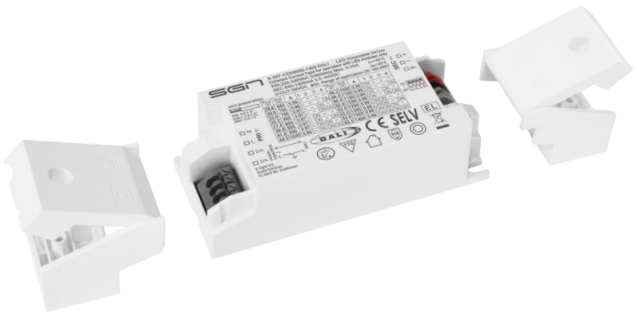
Constant Current Dimmable Driver

- The housing is made from V0 flame retardant PC materials from COVESTRO.
- Small size and light weight. Wide range of applicable lamps.
- Class 2 LED driver, Safety Extra Low Voltage (SELV).
- Innovative thermal management technology intelligently protects the life of the LED driver.
- Overheat, overload, short circuit protection and automatic recovery.
- Up to 50,000-hour life time.
- 5-year warranty (AiSHi capacitor).



The certification icon represents on-going certification applications only, and final certification qualification is subject to actual products.

Model	Output Current	Input Current	Input Power	Output Power Range	PF	Typical Efficiency	Output Voltage	No load Voltage
S-097-C53W650-1400 DALI	650mA	0.23A	31.7W	1.62-28.60W	0.96	90%	2.5-44V	59V
	700mA	0.24A	34.2W	1.75-30.80W	0.96	90%	2.5-44V	59V
	750mA	0.25A	36.6W	1.87-33.00W	0.97	90%	2.5-44V	59V
	800mA	0.26A	39.1W	2.00-35.20W	0.97	90%	2.5-44V	59V
	850mA	0.27A	41.5W	2.12-37.40W	0.97	90%	2.5-44V	59V
	900mA	0.28A	44.0W	2.25-39.60W	0.97	90%	2.5-44V	59V
	950mA	0.29A	46.4W	2.37-41.80W	0.97	90%	2.5-44V	59V
	1000mA	0.30A	48.8W	2.50-44.00W	0.98	90%	2.5-44V	59V
	1050mA	0.31A	51.3W	2.62-46.20W	0.98	90%	2.5-44V	59V
	1100mA	0.32A	53.7W	2.75-48.40W	0.98	90%	2.5-44V	59V
	1150mA	0.33A	56.2W	2.87-50.60W	0.98	90%	2.5-44V	59V
	1200mA	0.34A	58.6W	3.00-52.80W	0.98	90%	2.5-44V	59V
	1250mA	0.34A	58.9W	3.12-52.50W	0.98	89%	2.5-42V	59V
	1300mA	0.34A	58.4W	3.25-52.00W	0.98	89%	2.5-40V	59V
	1350mA	0.35A	59.1W	3.37-52.60W	0.98	89%	2.5-39V	59V
	1400mA	0.35A	59.7W	3.50-53.20W	0.98	89%	2.5-38V	59V

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

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 I)
	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

Schigna Technology
7th Floor,No.13,
Shunde,foshan

Input	Overvoltage protection	2h@380VAC, 48h@320VAC
	Input Current	≤0.35A max
	Input Power	≤59.7W max
	Power Factor	≥0.98 （230VAC，full load)
	THD	≤10% (230VAC，full load)
	Standby Power Consumption	≤0.45W @230VAC (DALI system DIM to off)
	Inrush Current	≤9.5A/16us (230VAC，full load)
	Connected quantity of 10A Breaker Connected quantity of 13A Breaker Connected quantity of 16A Breaker Connected quantity of 20A Breaker	21pcs/type A；33pcs/type B；53pcs/type C@ 230Vac 26pcs/type A ;42pcs/type B ; 68pcs/type C @ 230Vac 33pcs/type A; 53pcs/type B；84pcs/type C@ 230Vac 41pcs/type A; 66pcs/type B；105pcs/type C@ 230Vac
Output	Output Voltage Range	2.5-44VDC@500-1200mA；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% (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	Secondary PUSH dimming	Secondary PUSH dimming (Max. lead wire length:20m,same port of DALI）
	DALI function	DALI dimming (Max. lead wire length:300m） logarithm or linear dimming curve selectable
	Dimming range	DALI dimming: 1%-100%
	PUSH-button	Max parallel connections qty for Push-dim 15
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 L/N to PE
	Leakage current	< 700μA, I/P to O/P @230V input
Environment	Ta/Operation Temperature	-20….+40℃
	Ts/Storage Temperature	-20….+85℃
	Tc/Enclosure Temperature	85℃
	Humidity	10%....90%RH
	Atmosphere pressure	86-108KPa
Construction	Connection Method	Push-in Terminal
	Installation	Built-in/Independent
	Dimension	97*43*30mm (L*W*H)
	SEC Wire preparation	PVC,VDE certificated,0.5-1.5□ ,with 8mm tin
	PRI Wire preparation	PVC,VDE certificated,0.5-1.5□ ,with 8mm tin
	DALI Wire preparation	PVC,VDE certificated,0.5-1.5□/ 8-9mm
Standards	Certification	CE
	Safety Standards	EN61347-1:2015/A1:2021; EN61347-2-13:2014/A1:2017;
	DALI performance	EN 62386-101 (DALI-2),EN 62386-102 (DALI-2) EN 62386-207 (DALI-2, including part 251, 252, 253)
	Performance	EN 62384
	Surge	L/N-Ground:2kV； L-N:1kV

Others	RoHs	2011/65/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.

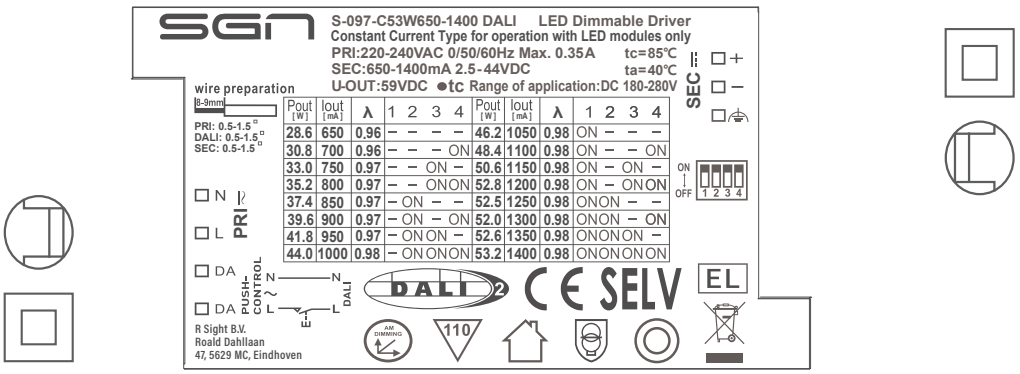
3.Please make sure Tc under Lifetime condition when long term operate under DC input.

4.DC emergency (DCemDim):Default 15%, EOFx range = 1 .. 100% (EOFx = DCemDIM level).

5.During the PUSH DIM test,the number of parallel connections must be less than 15PCS.

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

Label

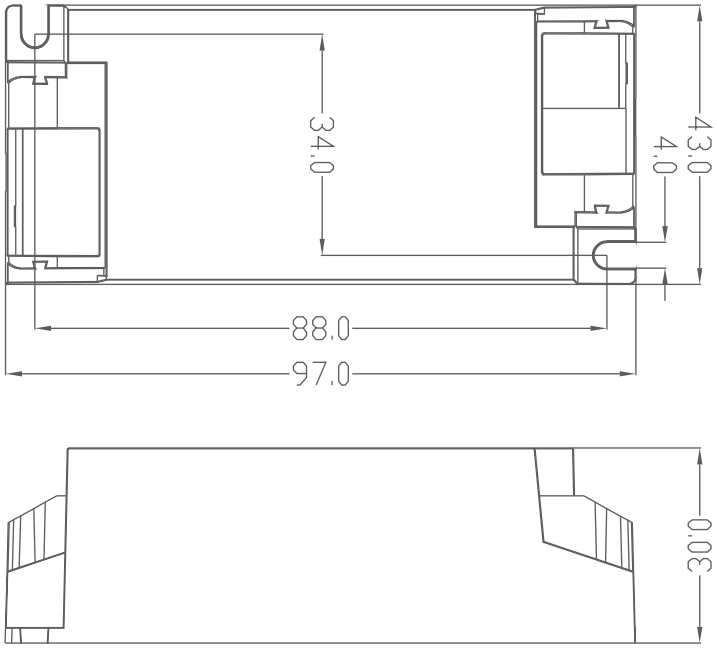


Output Current Setting

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

Dimension

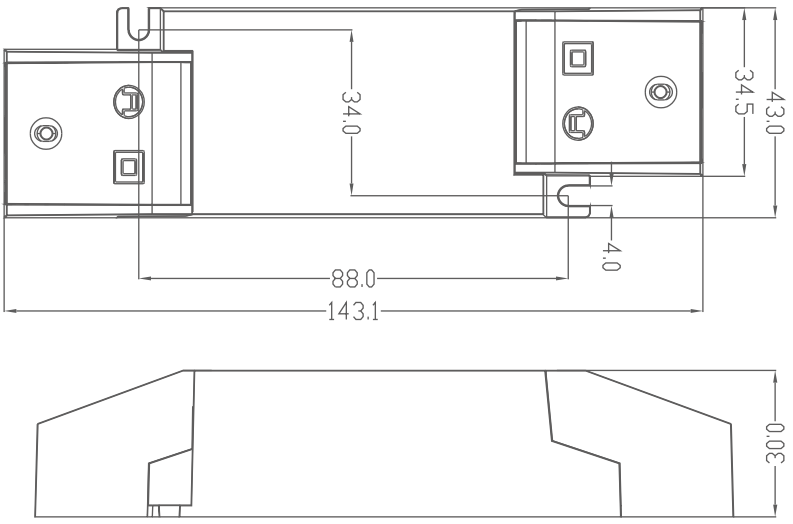
Built in type:



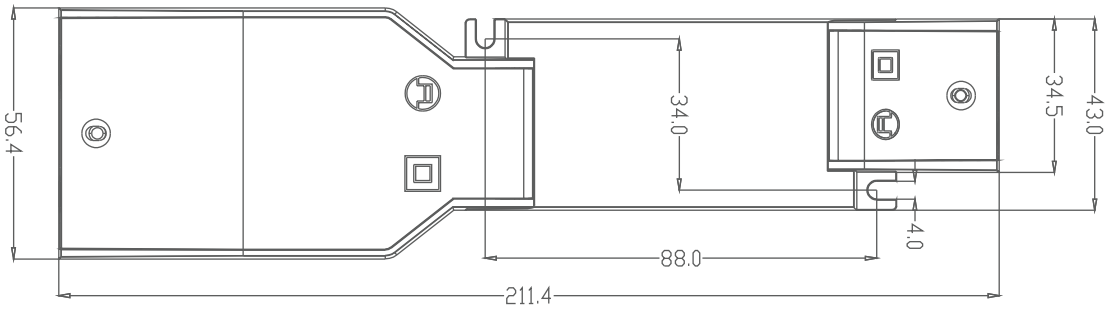
Compatible Small Strain reliefs:SR_CC53-60

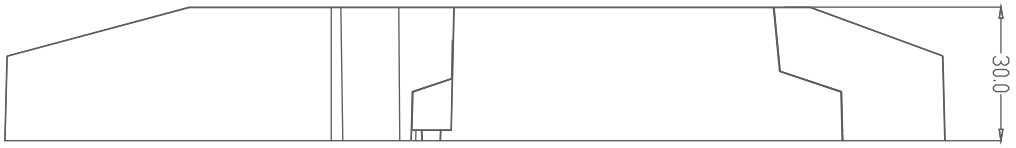
Compatible Large Strain reliefs:SR_CC53-60_5POL

Small side cover

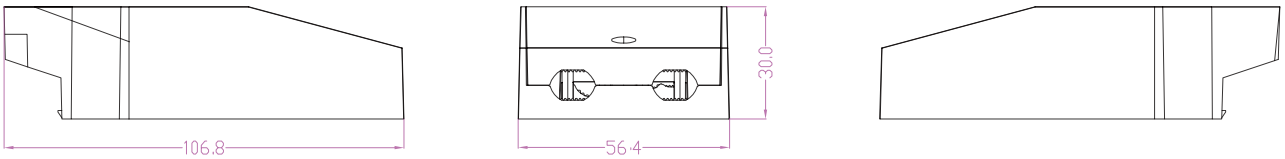


Large side cover





Large side cover specifications



Tolerance for dimensions ± 0.1 mm

Mechanical, Operating & Storage Conditions

Driver cross-section dimensions: 55.4-57.4 x 20.0-22.0 mm

Wire size: 0.5 - 2.5 mm²

Ambient temperature range: -20…+50 °C

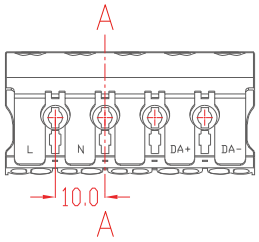
Storage temperature range: -20…+85 °C

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

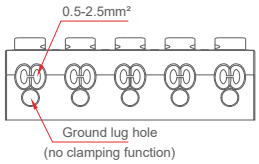
Do not store in wet or humid environment!

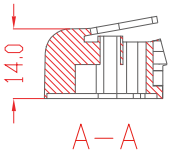
* Unless otherwise stated in the driver datasheet (for independent installation). Note! Tc max temperature of the driver shall not be exceeded.

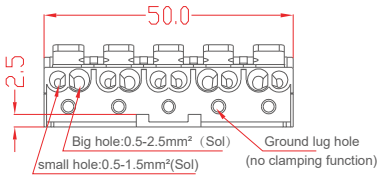
Terminal

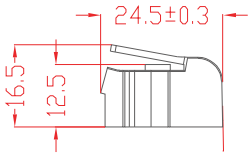


5 - pole connector for DA / CC drivers with LC-SRB-LOOP







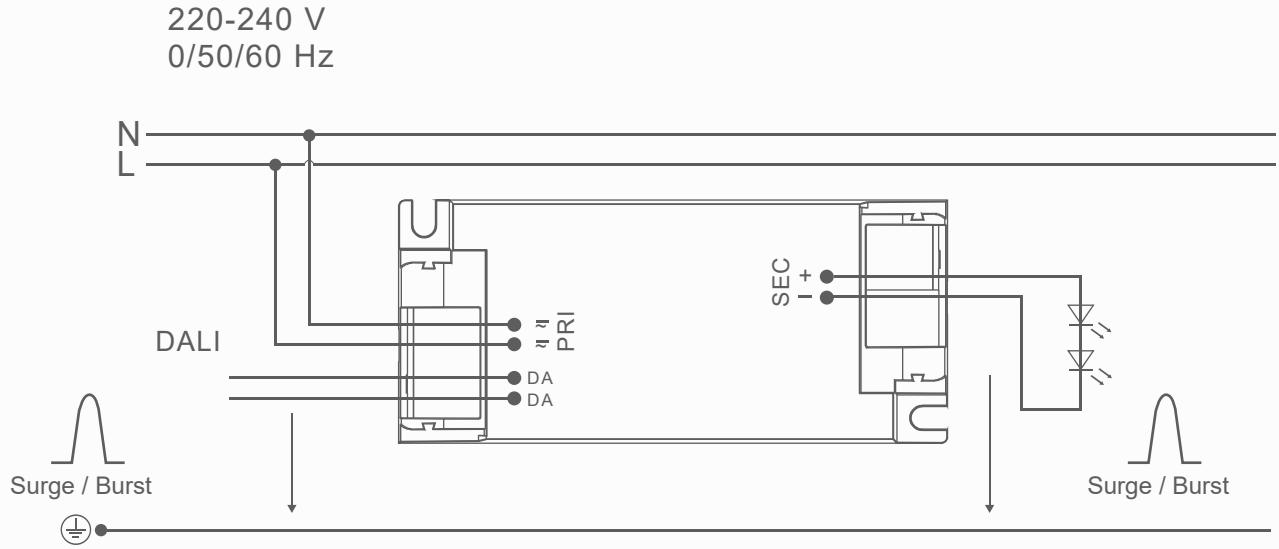


Schigna Technology
7th Floor,No.13,
Shunde,foshan

Wiring Diagram

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

Fig. A: DALI Dimming



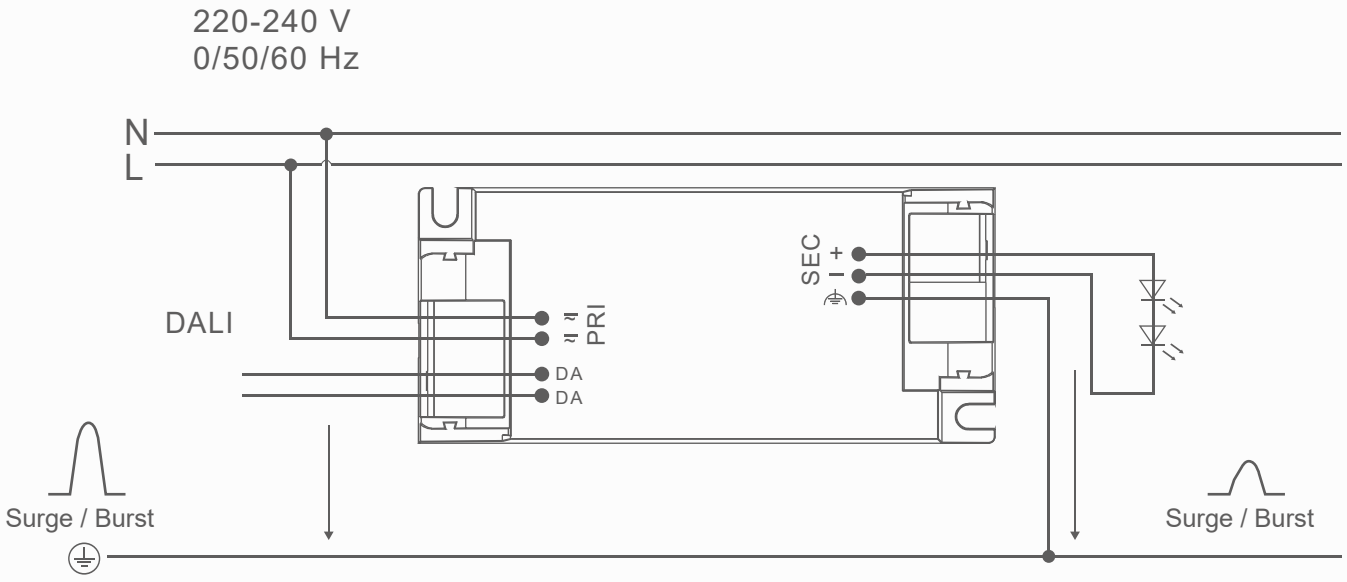
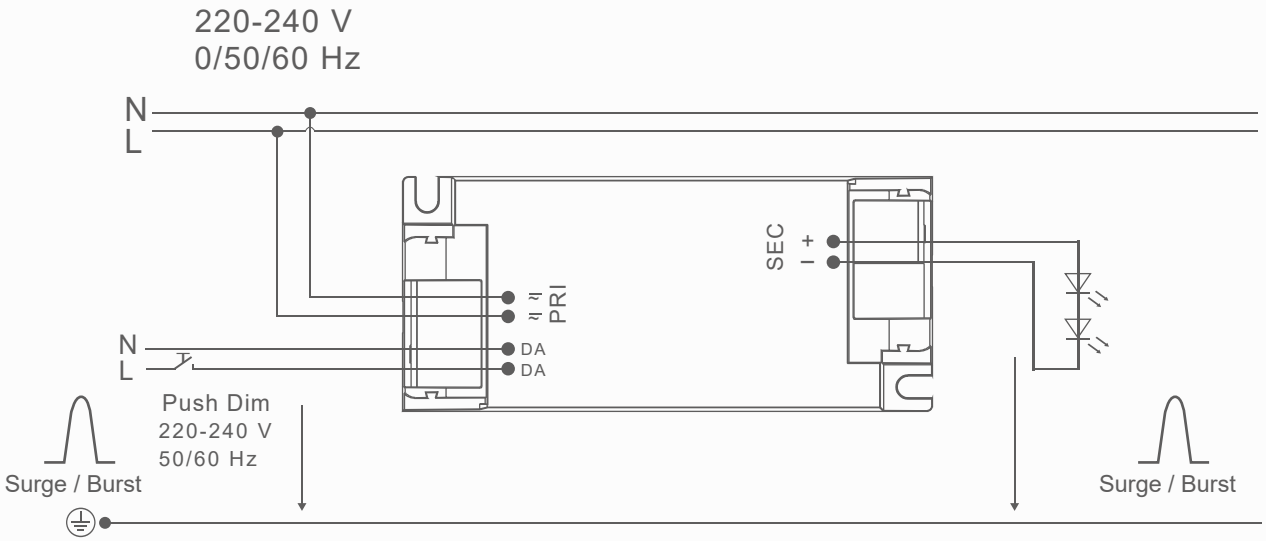
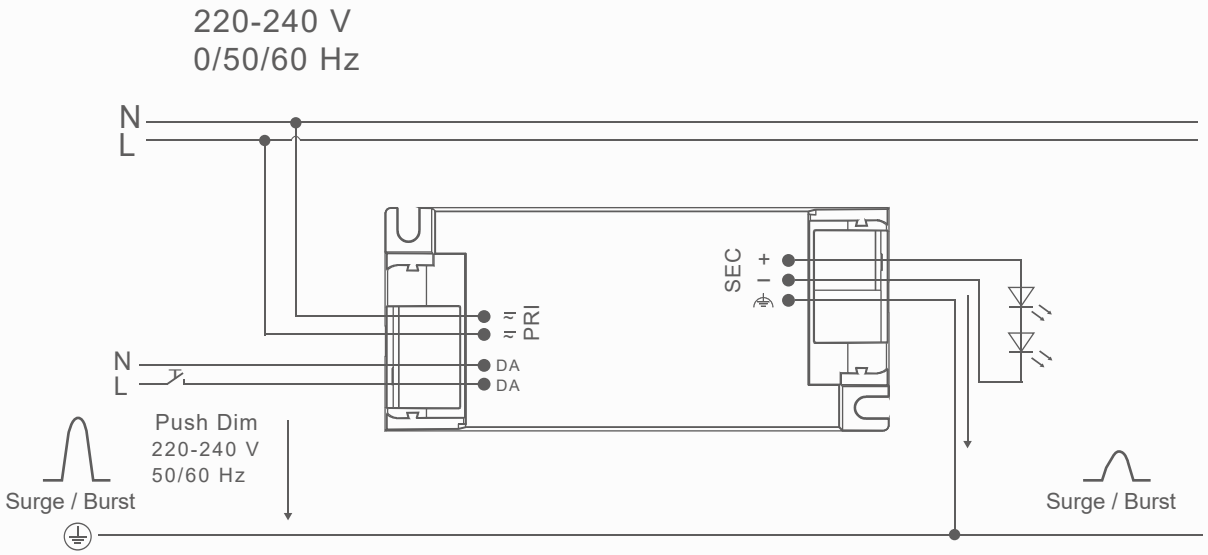


Figure: Voltage peaks for LED driver without earthing (Above) and with earthing (Below)

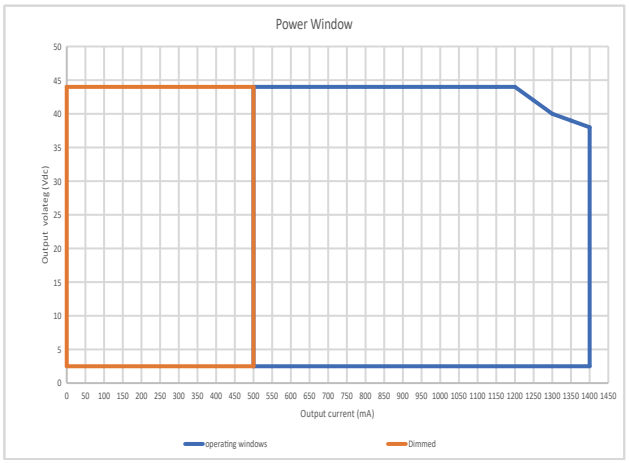
Fig.B:Push Dimming



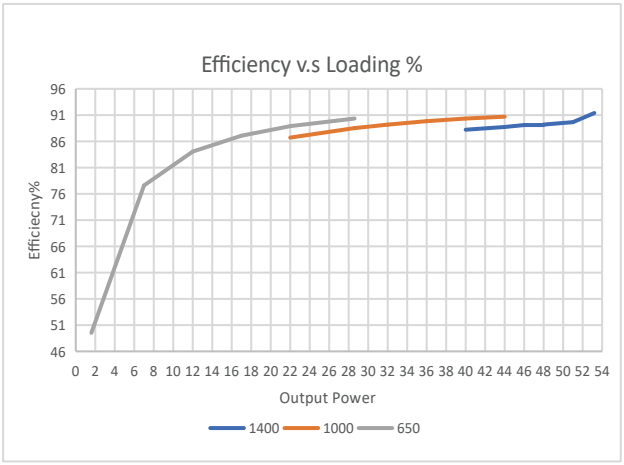


Electrical values

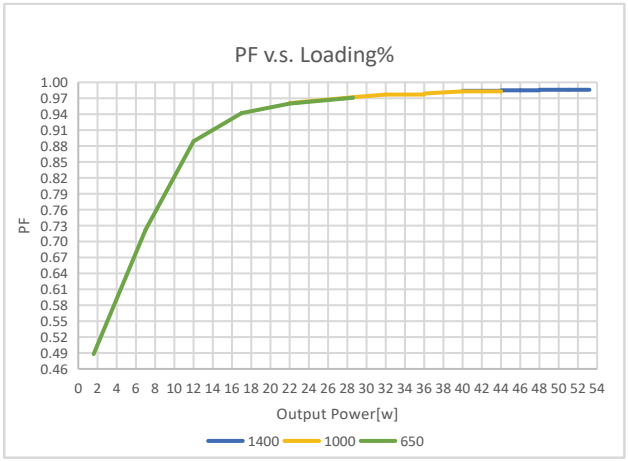
1. Operating power windows



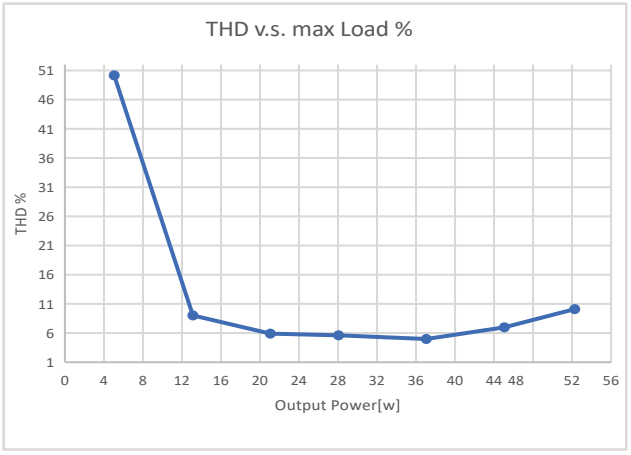
2. Effciency v.s. Load



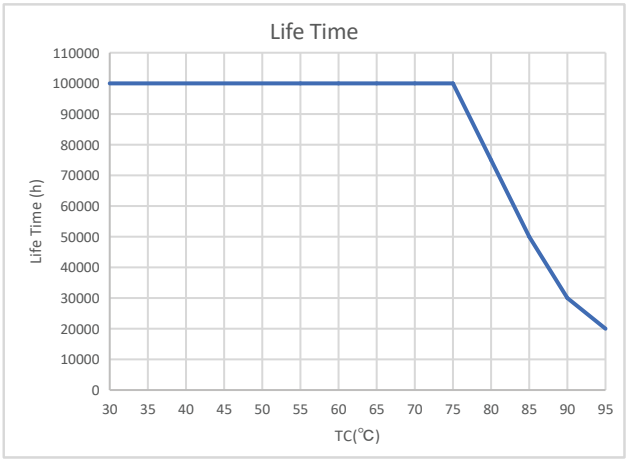
3. PF v.s. Load



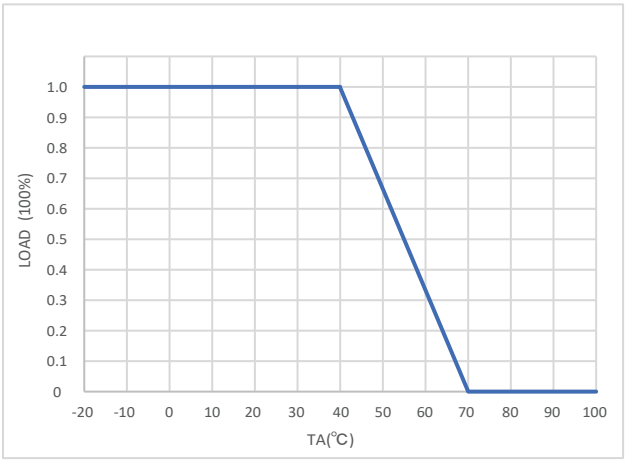
4.THD v.s. Load



5.Life time



6.Derating



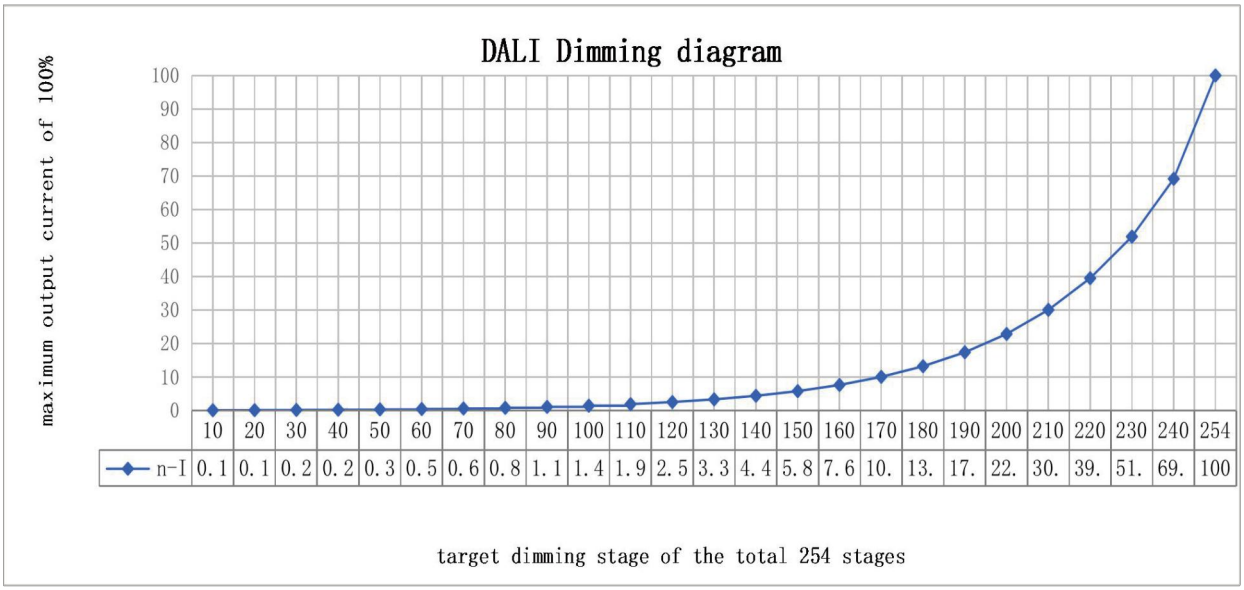
DALI dimming curve

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



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

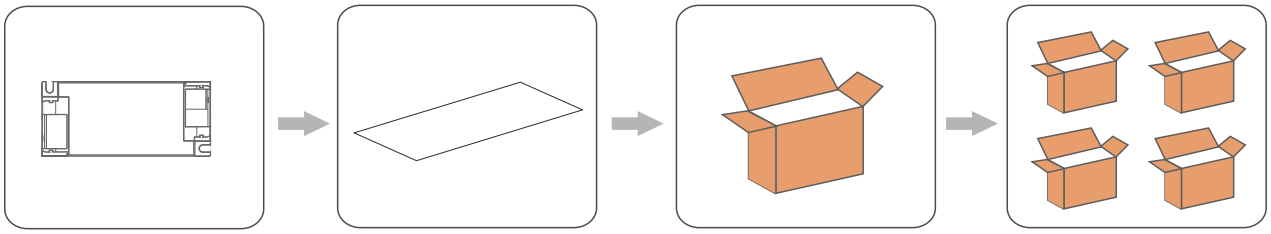
In general, it is recommended to earth the LED Driver if the LED module is mounted on earthed luminaire parts respectively heat sinks and thereby representing a high capacity against earth.
Avoiding residual LED glow on standby

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.

Packing information

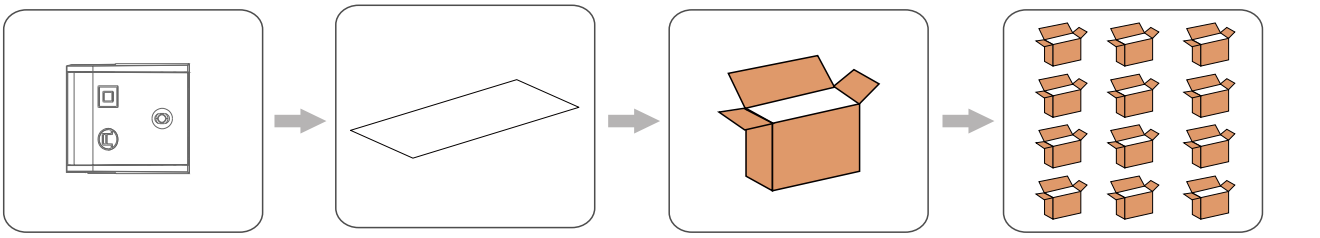
Built in type



Product | Paper partitions linerboard /Plastic paper | 28 per small box | 28sets/box*4boxs=112pcs/Carton

Model	Carton L*W*H(mm)	Pcs/-Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Cross weight/-Carton(kg)
S-097-C53W500-1400 DALI	410*233*225	112	0.151	16.96	19.36

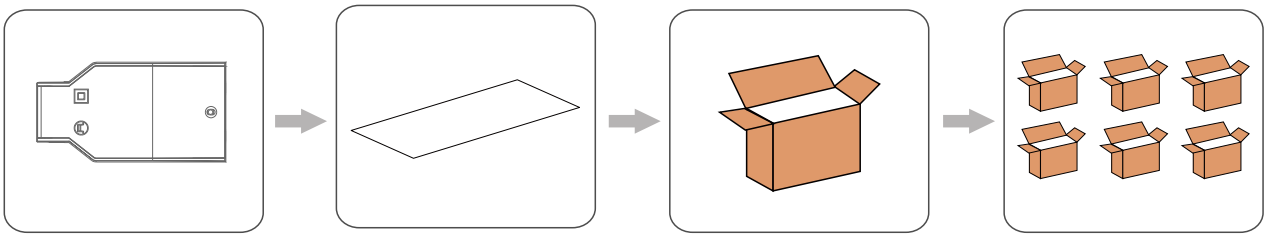
Small Strain reliefs



Product | Paper partitions linerboard /Plastic paper | 50 per small box | 50sets/box*12boxs=600pcs/Carton

Model	Carton L*W*H(mm)	Pcs/-Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Cross weight/-Carton(kg)
S-097-C53W500-1400 DALI	460*430*170	600	0.012	7.20	8.76

Large Strain reliefs



Product | Kraft linerboard /Plastic paper | 42 per small box | 42sets/box*6boxs=252pcs/Carton

Model	Carton L*W*H(mm)	Pcs/-Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Cross weight/-Carton(kg)
S-097-C53W500-1400 DALI	375*315*385	252	0.068	17.13	18.69

Push Dim :

1.On / off:

Short push (120ms-600ms) on the switch,Stepless dimming: long push (> 0.6sec) on the switch.

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)

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.

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.)

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.

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.

REVISION HISTORY

Date	Revision	Remark