UWF60-1W12V



Product Feature

- Rated input voltage range: 120-277Vac.
- Isolated constant voltage design.
- Built-in active PFC function.
- No-Load Power < 0.5 W.
- Class 2 Output.
- All-around protection: SCP, OLP, OVP
- Input surge protection: Differential mode: 4kV, Common mode: 6kV.
- IP67 design for indoor and outdoor applications. suitable for dry / damp / wet locations
- Safety according to CE & UL8750 &FCC Part 15 class B.
- 5-year warranty.

E517234 E490914

RoHS SELV IP67

Application

Architectural lighting, Decorative lighting, Advertising light box.

Flicker free | Short Circuit Protection | Over Current Protection | Over Load Protection | Over Voltage Protection

Models

Model Number	Input Voltage Range	Max. Output Power	Output Voltage	Output Current Range	Efficiency (Typ.)	PF (Typ.)	THD (Typ.)
UWF60-1W12V	90-305Vac	60W	12Vdc	0-5.0A	89%	0.97	10%

Note:
1. All specifications are measured at 25°C ambient temperature, input voltage 230Vac, and the typical value tested by full load.

Technical Parameters

Parameter		Min.	Typ.	Max.	Remark
Input	Rated Input AC Voltage	120Vac	230Vac	277Vac	
	Input AC Voltage Range	90Vac	-	305Vac	Reference derating curve
	Frequency Range	47Hz	50/60Hz	63Hz	
	Input AC Current	-	-	0.63A	At 120Vac input and 100% load
	Input AC Power	-	-	75W	At 120Vac input and 100% load
	Leakage Current	-	-	0.70mA	IEC 60598-1; 240Vac/50Hz
				0.75MIU	UL 8750;277Vac/60Hz.
	Inrush Current	-	-	35A	At 120Vac input and 100% load, 25°C Cold start
				50A	At 230Vac input and 100% load, 25°C Cold start
				60A	At 277Vac input and 100% load, 25°C Cold start
	No-load Power	-	-	0.5W	At 230Vac input
	Power Factor	0.95	0.98	-	At 120Vac, 50-60Hz, 70%-100% load
		0.94	0.97	-	At 230Vac, 50-60Hz, 70%-100% load
		0.90	0.95	-	At 277Vac, 50-60Hz, 70%-100% load
	THD	-	10%	20%	At 120-277Vac, 50-60Hz, 70%-100% load

Parameter		Min.	Typ.	Max.	Remark
Output	Output Voltage Range	11.4V	12V	12.6V	±5%
	Open Circuit Voltage	-	-	12.6V	At 100% load, 20 MHz BW
	Total Output Voltage Ripple(Pk-Avg)	-2%	-	+2%	At 100% load, 20 MHz BW
	Output Current Range	-	-	5.0A	
	Efficiency @120Vac	86.0%	87.5%	-	Measured at 100% load
	Efficiency @230Vac	87.5%	89.0%	-	Measured at 100% load
	Efficiency @277Vac	88.0%	89.5%	-	Measured at 100% load
	Startup Overshoot Voltage	-	-	5%	At 100% load
	Line Regulation	-1%	-	+1%	At 100% load
	Load Regulation	-3%	-	+3%	Input Voltage 100-277Vac, load changes from 70% to 100%.
	Turn-on Delay Time	-	-	1.5s	At 120-277Vac input and 100% load
	Dynamic Response deviation	-2.0V	-	+2.0V	R/S: 1 A/μs, 25% ~ 100% load.
	Dynamic Response settling time	-	-	10ms	
Other Characteristics	Operating Case Temperature For safety (Tc)	-40°C	25°C	+90°C	
	Operating Ambient Temperature For safety (Ta)	-40°C	25°C	+50°C	At 120-277VAC input
	Operating Case Temperature For warranty (Tc)	-40°C	25°C	+75°C	Humidity: 10% RH to 95% RH
	Storage Temperature (Ta)	-40°C	25°C	+85°C	Humidity: 20% RH to 95% RH
	Altitude	-65m	-	4000m	
	Temperature Coefficient	-0.06%/°C	-	+0.06%/°C	Tc:0 °C~90°C
	Over Load Protection	130%load	-	180%load	Self-recovery
	Short Circuit Protection	-	-	-	Self-recovery, short circuit without damage
	Lifetime (Tc≤85°C)	≥50,000 hours			At 230Vac,100% load, please refer to lifetime vs. case temperature curve
	MTBF	200, 000 hours			At 230Vac,80% load, Ta=25 °C (MIL-HDBK-217F)
	Warranty	5 years			Tc ≤ 75°C
	Net Weight	250g			
	Dimension	145mm*40.8mm*22.5mm			L x W x H
	Package	30PCS/Carton; 7.6kg±5%/Carton; Carton Size: 338*187*190mm			L x W x H

Note: All the parameters above are tested Ta 25°C and LED load, unless specified.

Safety and EMI/EMS Standards

Safety Certification	Standard	Status	Remark
UL/cUL	UL8750, CSA C22.2 No.250.13	√	
CB	IEC61347-1, IEC61347-2-13		
CE	EN 61347-1, EN 61347-2-13, EN62493	√	
ENEC	EN 61347-1, EN 61347-2-13, EN IEC 62384		
CCC	GB/T 19510.213, GB/T 19510.1		
PSE	J61347-1(H29), J61347-2-13(H29)	√	
SAA	AS/NZS 61347.1, AS/NZS61347.2.13		

EMC Category	Standard	Status	Remark
FCC	FCC Part15: Subpart A ANSI 63.4:2014	√	
CE	EN 55015, EN 61000-3-2, EN 61000-3-3, EN 61547	√	
CE	EN61000-4-2,3,4,5,6,11	√	
CCC	GB/T 17743, GB 17625.1		
PSE	J55015(H29)	√	
Surge	GB/T 17626.5 EN61000-4-5 AC power line: line to line 4kV, line to earth 6kV.	√	Class A
Ring Wave	ANSI/C82 .77-5-2017		Criterion B

Safety Test Items

Safety Test Items	Technical Indicators		Remark
Insulation Requirements	UL Insulation Requirements	CE/ENEC/CCC/PSE Insulation Requirements	
Input-Case	2U+1000Vac	2U+1000Vac	Basic insulation
Input-Output	2U+1000Vac	4U+2000Vac	Reinforced insulation
Output-Case	500Vac	500Vac	Basic insulation
Insulation Resistance	≥10MΩ		Input-Dim, Test voltage: 500Vdc
Ground Resistance	≤0.1Ω		25A/1min

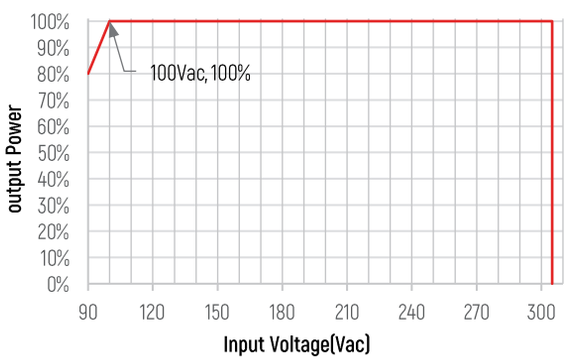
Note:

1. LED Driver itself complies with EMC standard. However, LED Driver 's EMC should be re-checked when integrated into lighting systems due to unexpected interference of components.

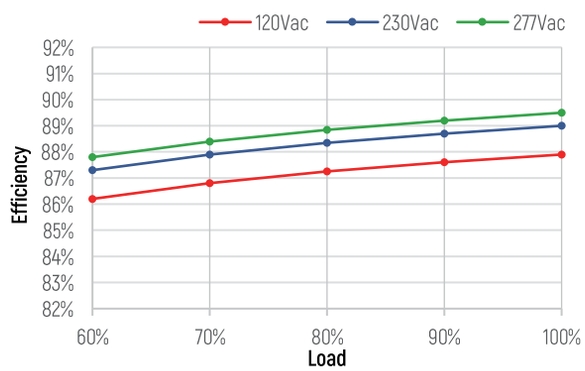
RoHS

Our products comply with RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU.

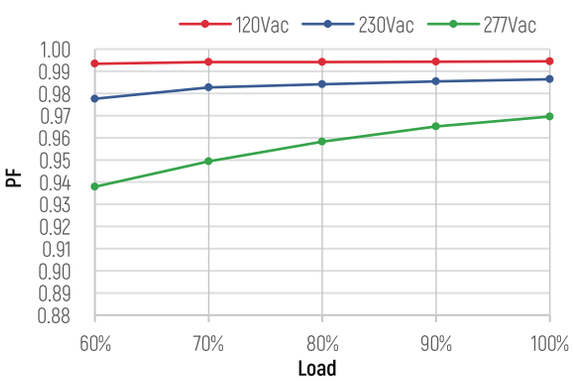
Derating



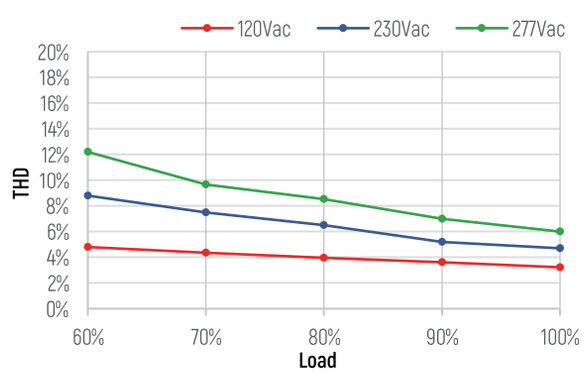
Efficiency vs. Load



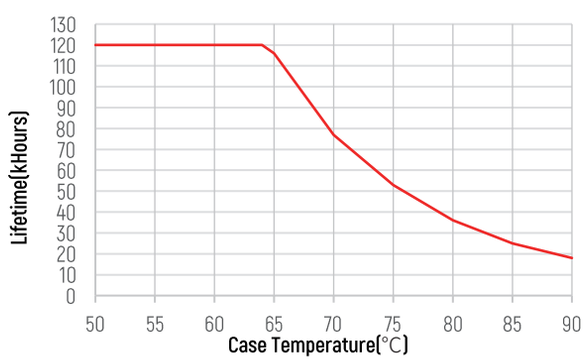
PF vs. Load



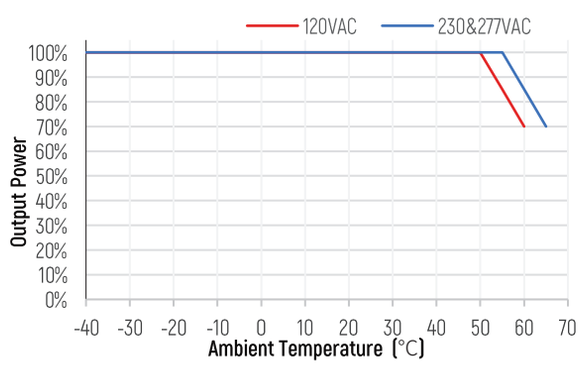
THD vs. Load



Lifetime vs. Case Temperature(Tc)

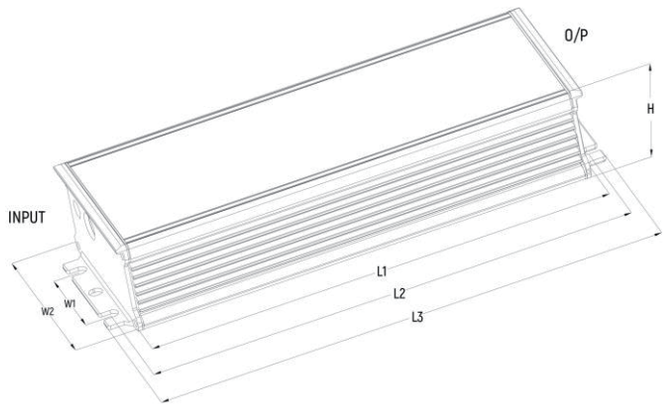


Output Power vs. Ambient Temperature(Ta)

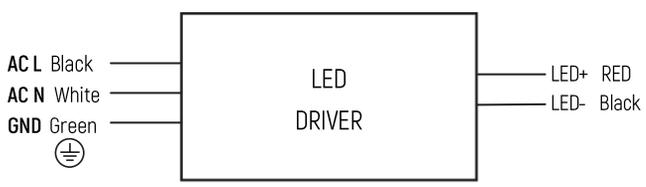


Dimension: mm (Inch)

Name Description	Standard Code	mm(In.)
Case Length	L3	145.0(5.71)
Case Width	W2	40.8(1.61)
Case Height	H	22.5(0.886)
Overall Length	L1	129.0(5.08)
Mounting Hole Length	L2	-
Mounting Hole Width	W1	-



Wiring Diagram

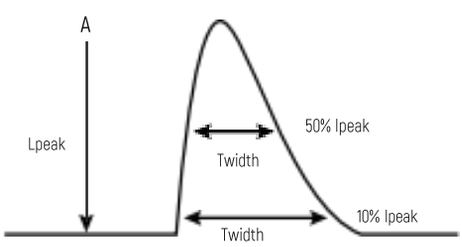


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Input: UL 18AWG Length=200±20mm

Output: UL 18AWG Length =200±20mm

Inrush Current

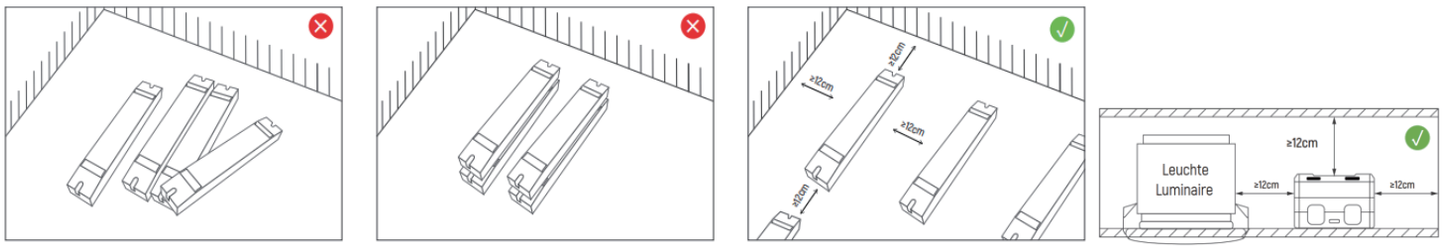


Max. quantity of drivers per miniature circuit breaker

	120Vac input	277Vac input	Condition
Inrush Current Ipeak	35A	60A	
Inrush Current Twidth	280us	280us	50%-50% Ipeak
Inrush Current Twidth	420us	420us	10%-10% Ipeak

MCB	120Vac	277Vac	MCB	120Vac	277Vac
B10	3pcs	3pcs	C10	6pcs	6pcs
B13	4pcs	4pcs	C13	7pcs	7pcs
B16	5pcs	5pcs	C16	8pcs	8pcs
B20	7pcs	7pcs	C20	10pcs	10pcs
			D16	12pcs	12pcs

Installation Precautions



The product is used flat. Please do not stack the products. The distance between two products should be>12cm so as not to affect heat dissipation and the lifespan of the products.

Cautions

This product must be installed and adjusted by a qualified professional.		
1	Confirmation of installation conditions	· **Waterproof and Protection:** Install in a suitable location according to the waterproof and protection requirements of the power supply. Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection. · **Heat dissipation requirements:** The drive power supply should avoid exposure to high temperature environments. Please ensure that the working environment temperature is within the recommended range. To ensure proper heat dissipation of the drive power supply, a well ventilated area should be selected for installation. Good heat dissipation conditions can help extend product lifespan.
2	Power check	· Before use, check the product parameters and confirm that the output voltage and current of the LED power supply meet the requirements
3	Safe wiring	· Use cables that meet the specifications to ensure that the cross-section of the wire matches the requirements of the driving power supply. Solid cables typically measuring 0.75-2.5 mm ^{2}, (Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements). · If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded. · Indication that the controlgear relies upon the luminaire enclosure for protection against accidental contact with hazardous live parts.
4	Wiring confirmation	· Before power on debugging, ensure that the wiring is secure and avoid poor contact to prevent unstable current or equipment damage.
5	Repair suggestions	· If the product malfunctions, please do not repair it without authorization. If you have any questions, please contact the supplier or sales team for assistance.

※ The contents of this manual are updated without prior notice. If the function of the product you are using is inconsistent with the instructions, the function of the product shall prevail. Please contact us if you have any questions.

Marking Explanation

Marking	Explanation
	This product is Independent LED Driver.
SELV / 	This product is a safety isolated LED Driver and complies with SELV output standards. It also features short-circuit protection functionality.

Warranty Agreement

1. Warranty periods from the date of delivery : 5 years.
2. Free repair or replacement services for quality problems are provided within warranty periods.

Warranty exclusions below:

The following situations are not covered by the free warranty or replacement service:

1. Exceeding the warranty period.
2. Damage caused by human factors such as high voltage, overload, and improper operation.
3. The appearance of the product is severely damaged or deformed.
4. Normal wear and tear or aging during regular product use.
5. Damage caused by natural disasters or force majeure factors.
6. The quality inspection label of the product is damaged (QC PASS).
7. No contract or valid invoice proof signed with EUCHIPS has been provided.

※Remedies: Repair or replacement is the only remedy provided by EUCHIPS to the customer, and EUCHIPS shall not be liable for incidental damages arising from repair or replacement, unless within the scope of applicable law.
※Adjustment of Warranty Terms: EUCHIPS reserves the right to modify or adjust the warranty terms, which shall be published in writing.

Revision history

Change date	Version	Item	From	To
2026.05	V0.1	Initiation Version		