



■ Features:

- Non-isolated architecture
- Waterproof rating: IP67
- Constant power design to avoid overload damage; NFC function for setting output current
- High efficiency, compact size, high power factor, low THD
- Multiple dimming options available: DALI-2, DMX, 0-10V, PWM, resistance, time control
- Comprehensive protection functions: short circuit/over-temperature/over-voltage protection
- Surge protection:differential mode 6kV/common mode 10kV
- 5-year warranty



■ Applications:

LED street lighting, LED architectural lighting, LED Grow lighting, LED flood lights, Other LED lighting fixtures.

■ Parameters

Input	Input Voltage	100-277Vac (90-305Vac)
	Input Frequency	50Hz/60Hz
	Input Current max	4.5A, 120Vac
	Surge current input	38A, 1.3ms @50% 277VAC
	Standby power consumption	0.5W, Dimming cutoff
	Power Factor	≥0.99, 120Vac Full load
	Total Harmonic Distortion (THD)	< 10%, 230Vac Full load
Output	Output Voltage	DC 160-260V
	Output Current	280-2780mA
	Output Power	500W
	No-load output voltage	300V MAX
	Efficiency	96%, 277Vac Full load
	Auxiliary power supply	+24V 125mA
	Output current ripple (peak-to-peak)	≤5%
	Start-up Current Overshoot	2.85A, 120VAC
	Boot-up Time	851ms, 120VAC (100%load)
	Load Regulation	≤5%
	Dimming Methods	DALI-2, DMX, 0-10V, PWM, resistance, Time-controlled dimming
Environmental Requirements	Operating Temperature	-40°C-50°C
	Storage Temperature	-40°C-85°C
	Operating Humidity	10%-90%RH
	Storage Humidity	5%-95%RH
	Altitude	-100m-6000m
	Cooling Method	Natural Cooling

■ Dimming Methods

Parameter		Min	Typical	Max	Remarks
0-10V	Additional maximum voltage	0V		12V	0-10V dimming, PWM dimming, and resistance dimming are three-in-one compatible. 0-5V dimming, negative logic dimming, and dimming cutoff function
	Output range	1% I _{omax}		100% I _{oset}	
	Dimming voltage	1V		10V	
cutoff	Cutoff point	0.8V	0.9V	1.0V	potential option to change
	Turn-on point	1.1V	1.2V	1.3V	
PWM	High level	5V		10V	
	Low level	-0.3V		-0.6V	
	Frequency range	200Hz		2KHz	
	Duty cycle	1%		99%	
Resistance	External resistance value	10K ohm		100K ohm	
DALI	AC power metering accuracy	-1%		1%	
	DA, DA high level	9.5 V	16 V	22.5 V	
	DA, DA low level	-6.5 V	0 V	6.5 V	
	DA, DA current	0 mA		2 mA	
	DALI implementation standard	IEC 62386-101 102 207: DALI 2.0 D4i			
	DALI dimming compatibility	DALI host compatibility: YuanHo, Simon, Philips, Osram, Ouhua, Reigel, Hedong, Crestron			
DMX					

Time-controlled dimming

The time-controlled dimming includes three modes: they are Adaptive-Midpoint Alignment, Adaptive-Percentage, and Traditional Timing.

- Adaptive-Midpoint Alignment: Set the midpoint time of the dimming curve, and the dimmer will automatically adjust the working curve based on the total working time in the past few days, adjusting in 30-minute intervals (midpoint set at 0:00, users can set their own offset, positive or negative offset up to 4 hours).
- Adaptive-Percentage: Adjust the working time automatically based on the working time of the past few days, proportionally increasing or decreasing according to the initialized time and effective working time.
- Traditional Timing: The power runs according to the dimming curve set by the system after the power is turned on.

Light decay compensation function

This function is mainly used to maintain a constant brightness output for LEDs. During the LED's lifespan, the driving current of the LED is gradually increased to compensate for the light decay caused by long-term operation, ensuring a constant luminous flux output from the LED.

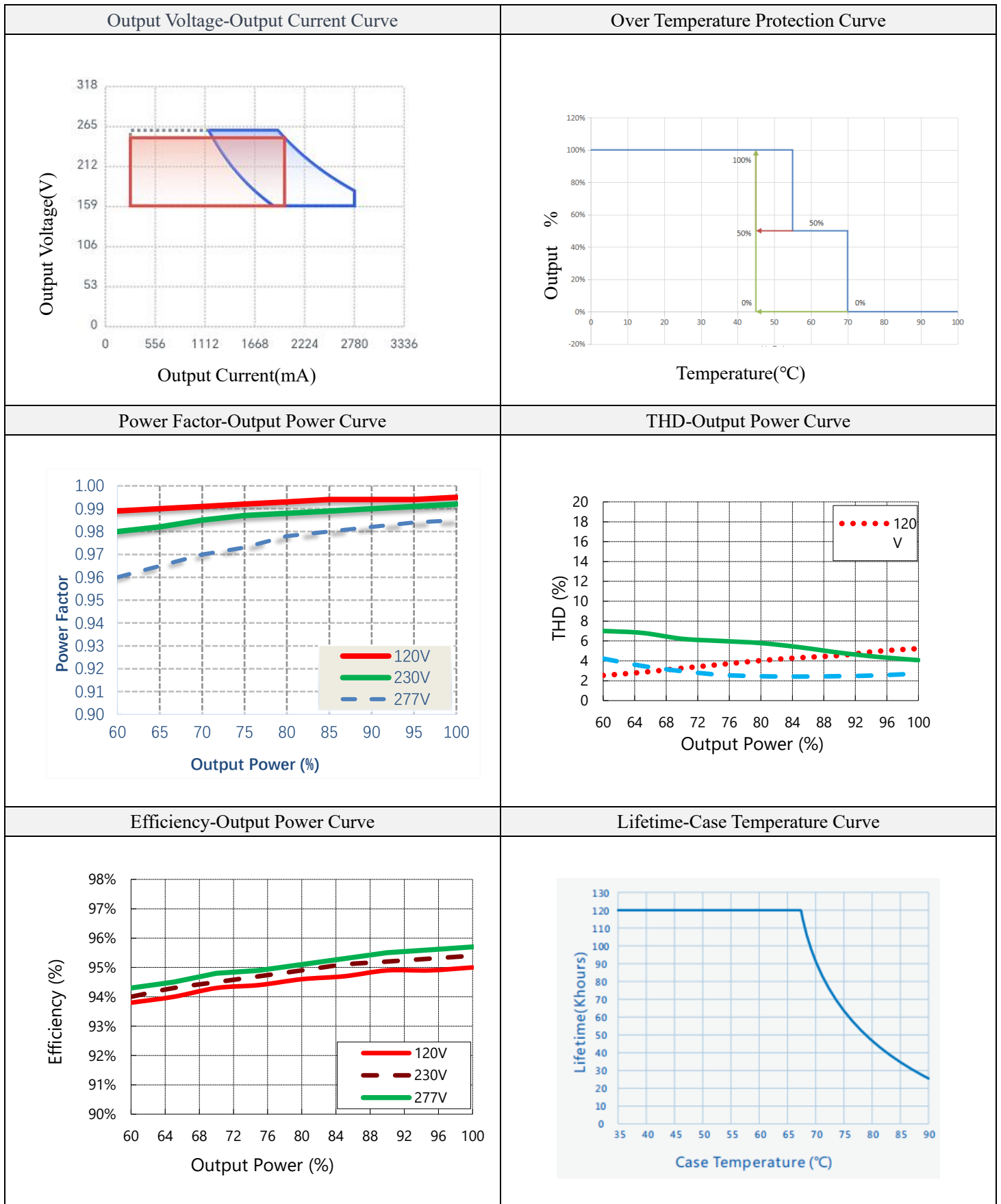
End-of-life warning function

Once this function is activated, each time the LED driver is started, its output current will automatically be reduced to 1% of the total current and last for 1 minute, reminding the user to replace it, indicating that the LED luminaire has reached the vendor's designed service life.

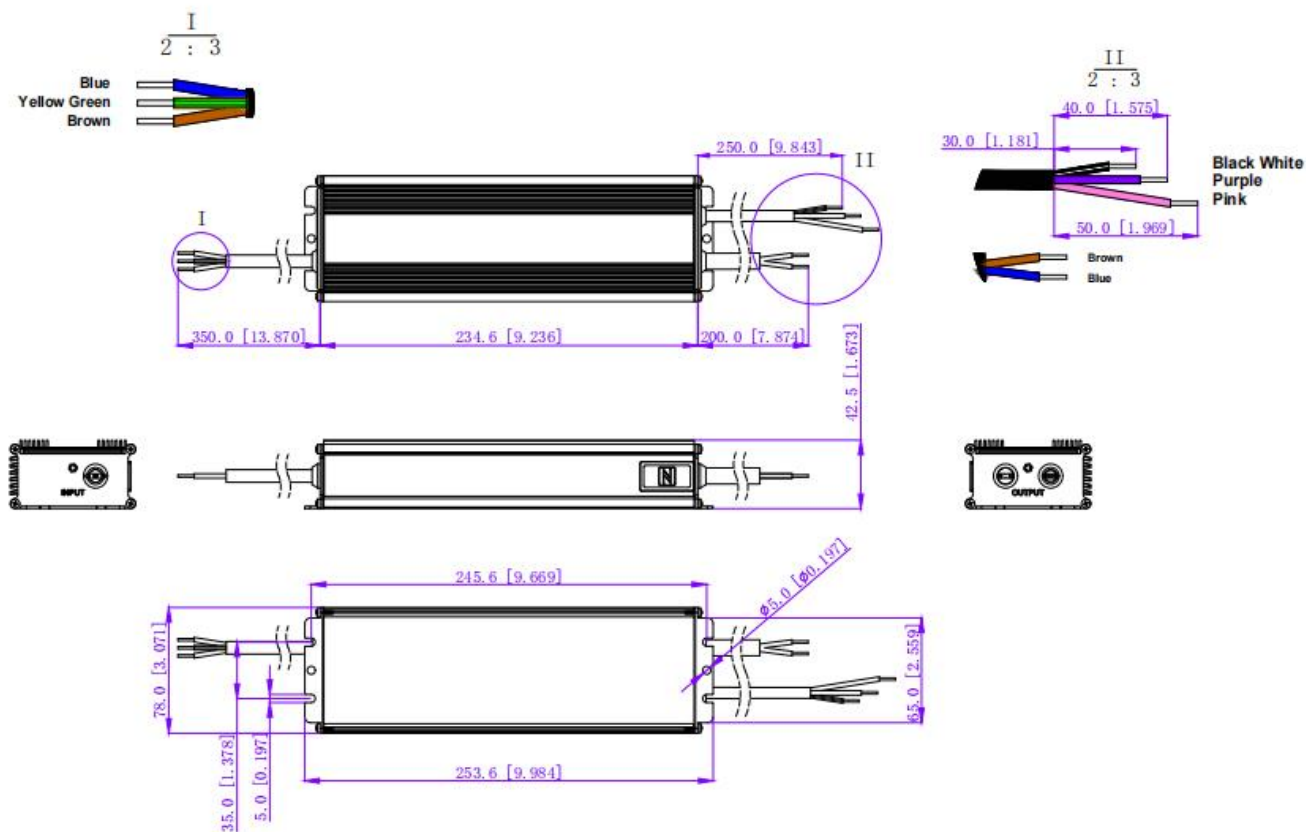
■ Safety and Electromagnetic Compatibility Standards

Certificate	Standards	
UL/CUL	UL8750	
ENEC	EN 61347-1, EN 61347-2-13	
BIS	IS15885:2012 Part 2 Sec 13	
SAA	AS/NZS61347.2.13	
CCC	GB19510.14	
CE	EN 61347-2-13:2014 EN 61347-1:2008+A1:2001+A2:2013	
Safety Compliance Test Items	Technical Standards	
Dielectric Strength	Input to Dimming	3750Vac/10mA Max/60s
	Primary to Ground	1500Vac/5mA Max/60s
	Secondary to Ground	1500Vac/5mA Max/60s
Insulation Resistance	Input to Output	500Vdc
Ground Resistance	$\leq 0.1\Omega$, 25A/1min	
Leakage Current	$\leq 0.75\text{mA}$, 277Vac	
EMI/MES	Standards	
Conducted Emissions (CE)	EN55015:2013+A1:2015, FCC PART15B	
Radiated Emissions (RE)	EN55015:2013+A1:2015, FCC PART15B	
Harmonics	ICE/EN 61000-3-2, Class C	
Surge	ICE/EN 61000-4-5, Differential Mode 6KV, Common Mode 10KV	

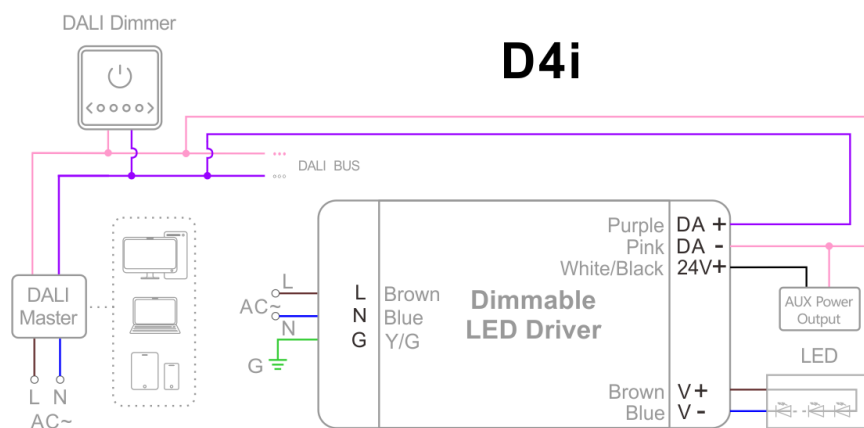
■ Test Curve



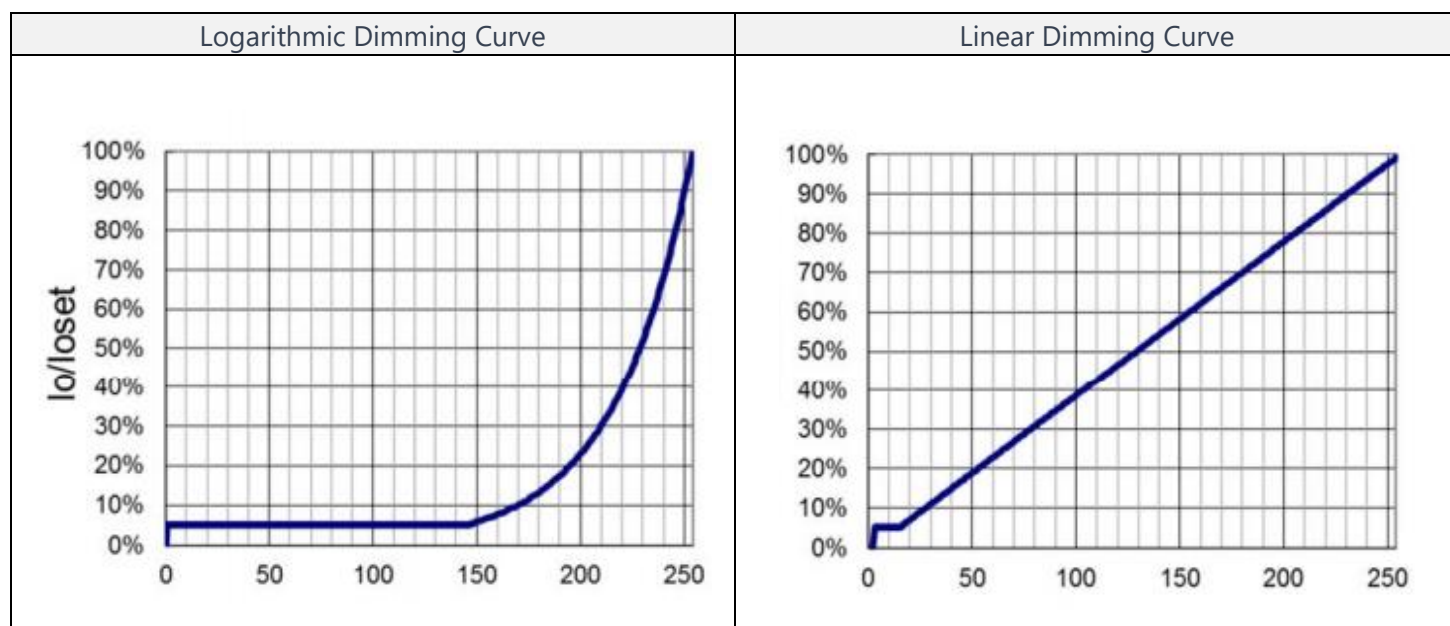
■ Structural Dimensions (Unit: mm)



■ Dimming Operation and Wiring Diagram



- Connect DALI signal between DA+ and DA- to adjust the constant current output value.
- Do not connect "DA-" to "V-."
- "DA+" and "DA-" have a built-in DALI bus power supply, and no additional bus power supply is required.
- The dimming section DA- is not internally connected to the main output V- power supply. It belongs to an isolated dimming driver power supply. The dimming control circuit cannot be directly extended to the external of the luminaire.



■ Notes:

- If the product packaging is damaged, please check whether the product's appearance is intact. The external structure of the product should not have cracks.
- LED driver installation should be performed by a professional.
- Ensure there is sufficient ventilation around the LED driver during installation to facilitate heat dissipation and extend the service life.
- When the dimming line is not in use, seal the dimming line joint to prevent interference signals from affecting the normal operation of the power supply.
- It is recommended to install undervoltage protection and surge protection devices in the luminaire power circuit to ensure electrical safety.
- The total output power during the use of the LED power supply must not exceed the rated maximum power, or the warranty may be void.
- During the withstand voltage test, short-circuit between the input lines L/N and between the positive/negative of the dimming line.
- For the withstand voltage test between LED beads and the aluminum substrate, it is recommended to perform a 100% inspection at $>3.0\text{KVac}$.
- The LED power supply is suitable for use at altitudes below 6,000M.