# UWF60-1W24V



## 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

Flicker free | Short Circuit Protection | Overcurrent Protection | Overload Protection | Overvoltage Protection

## Application

Architectural lighting, Decorative lighting, Advertising light box.

## Models

| Model Number | Input Voltage Range | Max. Output Power | Output Voltage | Output Current Range | Efficiency (Typ.) | PF (Typ.) | THD (Typ.) |
|---|---|---|---|---|---|---|---|
| **UWF60-1W24V** | 90-305Vac | 60W | 24Vdc | 0-2.5A | 90% | 0.97 | 10% |

Note:
1. All specifications are measured at 25℃ 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 | 22.8V | 24V | 25.2V | ±5% |
| | Open Circuit Voltage | - | - | 25.2V | At 100% load, 20 MHz BW |
| | Total Output Voltage Ripple(Pk-Avg) | -2% | - | +2% | At 100% load, 20 MHz BW |
| | Output Current Range | - | - | 2.50A | |
| | Efficiency @120Vac | 86.5% | 88.0% | - | Measured at 100% load |
| | Efficiency @230Vac | 88.0% | 89.5% | - | Measured at 100% load |
| | Efficiency @277Vac | 88.5% | 90.0% | - | Measured at 100% load |
| | Startup Overshoot Voltage | - | - | 5% | At 100% load |
| | Line Regulation | -1% | - | +1% | At 100% load |
| | Load Regulation | -3% | - | +3% | Input Voltage 100-240Vac, 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℃ | 25℃ | +90℃ | |
| | Operating Ambient Temperature For safety (Ta) | -40℃ | 25℃ | +50℃ | At 120-277VAC input |
| | Operating Case Temperature For warranty (Tc) | -40℃ | 25℃ | +75℃ | Humidity: 10% RH to 95% RH |
| | Storage Temperature (Ta) | -40℃ | 25℃ | +85℃ | Humidity: 20% RH to 95% RH |
| | Altitude | -65m | - | 4000m | |
| | Temperature Coefficient | -0.06%/℃ | - | +0.06%/℃ | Tc:0 ℃~90℃ |
| | Over Load Protection | 130%load | - | 180%load | Self-recovery |
| | Short Circuit Protection | - | - | - | Self-recovery, short circuit without damage |
| | Lifetime (Tc≤85℃) | ≥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 ℃ (MIL-HDBK-217F) |
| | Warranty | 5 years | | | Tc ≤ 75℃ |
| | 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℃ 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

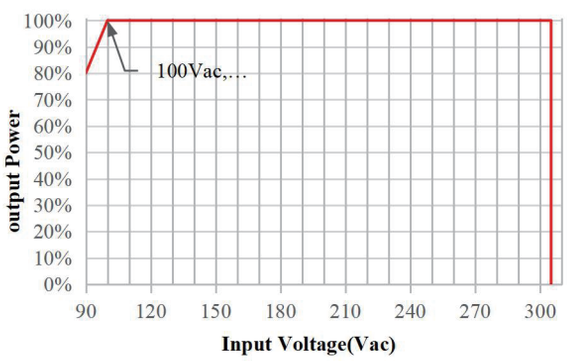
| Safety Test Items | Technical Indicators | | Remark |
|---|---|---|---|
| Insulation Requirements | UL Insulation Requirements | CE/ENEC/CCC/PSE Insulation Requirements | |
| Input-Case | 2U+1000Vac | 2U+1000Vac | Basic insulation |
| Input-Output | 2U+1000Vac | 4U+2000Vac | Reinforced insulation |
| 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.

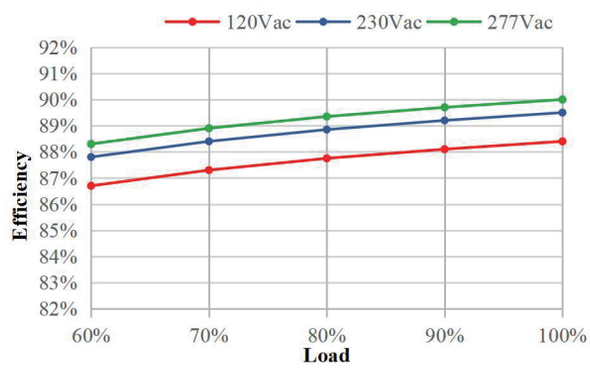
## RoHS

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

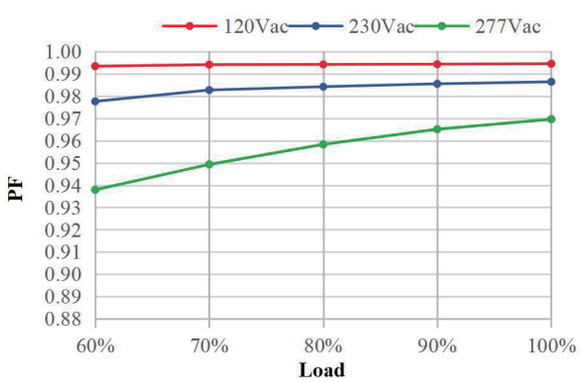
## Derating



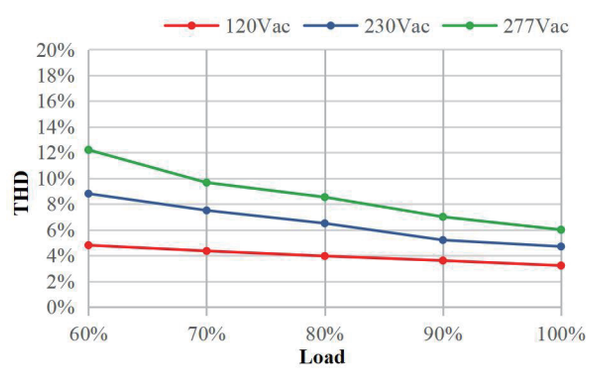

## Efficiency vs. Load



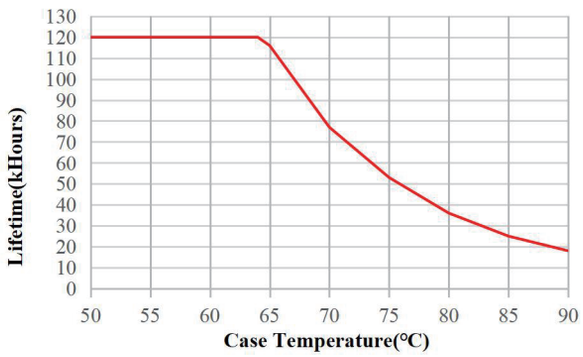

## PF vs. Load



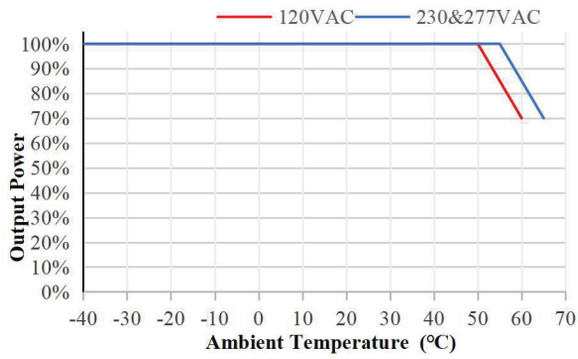

## THD vs. Load



## Lifetime vs. Case Temperature(Tc)

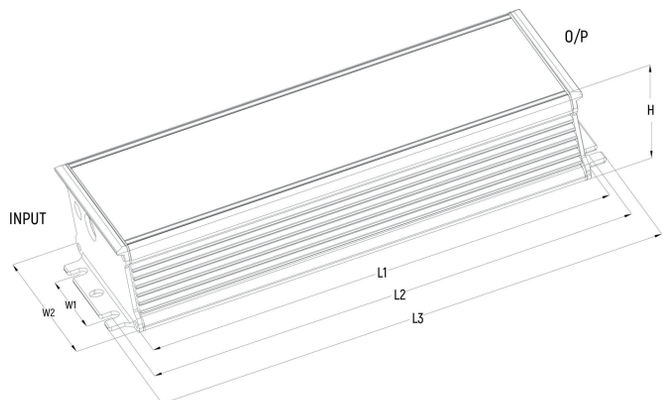



## Output Power vs. Case Temperature(Tc)

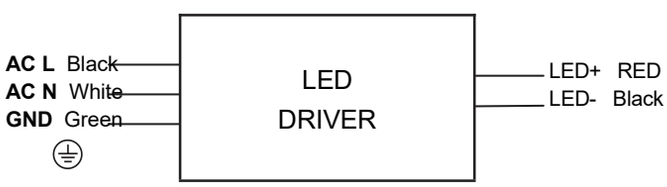



## Dimension: mm (Inch)

| 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

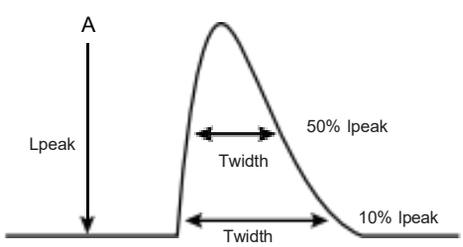



**UWF60-1W24V**

**Input:** UL 18AWG Length = 200±20mm

**Output:** UL 18AWG Length = 200±20mm

## Inrush Current



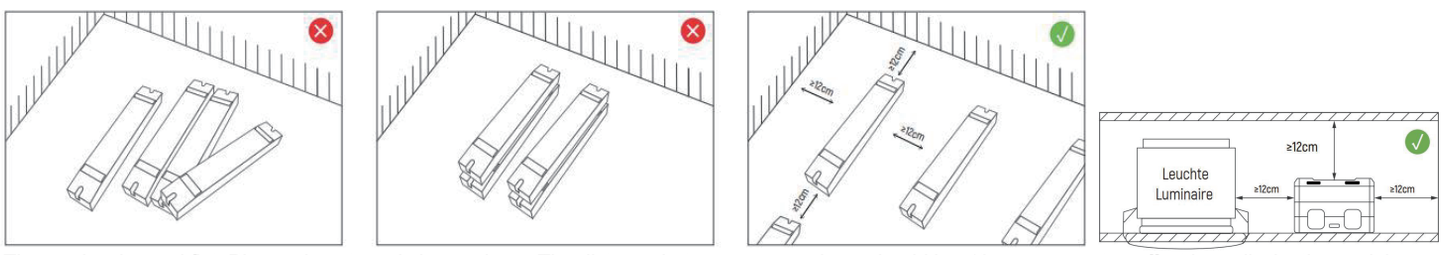

### Max. quantity of drivers per miniature circuit breaker

| | 120Vac input | 230Vac input | Condition |
|---|---|---|---|
| Inrush Current Ipeak | 45A | 70A | |
| Inrush Current Twidth | 280us | 280us | 50%-50% $I_{peak}$ |

| | | | |
|---|---|---|---|
| Inrush Current Twidth | 420us | 420us | 10%-10% Ipeak |

| MCB | 120Vac | 230Vac | MCB | 120Vac | 230Vac |
|---|---|---|---|---|---|
| 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.<br>Products without waterproof function should be protected from direct sunlight and rain. When installing outdoors, please use a waterproof box for protection.<br>• **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 $^2$,<br>(Please refer to the silk screen printing or wiring diagram in the instruction manual for specific wire diameter requirements).<br>• If the power supply (metal casing) is installed on a grounded lighting component or equipment, the power supply needs to be grounded.<br>• 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 | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |