD v.s. Load



5.Life time

6.Derating



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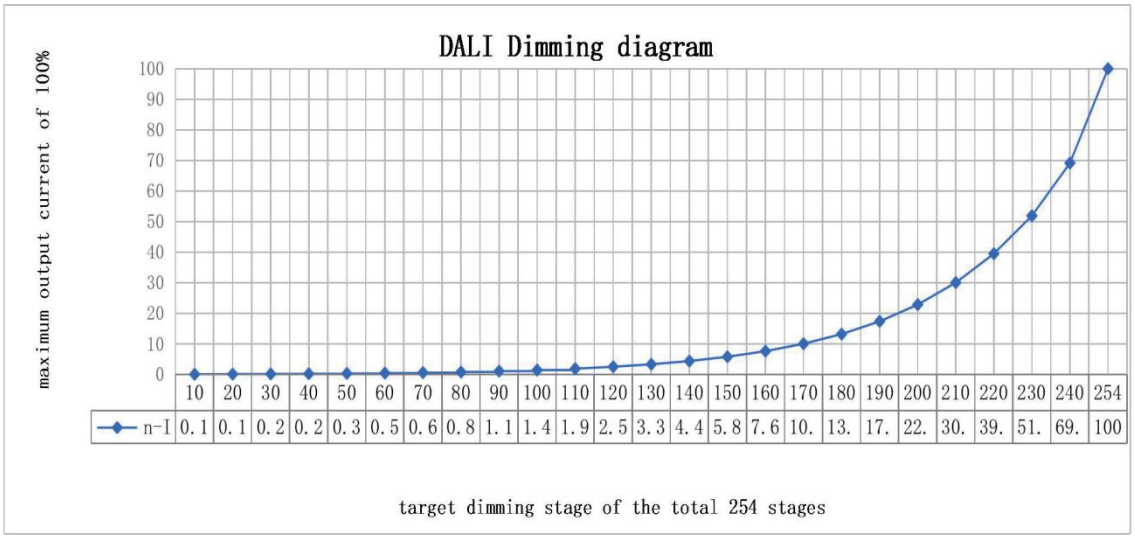
7. DALI dimming curve

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



	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200	210	220	230	240	254
n-I	0.1	0.1	0.2	0.2	0.3	0.5	0.6	0.8	1.1	1.4	1.9	2.5	3.3	4.4	5.8	7.6	10.	13.	17.	22.	30.	39.	51.	69.	100

8. Function of the earth terminal:

The earth connection is conducted as protection earth (PE). The LED Driver can be earthed via earth terminal or metal housing

(if device has metal housing). If the LED Driver will be earthed, protection earth (PE) has to be used. There is no earth connection required for the functionality of the LED Driver. Earth connection is recommended to improve following behaviour.

- Electromagnetic interferences (EMI)
- LED glowing at standby

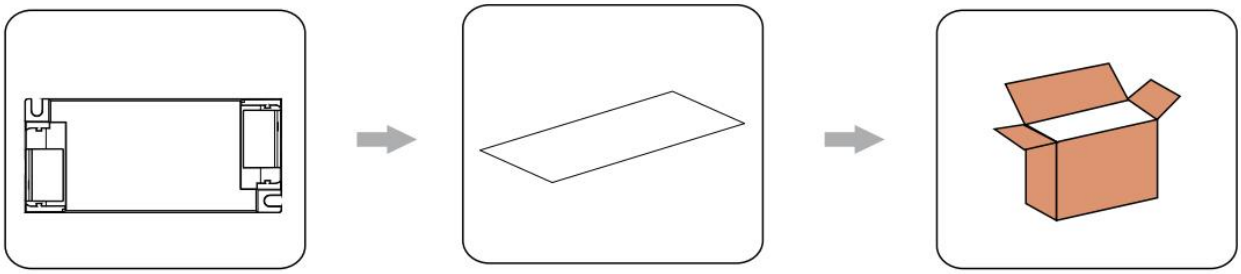
In general, it is recommended to earth the LED Driver if the LED module is mounted on earthed luminaire parts respectively heat sinks and thereby representing a high capacity against earth.

Avoiding residual LED glow on standby Residual LED glow on standby may occur as a result of capacitive leakage currents from the LED module onto earthed luminaire parts (such as the heat sink). This mainly affects high-efficiency LED systems with large surface areas installed in luminaires with protection class 1.

The topology has been improved so that residual LED glow can be virtually eliminated by earthing the devices.

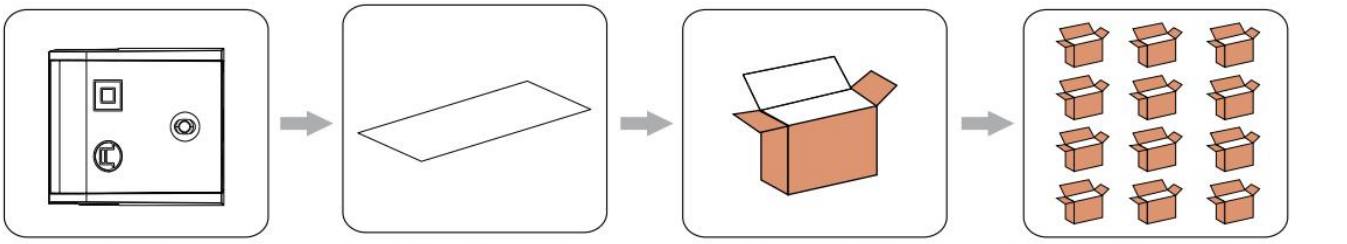
9. Packing information

Built-in type



Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
325*303*240	110	0.151	16.69	17.16

Small Strain reliefs



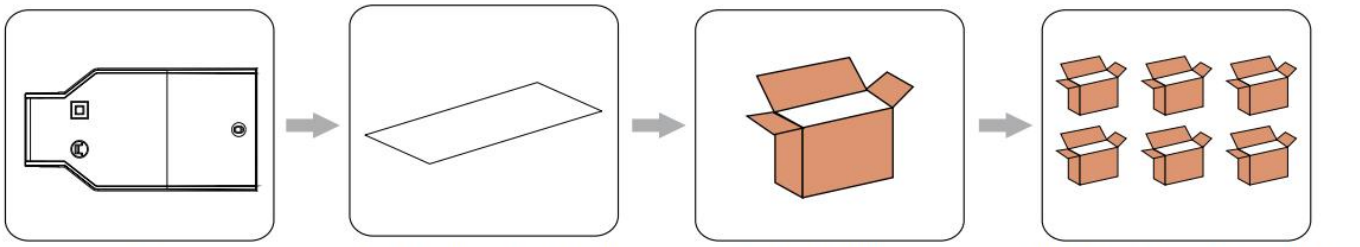
Inner box

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
224*138*90	50	0.018	0.90	1.26

Outer box

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
460*430*195	600	0.018	11.50	12.00

Large Strain reliefs



Product | paper partitions linerboard /Plastic paper | 33 per small box | 33sets/box*6boxs=198pcs/Carton

Inner box

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
300*180*122	33	0.062	2.06	2.35

Outer box

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
375*315*385	198	0.062	12.30	13.90

10. Ordering Data

Model No	Item code
CC53W650-1400-DALI-NX	161520
SR_CC_44-53-60	148001
SR_CC_44-53-60_5POL	148021

11. Constant light output (CLO)

https://www.kdocs.cn/l/cbWalbA1eiBv

12. Push Dim :

12.1 On / off:
Short push (120ms-600ms) on the switch
Stepless dimming: long push (> 0.6sec) on the switch

12.2 Power-on memory function
When the LED driver is powered on, it will restore the memory before the LED driver is poweredoff. (brightness remembers the brightness after the last dimming is stable, and the bright ness during dimming is not memorized)

12.3 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.

12.4 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-onis the maximum brightness, the first long-press is to dim. (Long press 0.6-3S to start dimming.)

12.5 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.

12.6 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.

13. REVISION HISTORY

Date	Revision	Remark
2026.16.03	V0.01	Product release
2026.27.06	V0.02	Add the logo for applying for ENEC certification