

Main Features:

- Input Voltage: 90~305Vac or 127~420Vdc
- Output Wattage: Constant Voltage (C.V.) at **60W**
- High Efficiency: Up to 89%
- Dimming Function: **0-10V**
- Lightning Protection: Built-in Surge Protector at 10KV/5KA
- Reliability Protection: OVP, SCP, OTP
- Safety Regulation: Complies with UL8750 & EN61347
- **Type TL and HL** Program Certified from UL
- **Class P** UL standard for retrofit kit
- Waterproof Rating: IP67
- Five Year Warranty under Normal Usage Conditions



SPECIFICATION

Model No. ⁽ⁱ⁾	Output Voltage	Output Current Range	OVP	OTP	Case Temperature
	C.V. Rated (Vdc)	I _{min} - I _{max} (mA) ⁽ⁱ⁾	(Vdc max.)	(°C) ⁽ⁱⁱ⁾	(T _c)
LDP-060012-5000-U	12	0 – 5000	120% Vomax, typ.	T _c ≥ 105 ± 10°C	90C
LDP-060024-2500-U	24	0 – 2500	120% Vomax, typ.	T _c ≥ 105 ± 10°C	90C
LDP-060048-1300-U	48	0 – 1300	120% Vomax, typ.	T _c ≥ 105 ± 10°C	90C
Note	(i) Short Circuit: Auto recovery. The output recovers when short is removed.				
	(ii) Turn off the output when T _c ≥ 105 ± 10°C; Auto Recovery When T _c ≤ 70 ± 10°C				

Input Spec.	Condition Description	Min.	Normal	Max.	Units
Input Voltage Range	Universal Input	90	100-277	305	VAC
Input Frequency Range		47	50/60	63	Hz
Input Current	120 VAC/220 VAC input, full load output			0.58/0.31	A
Power Factor	@60-100%load, refer to PF vs. Load curve		>0.9		
Inrush Current	At 220 VAC input, 25°C cold start / At 277 VAC input, 25°C cold start			66 / 90	A
Leakage Current	max @277Vac 60Hz		0.75	1	mA
Surge Protection	Line to line 6kV, line to ground 10kV, IEC 61000-4-5				

Output Spec.	Condition Description	Min.	Normal	Max.	Units
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Voltage Accuracy	±3%Vo		±3		%
Voltage Ripple	Vp-p:5%Vo max			5	% Ip-p (Io)
Overshoot/Undershoot	10% Vo, max.			10	%
Turn-On Delay	Measured at 110 VAC/220 VAC input and Full Load			1.2	S

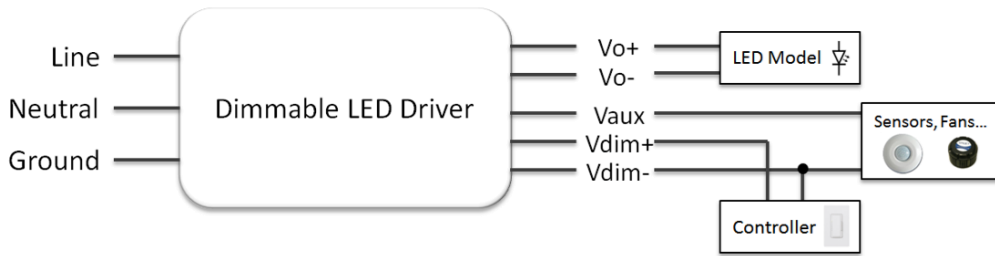
General Spec.	Condition Description	Min.	Normal	Max.	Units
Efficiency	Measured at full load and 220Vac in the thermal balanced condition.		88	89	%
MTBF	measured at Tc= 75°C (MIL-HDBK-217F)		≥320,000		Hours
Lifetime	measured at Tc= 75°C		≥100,000		Hours
Operating/Storage Temperature	5%RH~100%RH (See De-rating Curve for more details)	-40/-40		70/85	°C
Dimension (OL/L x W x H)	OL is the overall length with mounting plates	158/131 x 67.5 x 33.5			mm
		6.22/5.16 x 2.66 x 1.32			inch
Weight	Net weight without package	1.43/0.65			lb/kg

Safety & EMC Compliance	Category	Condition Description
Safety Regulations	UL8750	Light Emitting Diode(LED) Equipment for Use in Lighting Products
	UL1012	Power Unit Other Than Class 2
	IEC 61347-1	Lamp Controlgear Part 1: General and Safety Requirements
	IEC 61347-2-13	Lamp Controlgear Part 2-13: Particular Requirement for d.c. or a.c. Supplied Electronic Controlgear for LED Modules
	CE	Europe: EN 61347-1, EN61347-2-13
EMI Standards	IEC 55015	Conducted emission test & Radiated emission test
	IEC 61000-3-2	Harmonic current emissions; Class C (≥75% load)
	IEC 61000-3-3	Voltage fluctuations & flicker
	FCC Part 15	Class B
EMS Standards	IEC 61000-4-2	Electrostatic discharge (ESD)
	IEC 61000-4-3	Radio frequency electromagnetic field susceptibility test (RS)
	IEC 61000-4-4	Electrical fast transient (EFT)
	IEC 61000-4-5	Surge immunity test
	IEC 61000-4-6	Conducted radio frequency disturbances test (CS)
	IEC 61000-4-8	Power frequency magnetic field test
	IEC 61000-4-11	Voltage dips
	IEC 61547	Electromagnetic immunity requirements applies to lighting equipment

■ Dimming Curve

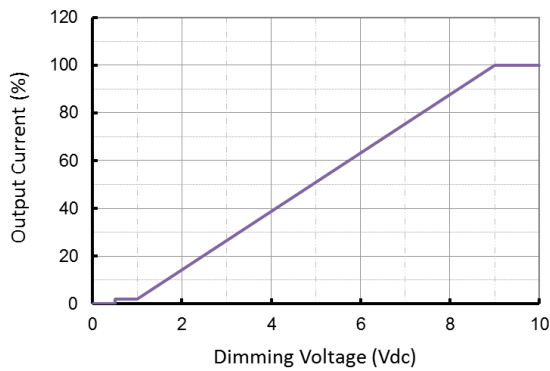
Parameter	Min.	Typ.	Max.
Vdim Sourcing Current	100uA	150uA	200uA
Vdim Allowed Input Voltage	-20 V		20 V
0-10V Dimming Range	2% (Vdim=1V)	Linear	100% (Vdim=9~10V)
PWM Dimming Range	2% (Duty=10%)	Linear	100% (Duty=90-100%)
Dim off threshold	0.4V or 4%	0.5V or 5%	0.6V or 6%
Dim on threshold	0.6V or 6%	0.7V or 7%	0.8V or 8%
PWM High	3.8V		10V
PWM Low	0V		0.6V
PWM Frequency	300Hz		2kHz
External PWM Controller Current Sinking Capability	300uA		

Dimming Wire

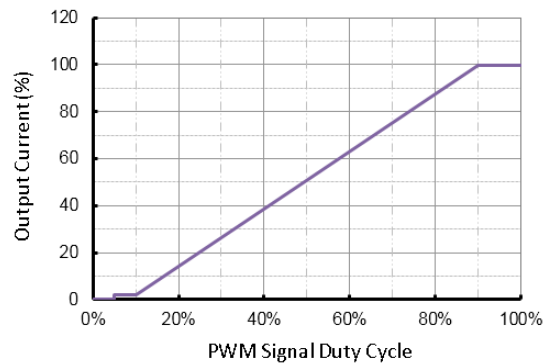


With dim-off (dto)

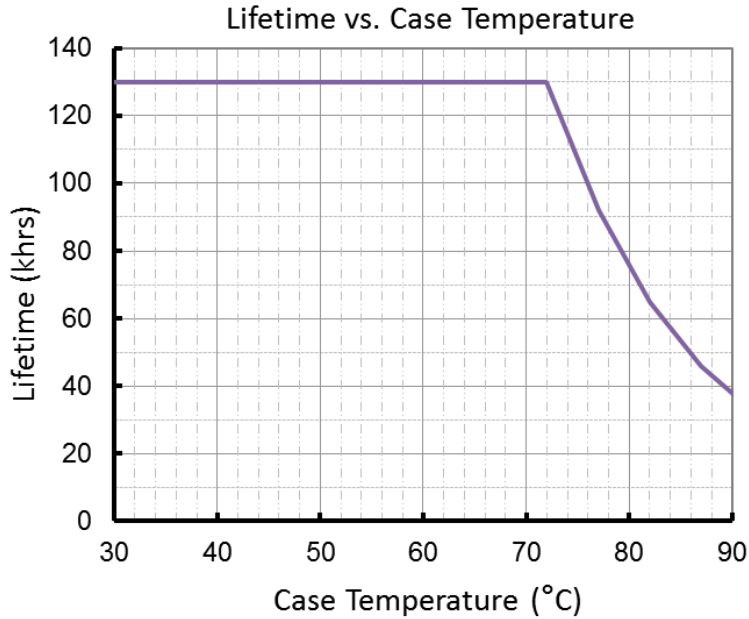
0-10V Dimming Curve



PWM Dimming Curve

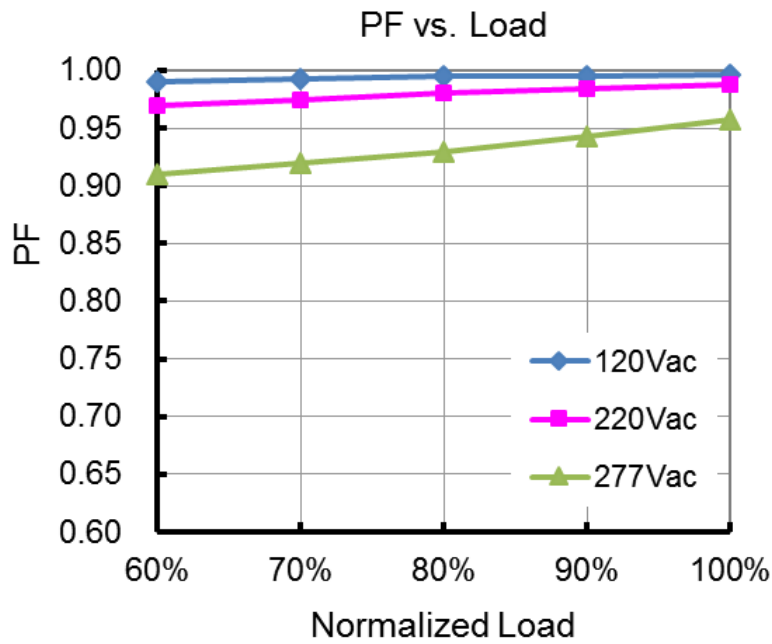


■ Lifetime vs. Case Temperature

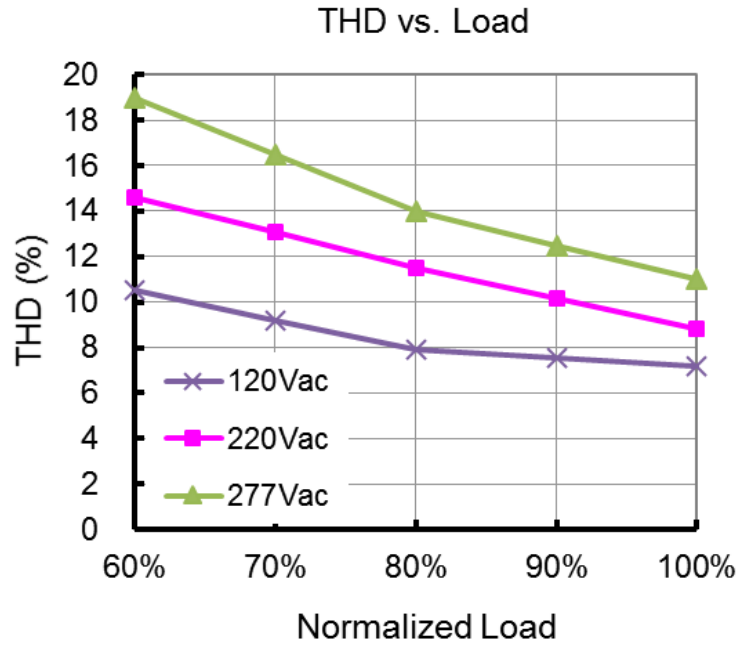


(End of Life: Maximum Failure Rate=10%)

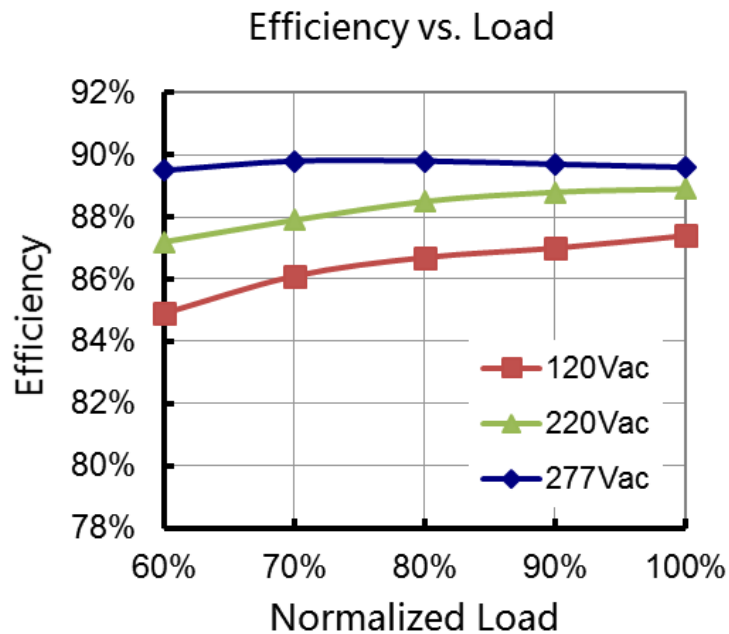
■ Power Factor VS Load



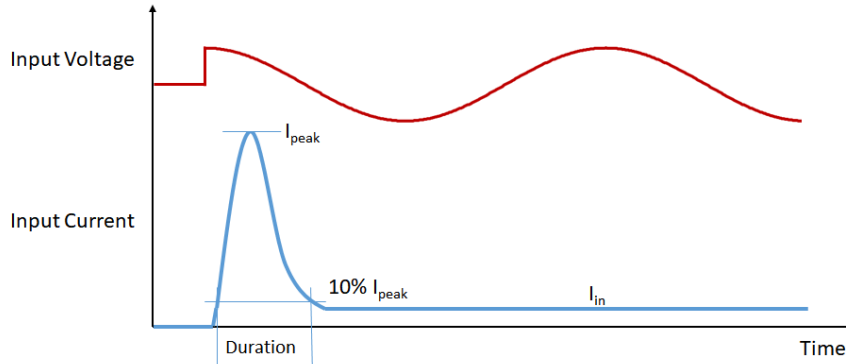
■ THD vs. Load



■ Efficiency vs. Load (24V Model)



■ Inrush current



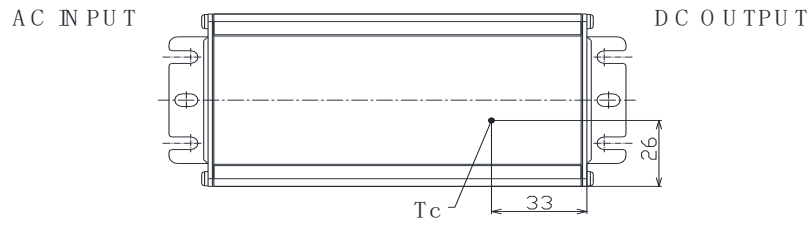
Input Voltage	I _{peak}	Duration
120Vac	37A	820us
220Vac	66A	820us
277Vac	90A	760us

Please contact with us for MCB calculation and waveforms.

■ Dielectric Strength

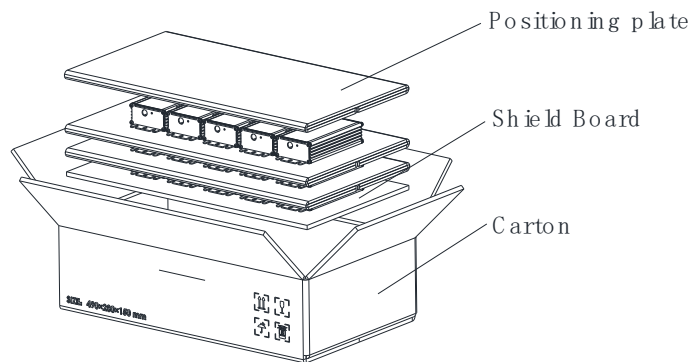
Unit: Vac	Input	Output	Dimming	Case
Input	-	3750	3750	1554
Output	3750	-	-	1554
Dimming	3750	-	-	1554
Case	1554	1554	1554	-

■ Tc Point



■ Packaging information

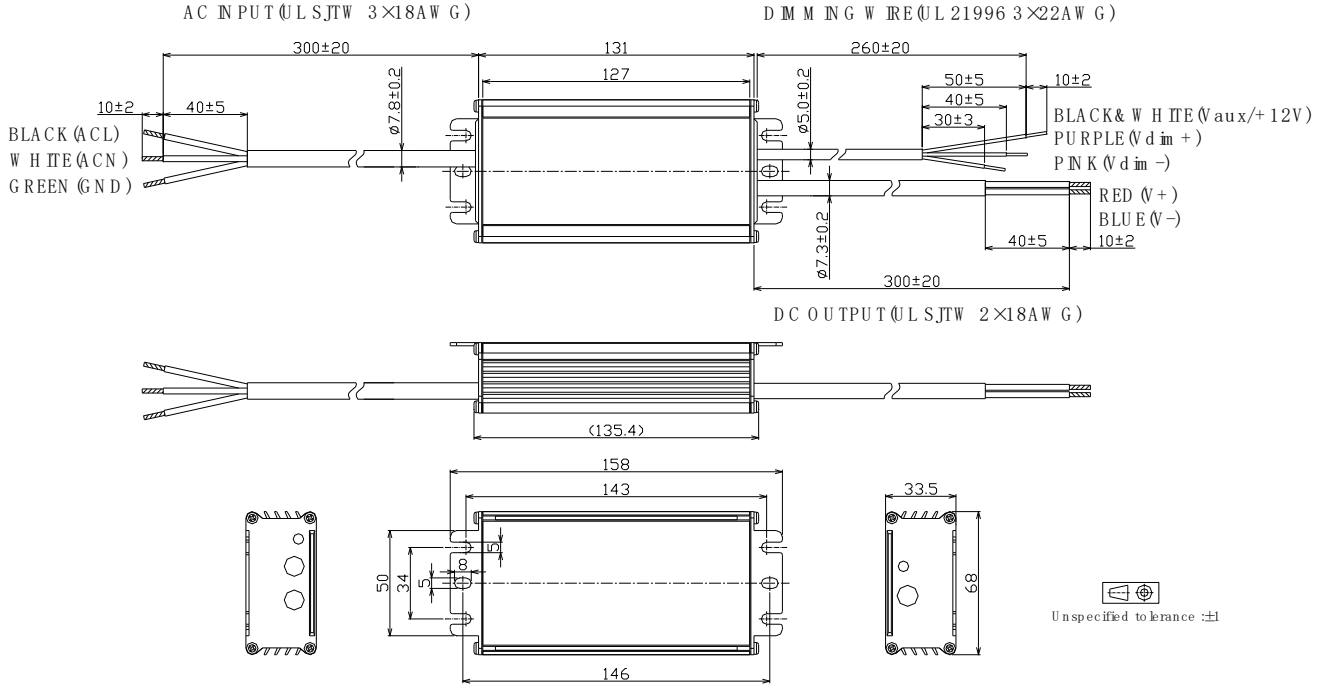
Typical Carton Dimension(L×W×H)	490×280×150 mm
Positioning plate	3pcs/carton
Shield Board	1pcs/carton
LED Drivers	15pcs/carton



■ Mechanical Outline (Unit: mm)

Note: Dimensions in millimeters, where 25.4 mm = 1 inch

Tolerance: ± 0.51 mm



Safety Note: Please make sure the output cable does not connect to dimming cable or the cables of other drivers until 20 seconds after being tested because of the remained voltage in the output capacitor

Revision

Date	Rev.	Description of Change		
		Item	Old	New
2/2/2018	V2a	In Draft Release	/	/
3/11/2023	V2b	New version	No 12V VAUX	12 V VAUX