

## SPECIFICATION FOR APPROVAL

CUSTOMER: \_\_\_\_\_

CUSTOMER P/N: \_\_\_\_\_

OUR MODEL NO.: \_\_\_\_\_ HA-DLIxxxBF-CCX \_\_\_\_\_

APPROVAL NO.: \_\_\_\_\_ HA-DLIxxxBF-CCX \_\_\_\_\_

DATE: \_\_\_\_\_ 2022-4-25 \_\_\_\_\_

(CUSTOMER APPROVAL):

(TESTED)	(CHECKED)	(APPROVAL)

(HAHGA APPROVAL)

(TESTED)	(CHECKED)	(APPROVAL)

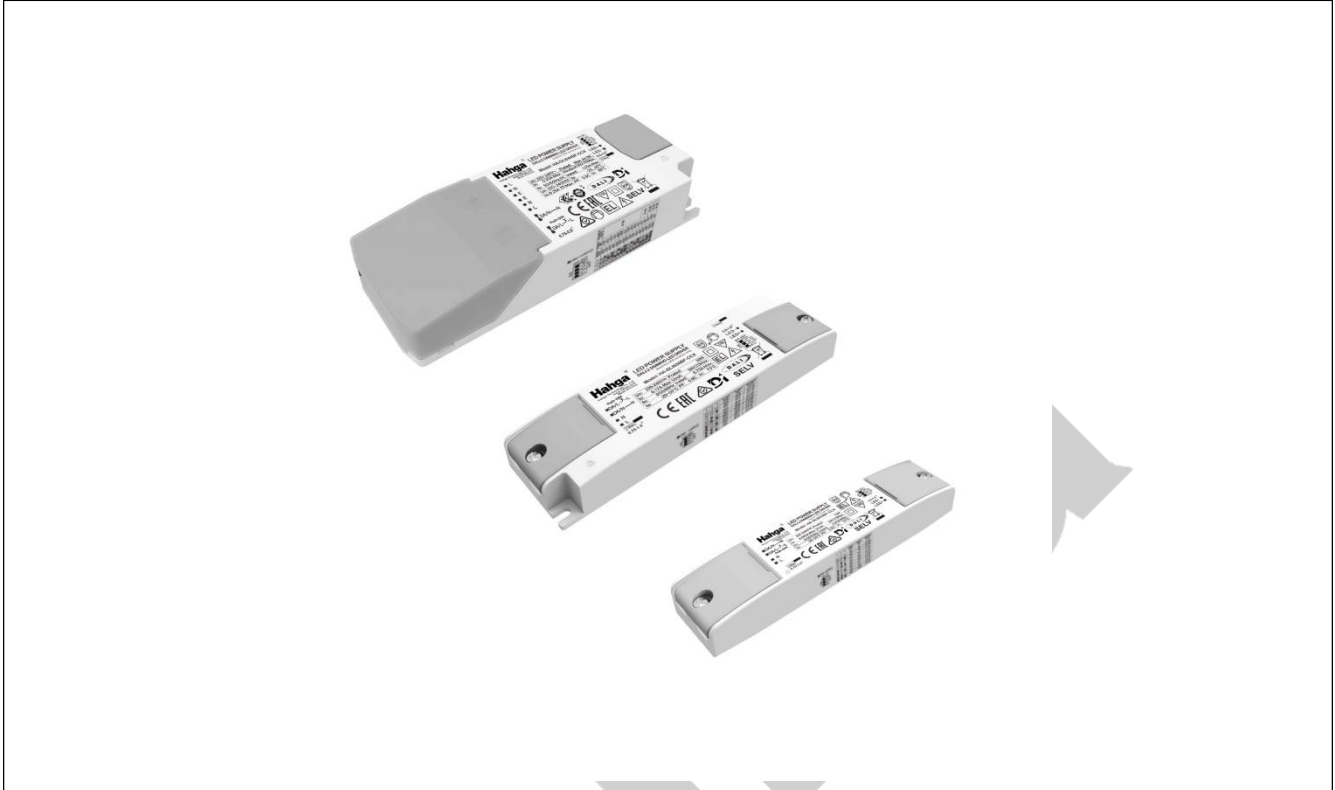
Manufacturer: Zhongshan Hahga Technology Co.,Ltd  
Add:6th Floor, No.4, Southeast 7th Road, Gusan Ind.Ave., Guzhen Town,  
Zhongshan, Guangdong, China  
Web:www.hahga.com  
Email:info@hahga.com

## E.C.N LIST

Rev.	Description of Change	Change Date
V1	Origin	2022.4.25
V2.1	Add D4i function	2023.2.5



## 1.Product Picture



## 2. Driver Structure:

- PC  Metal  Aluminum
- Isolated SELV  No-Isolated
- IP20  IP67
- Flicker free  Flicking
- Non-Dimming  Dimmable: DALI-2 D4i PUSH
- No switchable  Smart Switchable By: DIP

Warranty : 5 Years

### 3. Electrical datasheet

No.	Model No.	Input Voltage (V) Rate.	Input Voltage (V) Max.	Input Frequency (Hz)	Input Current Max (A)	Power Factor (Max Load) (%)	T.H.D (Max Load) (%)	Inrush Current (A)
1	HA-DLI015BF-CCX	220-240VAC 220-240VDC	264Vdc	0/50/60	0.1	>0.9	<10%	1.55A/ 30us
2	HA-DLI030BF-CCX	220-240VAC 220-240VDC	264Vdc	0/50/60	0.2	>0.9	<15%	4A/ 25us-
3	HA-DLI044BF-CCX	220-240VAC 220-240VDC	264Vdc	0/50/60	0.3	>0.9	<15%	5.6A/ 50us

### 3.1 Output Datasheet

No.	Model No.	Output Wattage (W)	Output Current (mA) ±5%	Output Voltage (Vdc)	Efficiency (Max Load) (%)	DIP			
						1	2	3	4
1	HA-DLI015BF-CCX	5.2	100	2.5-52	81	-	-	-	-
		7.8	150	2.5-52	81	-	-	ON	-
		10.4	200	2.5-52	81	-	ON	-	-
		12.5	250	2.5-52	85	-	ON	ON	ON
		15	300	2.5-50	85	ON	-	-	-
		14.7	350	2.5-42	85	ON	-	ON	ON
		14.8	400	2.5-37	85	ON	ON	-	-
		14.85	450	2.5-33	85	ON	ON	ON	ON
2	HA-DLI030BF-CCX	20.8	400	2.5-52	86	-	-	-	-
		23.4	450	2.5-52	86	-	-	ON	ON
		26	500	2.5-52	86	-	ON	-	-
		28.6	550	2.5-52	86	-	ON	ON	ON
		30	600	2.5-50	86	ON	-	-	-
		29.9	650	2.5-46	87	ON	-	ON	ON
		29.4	700	2.5-42	87	ON	ON	-	-
		30	750	2.5-40	88	ON	ON	ON	ON
3	HA-DLI044BF-CCX	15.6	300	6-52	87	-	-	-	-
		18.2	350	6-52	87	-	-	-	ON
		20.8	400	6-52	87	-	-	ON	-
		23.4	450	6-52	87	-	-	ON	ON
		26	500	6-52	87	-	ON	-	-
		28.6	550	6-52	87	-	ON	-	ON
		31.2	600	6-52	87	-	ON	ON	-

		33.8	650	6-52	87	-	ON	ON	ON
		36.4	700	6-52	87	ON	-	-	-
		39	750	6-52	87	ON	-	-	ON
		41.6	800	6-52	87	ON	-	ON	-
		41.7	850	6-49	88	ON	-	ON	ON
		44.1	900	6-49	88	ON	ON	-	-
		43.7	950	6-46	88	ON	ON	-	ON
		44	1000	6-44	88	ON	ON	ON	-
		44.1	1050	6-42	88	ON	ON	ON	ON

### 3.2 Product Specification

No	Model No.	Dimension(mm)			Carton size(mm)	Pcs/ Carton	Carton Weight(kg)
		Length	Width	Height			
1	HA-DLI015BF-CCX	145	33	21	303*225*120	48	4.1
2	HA-DLI030BF-CCX	160	43	21	335*225*145	50	6
3	HA-DLI044BF-CCX	170	65	30	353*335*220	60	12

### 3.3 Specification Datasheet

	Item	
Features	Output Type	Constant Current
	Dimming Type	DALI-2 PUSH
	Dimming Range	1-100%
	IP Grade	IP20
	Insulation Class	Class II SELV
	Support function	Corridor dimming (corridor DIM)
Input	Rated Input Voltage	AC220-240V DC220-240V
	Range input Voltage	AC198-250V DC198-250V
	Rated input Frequency	0/50/60Hz
	Power Factor@ full load	0.9
	THD@full load%	<15%
	No-load power consumption	<0.5W
Output	Input Line Ripple	±5%
	Output Line Ripple	±5%
	PstLM	<1
	SVM	<0.4
	Max Output Voltage	60Vdc
	Power on time	<0.7s

### 4. Environmental Specification

Item	Min.	Rated	Max.	Unit
Operating Temperature	-20	/	+50	°C

			(+45 for 44W)	
Operating Humidity	10	/	90	%RH
Storage Temperature	-40	25	+80	°C
Storage Humidity	5	/	90	%RH
Driver Lifespan(<40W)	At Tc≤75°C:50,000hrs; At Tc≤65°C:100,000hrs:@230Vac			
Driver Lifespan(>40W)	At Tc≤85°C:50,000hrs; At Tc≤75°C:100,000hrs:@230Vac			
Max Tc Temperature			75 (85for 44W)	°C

### 5. Protection

Item	Remark
Short Circuit Protection	Burp,Auto-recover
Over-Voltage Protection	>320Vdc
Over-Power Protection	>17W / 35W / 50W
No-Load Protection	Auto-recover
Over-heat Protection	Auto-recover,Tc<90°C
Electric Strength	I/P-O/P: 3.75 kVac, < 5 mA 60 sec; I/P-DA/P: 0.5 kVac, < 5 mA 60 sec; O/P-DA/P: 1.5 kVac, < 5 mA 60 sec
Leakage Current	0.25mAmax. at 240Vac / 50Hz input
Insulation Resistance	100MΩ min. @ primary to secondary add 500Vdc test voltage
Surge	L-N:1KV

### 6. Reliability Specification

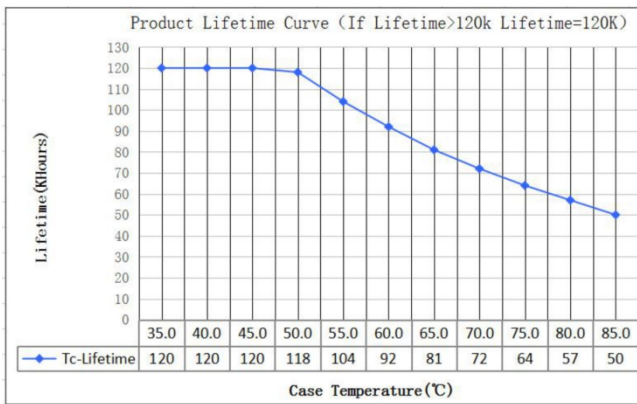
Item	Remark
Aging	Full load 100% Burn-in,minimum of 2 Hours
Warranty	Power life of 50°C at the ambient temperature of 5 years (50000hours)
MTBF Qualification	The MTBF shall be at least 50,000hours at 25°C, Full load and nominal input condition
EMI/EMS standards	Conduction Emission GB17743 CLASS B *CISPR15 CLASS B
	Radiated Emission GB17743 CLASS B *CISPR15 CLASS B
	EN55015/EN61000-3-3 part15 standards
EMS Standards	EN 61000-3-2 Harmonic current emissions
	EN 61000-3-3 Voltage fluctuations & flicker
	EN 61000-4-3 Radio-Frequency Electromagnetic Field Susceptibility Test-RS
	EN 61000-4-4 Electrical Fast Transient/Burst-EFT
	EN 61000-4-5 Surge Immunity Test: AC Power Line: line to line1kV
	EN 61000-4-6 Conducted Radio Frequency Disturbances Test-CS
	EN 61000-4-8 Power Frequency Magnetic Field Test
	EN 61000-4-2 Electrostatic Discharge(ESD):±8kVair discharge,±4kV contact discharge
Regulatory Standards	EN61547 standards
	EN 61347-2-13:2014/AMD1:2017

	EN61347-1:2015
Notice	The luminaire manufacturer is responsible for measuring and verifying EMI compliance of the complete luminaire as the level of radio interference will vary depending on the luminaire construction. Especially primary and secondary cable lengths and their routing may have a significant effect on radio interference.
	For Push-dim function: please follow up our instruction which can be downloaded from <a href="#">HahgaPushDimManual</a>

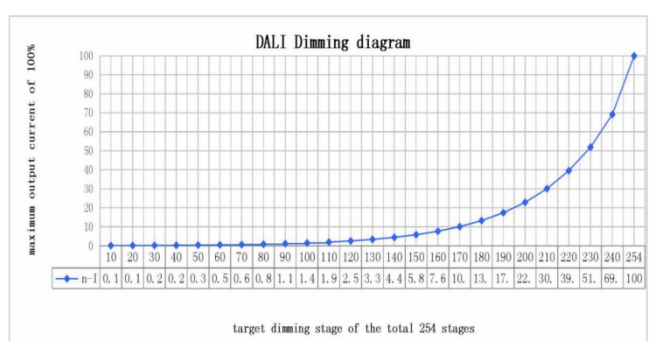


### 7. Parametric Graph

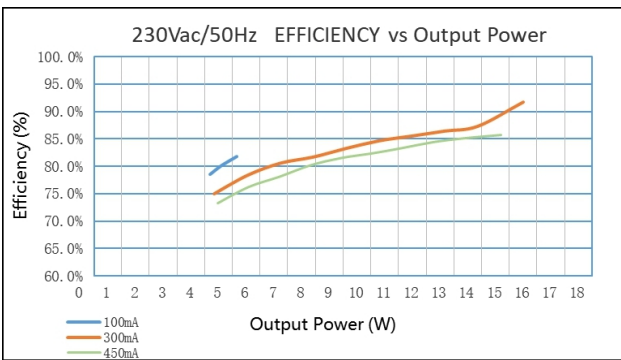
**Product Referenced Lifetime Curve**



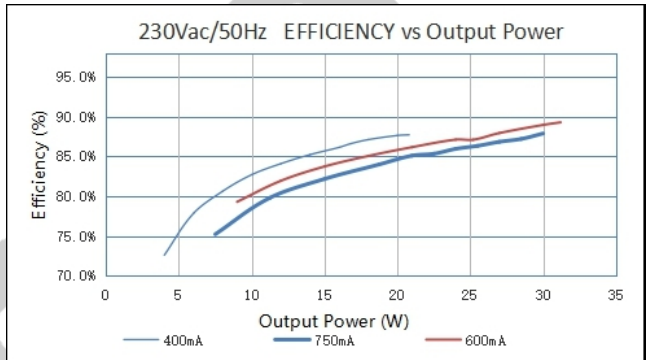
**DALI Dimming Graph**



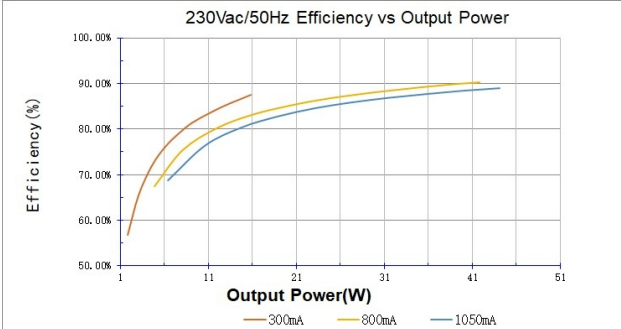
**Efficiency Graph 15W**



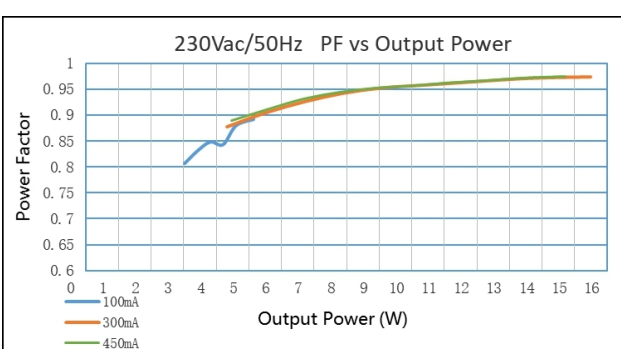
**Efficiency Graph 30W**



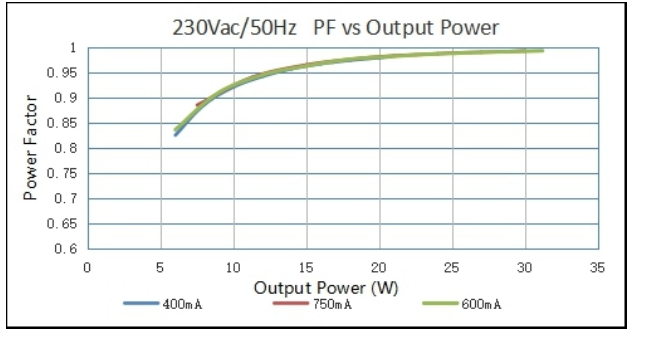
**Efficiency Graph 44W**



**Power Factor Graph 15W**

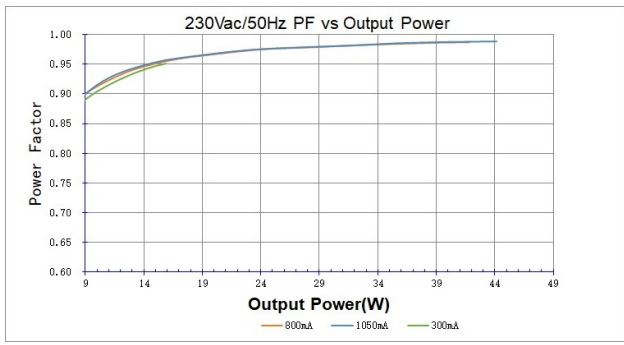


**Power Factor Graph 30W**

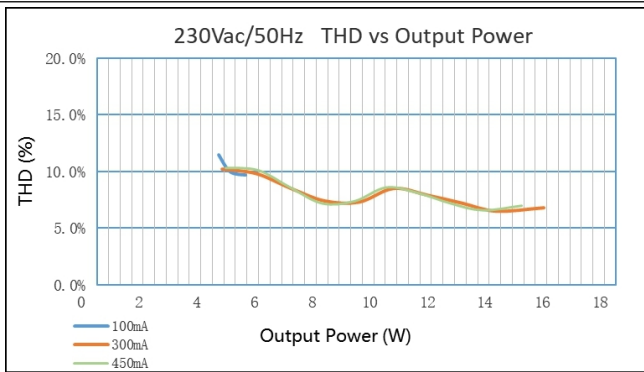


**Power Factor Graph 44W**

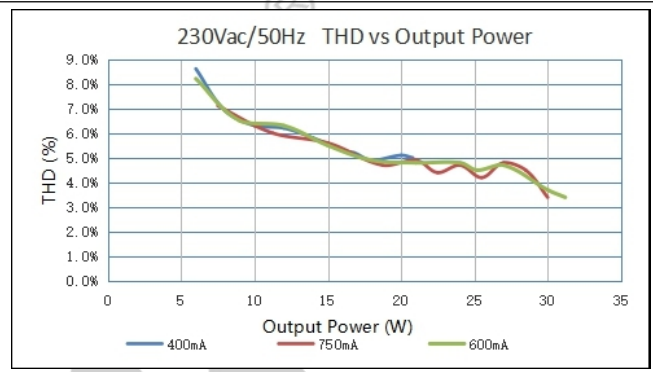




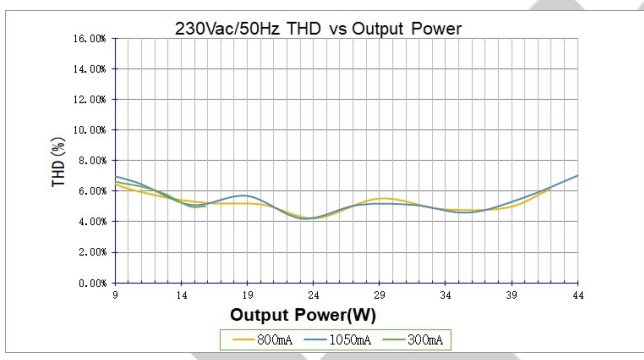
**THD Graph 15W**



**THD Graph30W**

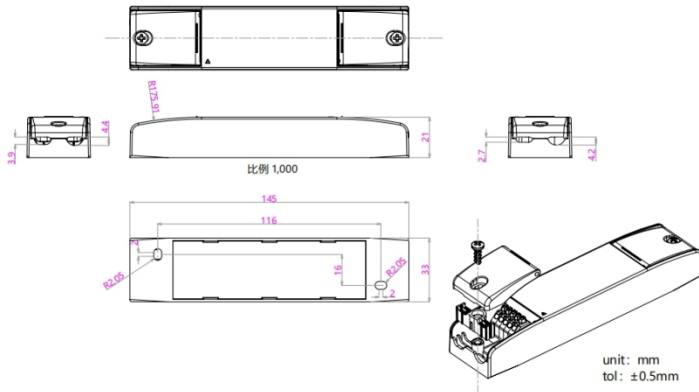


**THD Graph 44W**

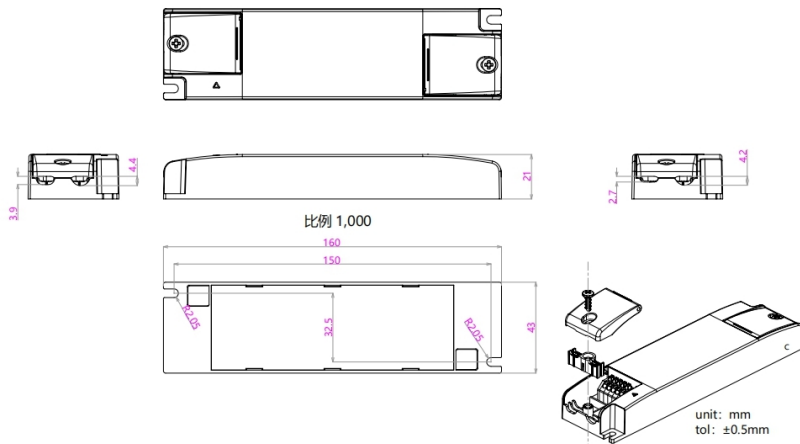


## 8. Outline Drawing and Dimension

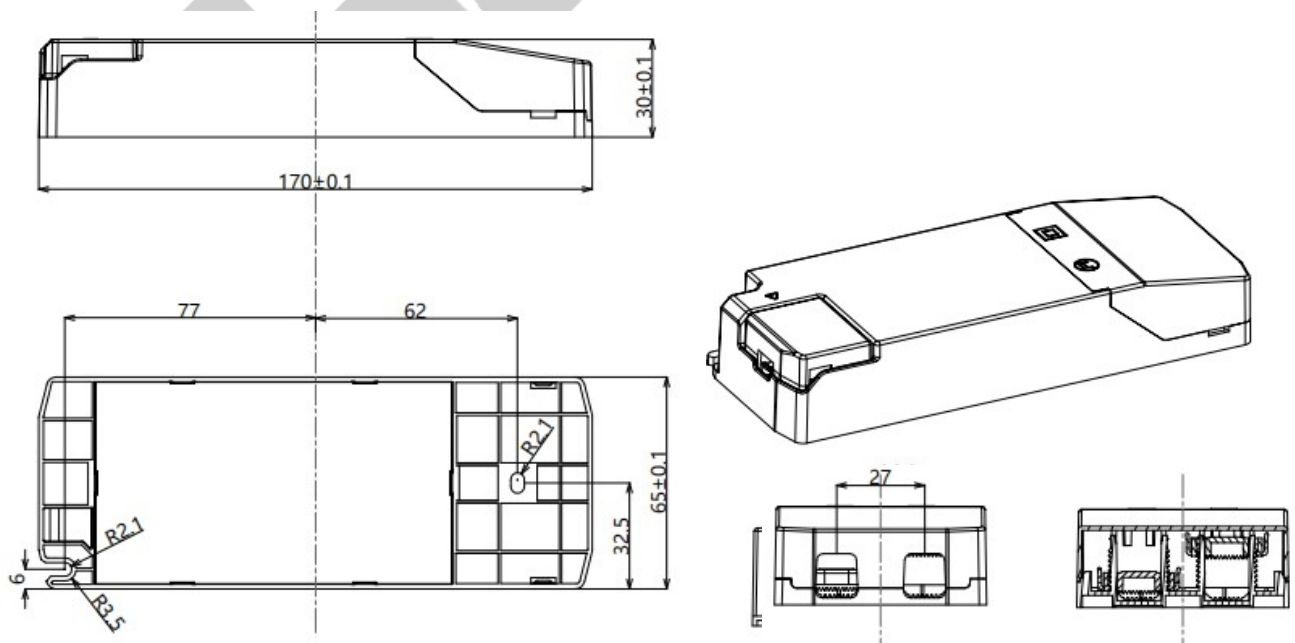
15W



30W



44W



9. Label

15W

**Hahga®** LED POWER SUPPLY  
DALI-2 DIMMING LED DRIVER  
Used for LED module only  
Model: HA-DLI015BF-CCX

Un: 220-240V~ Prated: 15W  
In: 0.085A Max Uout: 59V~Max.  
fn: 0/50/60Hz Irated: 0.45A Max.  
ta: -20~50°C PF: 0.9C tc: 75°C

DA/N—N  
DA/L—L  
N  
L

0.75-1.5

CE EAC DALI SELV

1	2	3	Irated (mA)	Prated (W)	Uoutput (V <sub>DC</sub> )
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	100	5.2	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	150	7.8	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	200	10.4	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	250	13.0	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	300	15.0	2.5-5.0
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	350	14.7	2.5-4.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	400	14.8	2.5-3.7
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	450	14.85	2.5-3.3

30W

**Hahga®** LED POWER SUPPLY  
DALI-2 DIMMING LED DRIVER  
Used for LED module only  
Model: HA-DLI030BF-CCX

Un: 220-240V~ Prated: 30W  
In: 0.17A Max Uout: 59V~Max.  
fn: 0/50/60Hz Irated: 0.75A Max.  
ta: -20~50°C PF: 0.9C tc: 75°C

DA/L—L  
DA/N—N  
N  
L

0.75-1.5

CE EAC DALI SELV

1	2	3	Irated (mA)	Prated (W)	Uoutput (V <sub>DC</sub> )
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	400	20.8	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	450	23.4	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	500	26.0	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	550	28.6	2.5-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	600	30.0	2.5-5.0
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	650	29.9	2.5-4.6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	700	29.4	2.5-4.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	750	30.0	2.5-4.0

44W

**Hahga®** LED POWER SUPPLY  
DALI-2 DIMMING LED DRIVER  
Used for LED module only  
Model: HA-DLI044BF-CCX

Un: 220-240V~ Prated: Max. 44.1W  
In: 0.30A Max Uoutput: 59V~Max.  
fn: 50/60Hz;DC Irated: 1.05A Max.  
Un: 220-240V~ ta: -20...45°C  
In: 0.25A Max. PF: 0.9C tc: 85°C

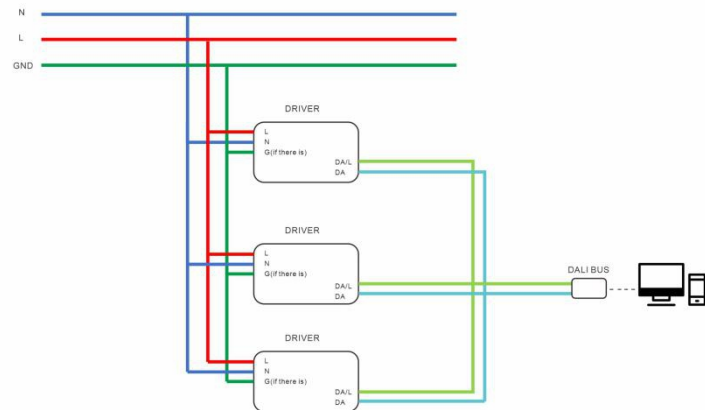
L  
N  
E  
E  
N  
L

0.75-2.5

CE EAC DALI SELV

1	2	3	4	Irated (mA)	Prated (W)	Uoutput (V <sub>DC</sub> )
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	300	15.6	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	400	20.8	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	450	23.4	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	500	26.0	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	550	28.6	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	600	31.2	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	650	33.8	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	700	36.4	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	750	39.0	6-5.2
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	800	41.6	6-4.9
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	850	44.1	6-4.6
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	900	44.1	6-4.4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1000	44.0	6-4.4
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1050	44.1	6-4.2

### 10. Wiring instructions



1. All connections must be kept as short as possible to ensure good EMI behaviour
2. Mains leads should be kept apart from LED Driver and other leads (ideally 5–10cm distance)
3. Advice the maximum length of output wires is 3m
4. Secondary switching is not permitted (Except for constant voltage)
5. Incorrect wiring can damage LED modules.
6. The wiring must be protected against short circuits to earth (sharp edged metals parts, metal cable clips, louver, etc.)

### 11. Caution

1. This product should be installed by electric engineer.
2. For Multi-function Product DALI/ Push-DIM /0-10V DIM/ PWM / Triac functions can not be used at the same time.
3. The IP20 product is non waterproof, need to avoid sun and rain. In case of outdoor use, please ensure it is mounted in a water proof enclosure.
4. Good heat dissipation conditions extend product life. Please install the product in a well-ventilated environment.
5. Please make sure LED power supply output voltage, current is used to meet the product requirements.
6. Due to safety concerns, PVC or rubber cord of 0.75-1.5mm<sup>2</sup> is recommended for input and output terminal(s) (excluding signal terminals). Flat power cord is not suitable. Ensure all wire connections and polarities are correct before applying power to avoid any damages to the LED lights.
7. Please ensure that adequate sized cable is used from the controller to the LED lights to carry the current. Please also ensure that the cable is secured tightly in the connector.
8. In case of malfunction, do not repair it yourself.
9. For Push-dim function: please follow up our instruction which can be downloaded from [HahgaPushDimManual](#)

### 12. Quality Assurance:

11.1 Guaranty is 5 years under normal operation. But out of responsible for below cases:

- ▼ The maximum failure rate of the same batch in 5 years is not more than 3%. The company only assumes the cost of product maintenance.
- ▼ Repairing without permission which lead to the destroy.
- ▼ Any change or modification.
- ▼ Incorrect operation or use.
- ▼ The damage is lead by in normal environment conditions.
- ▼ Destroy deliberately.
- ▼ The damage caused by irresistible natural disasters.

## 11.2 Repairing range:

Under warranty,if the fail is caused by bad material or manufacture,we will supply free replacement or repair which including labor service and component change.

## 11.3 Safety instructions

In any case,such as,operation,cleaning or maintenance,please obey the following the required safety rules. If the operation is beyond the security concerns of design,we won't be responsible.

- ▼Do not work in a volatile gas or flammable environment.
- ▼In any case, do not remove the case or touch the inner component.
- ▼For safety, do not carry out internal maintenance and components replacement.
- ▼The use of power should be specified in the specification of environmental conditions.



Hahga