

COMPACT LED DRIVER / DALI-2

ARVIK MINI 44 DALI

Technical model: AR-44-1050-MI-DALI-A



POWER

44.1 W

OUTPUT CURRENT

300-1050 mA

OUTPUT VOLTAGE

9-49 VDC*

CONTROL

DALI-2 / PUSH

KEY FEATURES

-  Isolated
-  Flicker-free
-  DALI-2
-  5-year warranty

Efficiency	up to 88%
Dimensions	97 x 43 x 22.8 mm
Installation	Built-in / independent
Protection	IP20 / Class II / SELV
Input	220-240 VAC / 50-60 Hz

Technical specifications apply to the stated ARVIK model. Before implementation, confirm the selected variant, operating conditions and document revision.

* The voltage range depends on the selected output current.

PRODUCT DATASHEET

AR-44-1050-MI-DALI-A

ARVIK | TECHNICAL DOCUMENTATION



Feature

- Isolation
- Flick free
- DALI dimming
- Complete protections: OSP / OVP /OPP
- Standby power consumption ≤ 0.45W
- It can be used for lighting equipment in protection class I I
- 5 year warranty (TOPAZCON, HUAWEI, KINLS SAPPHIRE, MAN YUE, Aihua capacitor).



Model	Output Current	Input Current	Input Power	Output Power Range	PF	Efficiency Typical	Output Voltage	No load Voltage
AR-44-1050-MI-DALI-A	300mA	0.16A	17.13W	2.70-14.70W	0.86	85.8%	9-49V	59V
	350mA	0.17A	19.83W	3.15-17.15W	0.87	86.5%	9-49V	
	400mA	0.18A	22.53W	3.60-19.60W	0.88	87.0%	9-49V	
	450mA	0.19A	25.20W	4.05-22.05W	0.89	87.5%	9-49V	
	500mA	0.20A	27.90W	4.50-24.50W	0.90	87.8%	9-49V	
	550mA	0.21A	30.62W	4.95-26.95W	0.91	88.0%	9-49V	
	600mA	0.22A	33.41W	5.40-29.40W	0.92	88.0%	9-49V	
	650mA	0.23A	36.19W	5.85-31.85W	0.93	88.0%	9-49V	
	700mA	0.24A	38.97W	6.30-34.30W	0.94	88.0%	9-49V	
	750mA	0.25A	40.90W	6.75-36.00W	0.94	88.0%	9-48V	
	800mA	0.25A	40.90W	7.20-36.00W	0.95	88.0%	9-45V	
	850mA	0.26A	43.46W	7.65-38.25W	0.95	88.0%	9-45V	
	900mA	0.27A	46.02W	8.10-40.50W	0.95	88.0%	9-45V	
	950mA	0.27A	45.34W	8.55-39.90W	0.95	88.0%	9-42V	
	1000mA	0.28A	47.72W	9.00-42.00W	0.95	88.0%	9-42V	
	1050mA	0.29A	50.11W	9.45-44.10W	0.95	88.0%	9-42V	

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

1. Parameters

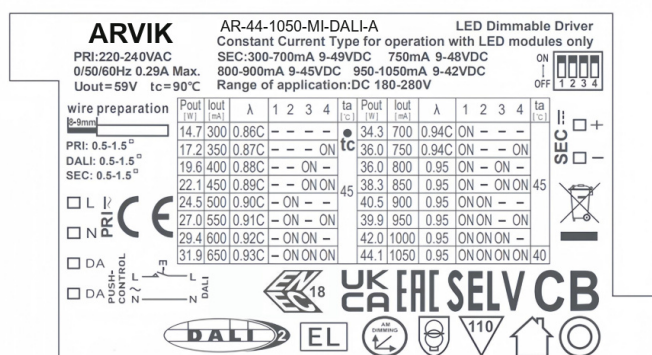
Category	Item	Technical Norm
Features	Output Type	Constant Current
	Dimming Type	Amplitude (DALI-2)
	Output Features	Isolation
	IP Grade	IP20
	Insulation Class	Class II (compatible Class I)
Input	Rated Input Voltage	220-240VAC
	Range of Input Voltage	198-264VAC
	Range of DC Input Voltage	180-280VDC
	Frequency	0/50/60Hz, Range:0/47-63Hz
	Overvoltage protection	2h@380VAC, 48h@320VAC
	Input Current	≤0.29A (230VAC, full load)
	Input Power	≤50.11W (230VAC, full load)
	Power Factor	≥0.95 (230VAC, full load)
	THD	≤7% (230VAC, full load)
	No-load Power Consumption	≤0.45W Dim to o , 230VAC
	Inrush Current	≤9.4A/2.3us (230VAC, full load)
	Connected quantity of 10A Breaker	20pcs/type A ;33pcs/type B ; 53pcs/type C @ 230Vac
	Connected quantity of 13A Breaker	27pcs/type A ;43pcs/type B ; 69pcs/type C @ 230Vac
Output	Connected quantity of 16A Breaker	33pcs/type A;53pcs/type B ; 85pcs/type C @ 230Vac
	Connected quantity of 20A Breaker	41pcs/type A;66pcs/type B ;106pcs/type C @ 230Vac
	Output Voltage Range	9-49VDC@300-700mA;9-48VDC@750mA; 9-45VDC@800-900mA;9-42VDC@950-1050mA
	Output Current:	300mA-1050mA , Factory set current of 300mA
	Efficiency	≥88% (230VAC, full load)
	Max. Output Power:	44.1W
	LF Current Ripple (< 120 Hz)	±3% (Imax-Imin)/(Imax+Imin) MAX
	Current Accuracy	±5%
	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
	PstLM	≤1
Control Method	SVM	≤0.4
	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
Protection	Dimming range	DALI dimming: 1%-100%
	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	-25....+45℃ @300-1000mA ; -20....+40℃ @1050mA
	Ts/Storage Temperature	-40....+90℃
	Tc/Enclosure Temperature	90℃
	Humidity	10%....90%RH
	Atmosphere	86-108KPa
Construction	Connection Method	Push-in Terminal
	Installation	Built-in/Independent
	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
	Dimension	97*43*22.8mm (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 61347-1-1:2015+A1:2017; IEC 61347-13:2014+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 IEC 61000-3-3:2013+A1:2019;
	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:4kV; L-N:2kV
	RoHS	complied to 2011/65/EU
Others	Life Time	50000h Tc=90℃
		75000h Tc=85℃
		100000h Tc=80℃
	Warranty	5years , F.R. < 10000ppm

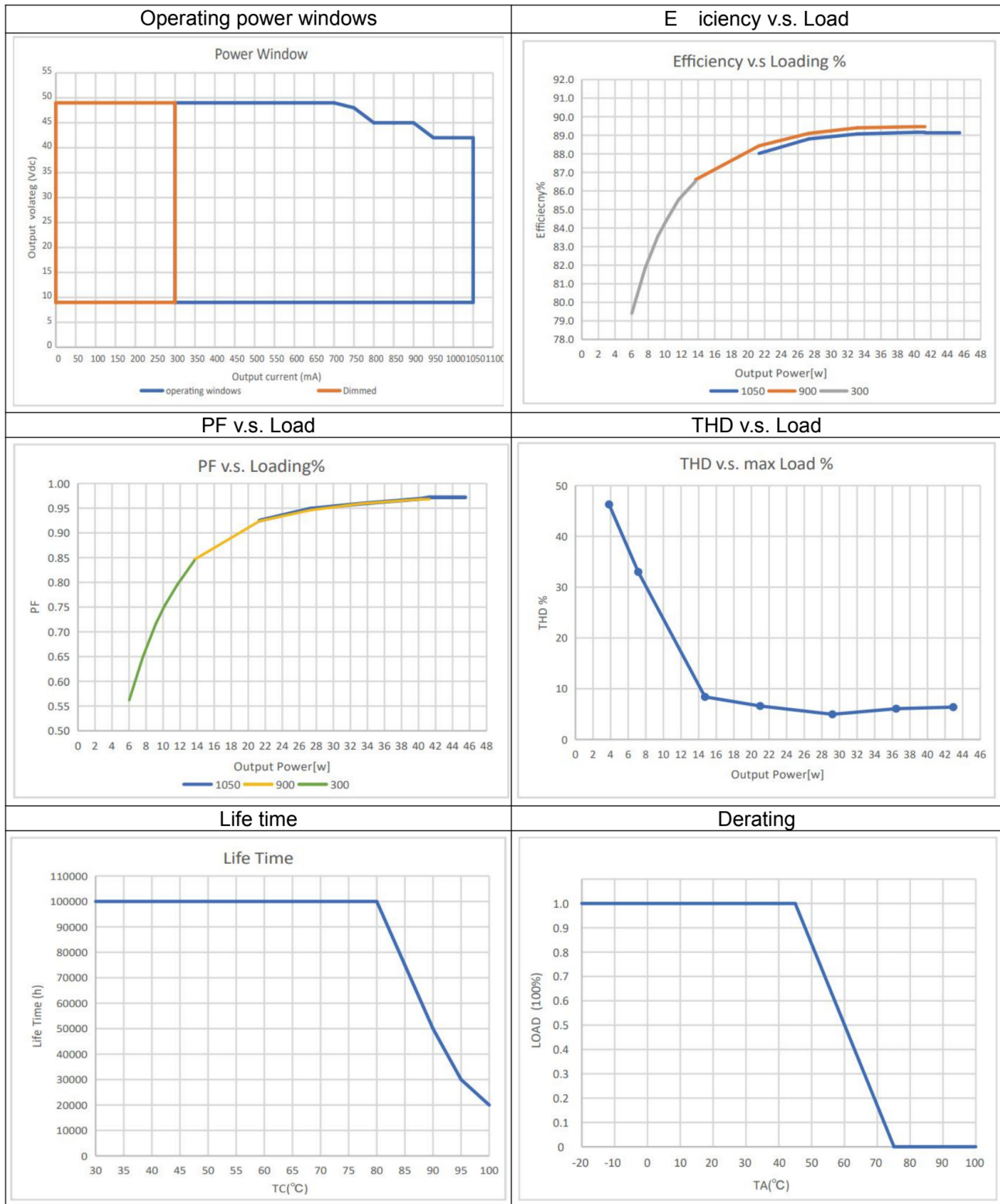
Remark:

- 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.

Output Current	1	2	3	4
300mA	-	-	-	-
350mA	-	-	-	ON
400mA	-	-	ON	-
450mA	-	-	ON	ON
500mA	-	ON	-	-
550mA	-	ON	-	ON
600mA	-	ON	ON	-
650mA	-	ON	ON	ON
700mA	ON	-	-	-
750mA	ON	-	-	ON
800mA	ON	-	ON	-
850mA	ON	-	ON	ON
900mA	ON	ON	-	-
950mA	ON	ON	-	ON
1000mA	ON	ON	ON	-
1050mA	ON	ON	ON	ON

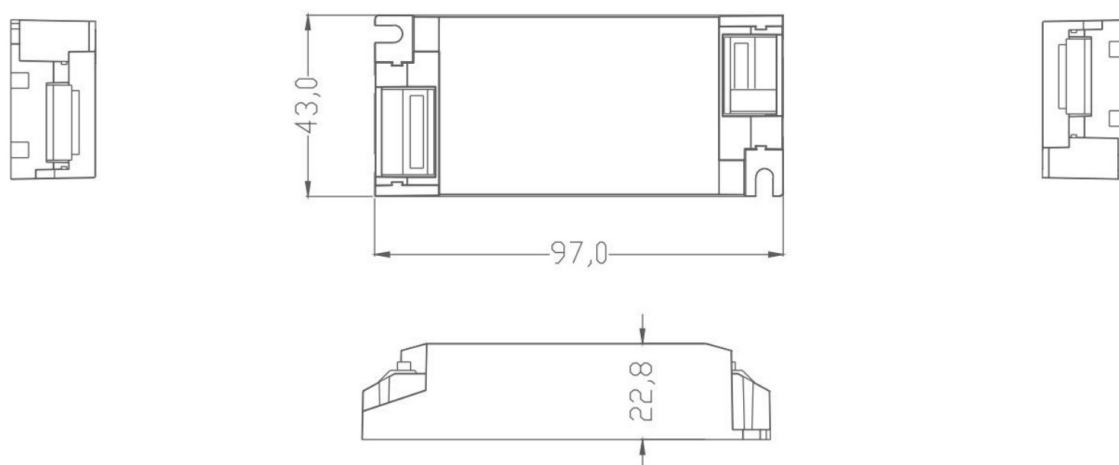


4. Electrical values

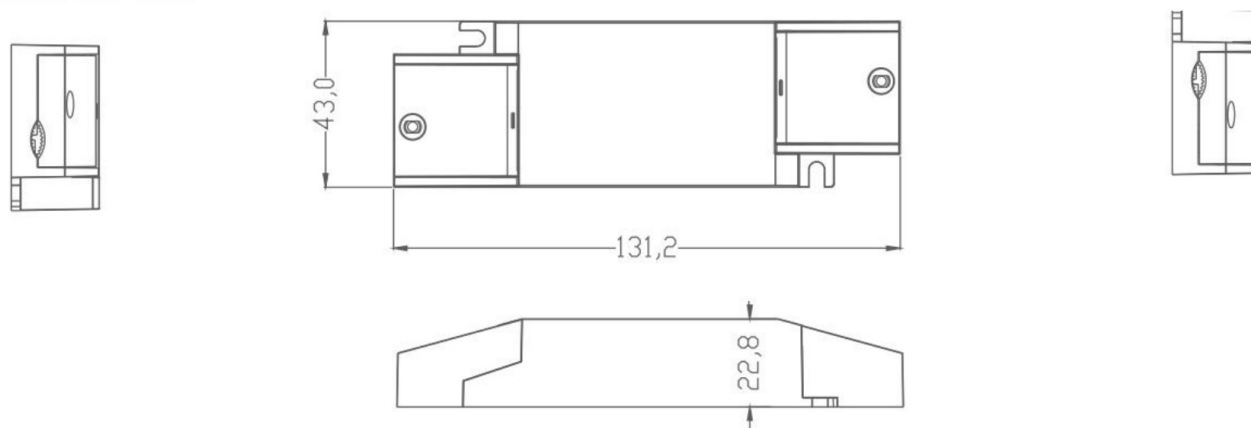


5. Dimension (Unit: mm)

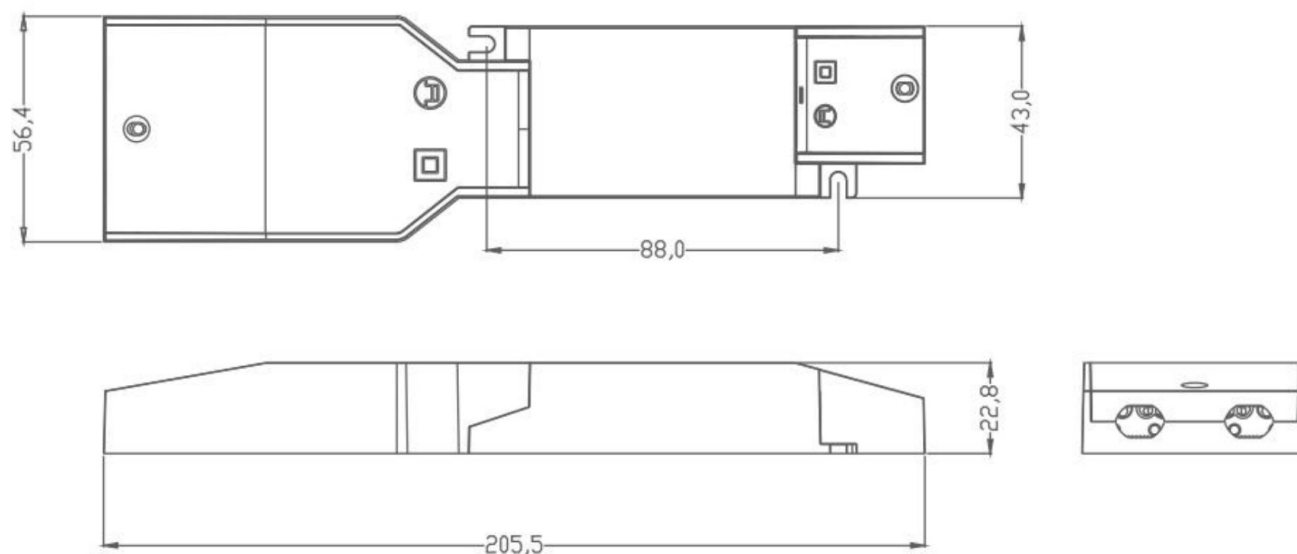
Built in type:



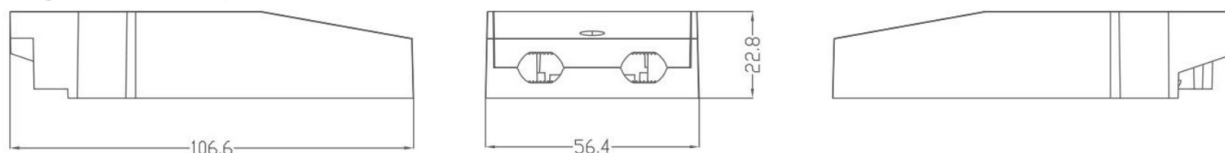
Small side cover



Large side cover



Large side cover specifications



Mechanical, Operating & Storage Conditions

Driver cross-section dimensions: 55.4-57.4 x 21.8-23.8 mm

Wire size: 0.5 - 2.5 mm²

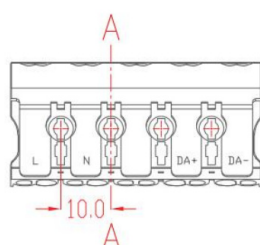
Ambient temperature range: -25...+45 °C

Storage temperature range: -40...+90 °C

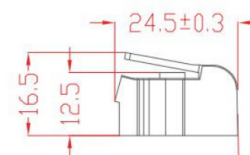
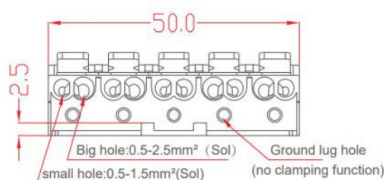
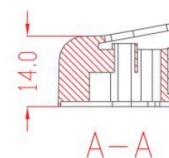
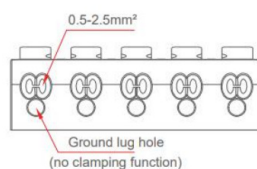
Assembly temperature range: +5...+30 °C

Do not store in wet or humid environment!

Terminal



5 - pole connector for DA / CC drivers

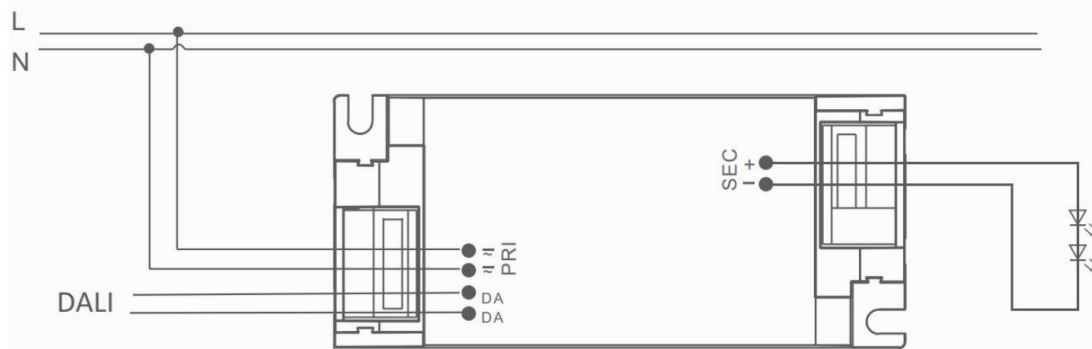


6. Wiring Diagram

DALI Dimming

220-240 V

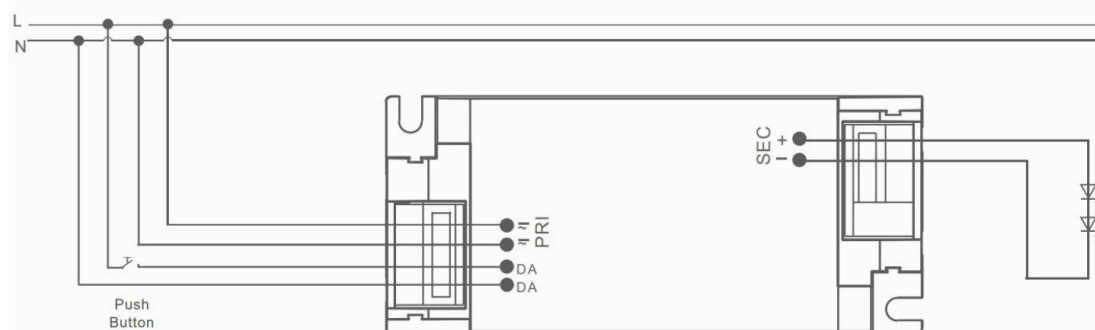
0/50/60 Hz



Push Dimming

220-240 V

0/50/60 Hz



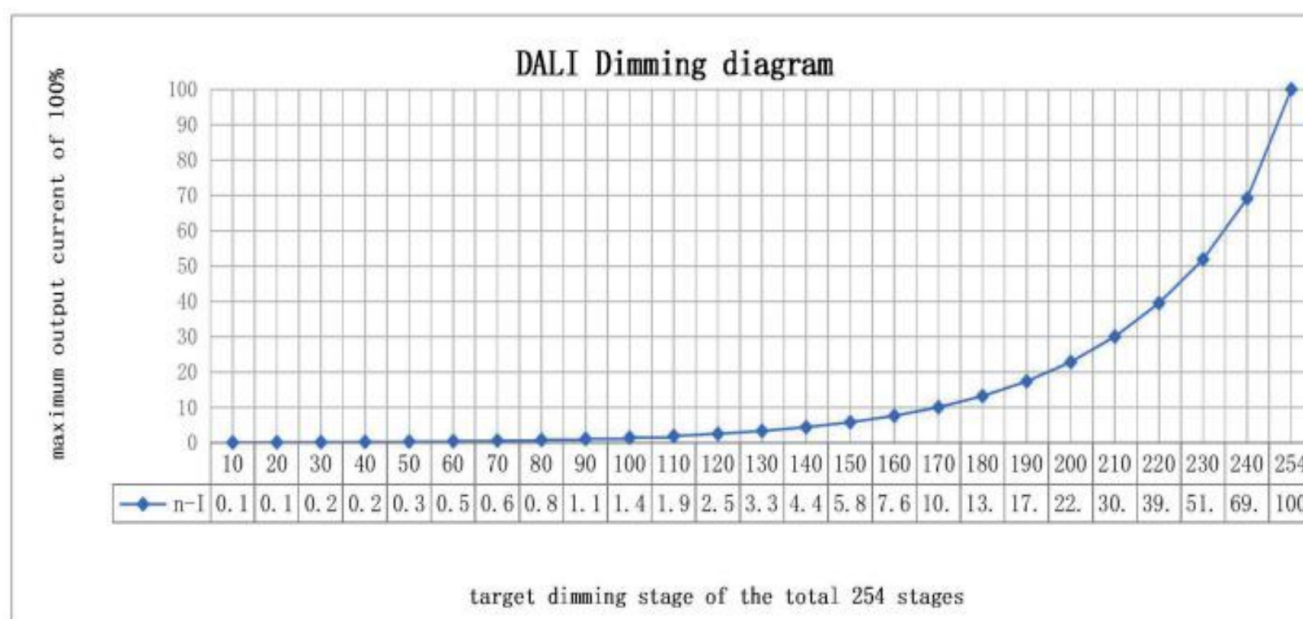
7. DALI dimming curve

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 (Built in type)

Carton L*W*H(mm)	Pcs/Carton	Net weight/ Pcs(kg)	Net weight/ Carton(kg)	Gross weight / Carton(kg)
398*230*130	100	0.130	13.00	13.22

***The details shall be subject to the shipping package.**

9. REVISION HISTORY

DATE	VER	REMARK
2025-8-19	V1.0	Initial release.