



Class II

### Product Features

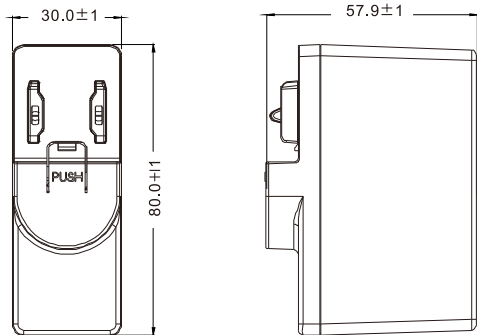
- Meets medical & I.T.E. safety
- 2 MOPP input to output isolation
- Touch current  $\leq 100\mu\text{A}$
- Energy efficiency level VI
- $\leq 0.1\text{W}$  standby power
- Up to 5,000m operating altitude
- Meet USB PD3.0, QC3.0, QC2.0, PPS fast charge agreement
- Fixed pins or convertible heads are optional



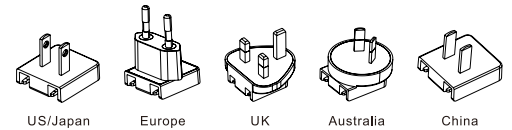
### Models & Ratings

| Model Number                  | Voltage <sup>(*)</sup> | Current   | Rated Power | Ripple & Noise<br>(max)( <sup>(*)</sup> 2) | Voltage<br>Tolerance | Line & Load<br>Regulation          | Efficiency<br>(Average) | Start Up<br>Delay |
|-------------------------------|------------------------|-----------|-------------|--------------------------------------------|----------------------|------------------------------------|-------------------------|-------------------|
| UES45LCP-SPC<br>UES45LCP1-SPC | 5.0                    | 0.01-3.00 | 15.00W      | 200mVpk-pk                                 | $\pm 5\%$            | Line: $\pm 1\%$<br>Load: $\pm 5\%$ | 81.38%                  | $\leq 3\text{s}$  |
|                               | 9.0                    | 0.01-3.00 | 27.00W      | 200mVpk-pk                                 | $\pm 5\%$            |                                    | 86.62%                  | $\leq 3\text{s}$  |
|                               | 12.0                   | 0.01-3.00 | 36.00W      | 200mVpk-pk                                 | $\pm 5\%$            |                                    | 87.40%                  | $\leq 3\text{s}$  |
|                               | 15.0                   | 0.01-3.00 | 45.00W      | 200mVpk-pk                                 | $\pm 5\%$            |                                    | 87.72%                  | $\leq 3\text{s}$  |
|                               | 20.0                   | 0.01-2.25 | 45.00W      | 200mVpk-pk                                 | $\pm 5\%$            |                                    | 87.72%                  | $\leq 3\text{s}$  |

### Mechanical Details



#### Interchangeable AC Plug Options



Unit: mm

#### Notes

(\*) Other options are available, please contact our sales representative for details.

(\*)2 Measured at output connector with 20MHz bandwidth and 0.1uF ceramic in parallel with 10uF electrolytic capacitors.

## Input

|                                        |                               |
|----------------------------------------|-------------------------------|
| Input Voltage Range                    | 90-264VAC                     |
| Frequency Range                        | 47-63Hz                       |
| Input Current                          | 1.3A at 90VAC                 |
| Inrush Current                         | 130A max at 240VAC cold start |
| Touch Leakage Current <sup>(max)</sup> | ≤ 100μA at 264VAC             |

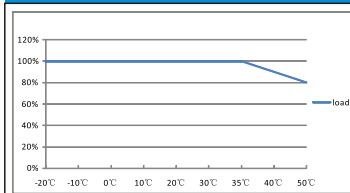
## Environmental

|                       |                                                    |
|-----------------------|----------------------------------------------------|
| Operating Temperature | -20°C to 50°C(Refer to the derating curve diagram) |
| Storage Temperature   | -30°C to 60°C                                      |
| Operating Humidity    | 10% to 90% RH, non-condensing                      |
| Storage Humidity      | 5% to 95% RH                                       |
| Operating Altitude    | 5,000m                                             |

## General

|            |                                  |
|------------|----------------------------------|
| Dimensions | 80.0(L) 57.9(W) 30.0(H)mm        |
| Weight     | 125g                             |
| MTBF       | >100,000hrs MIL-HK8K-217 at 25°C |
| Isolation  | 4000VAC Input to Output          |

## Derating curve diagram



## Protection

|               |                                              |
|---------------|----------------------------------------------|
| Overload      | 105-130% rated output power, auto recovery   |
| Over Voltage  | Min 120% rated output voltage input to reset |
| Short Circuit | Trip and restart (hiccup mode)               |

## Safety Approvals

| Safety Agency / Mark | Medical(Meet)                      | ITE                       |
|----------------------|------------------------------------|---------------------------|
| CB                   | IEC60601-1:2005/AmD2:2020          | IEC62368-1                |
| UL                   | ANSI/AAMI ES60601-1:2005/AmD2:2021 | UL62368-1                 |
| TüV SuD/Mark         | CAN/CSA C22.2 NO. 60601-1          | CAN/CSA C22.2 NO. 62368-1 |
| RCM                  | EN60601-1:2006/A2:2021             | -                         |
| CE                   | -                                  | AS/NZS 62368.1            |
| CCC                  | -                                  | EN62368                   |
| PSE                  | -                                  | GB4943.1                  |
| NOM                  | -                                  | J62368                    |
|                      |                                    | Nom-001-SCFI-2018         |

## EMC

| Emission             | Medical                  | ITE                                   |
|----------------------|--------------------------|---------------------------------------|
| Conduction           | IEC/EN60601-1-2,CISPR 11 | EN55032, CISPR 32                     |
| Radiation            | IEC/EN60601-1-2,CISPR 11 | EN55032, CISPR 32                     |
| Harmonic Currents    | EN61000-3-2, Class A     | EN61000-3-2, Class A                  |
| Voltage Flicker      | EN61000-3-3              | EN61000-3-3                           |
| Immunity             | IEC/EN60601-1-2          | En55035, CISPR 35                     |
| ESD                  | IEC61000-4-2             | ±15KV air, ±8KV contact               |
| Radiated Immunity    | IEC61000-4-3             | 10V/m ,3V/m 80MHz - 2.7GMHz           |
| EFT/Burst            | IEC61000-4-4             | ±2KV on AC port, ±1KV on signal ports |
| Surge                | IEC61000-4-5             | ±1KV line to line (different mode)    |
| Conducted Immunity   | IEC61000-4-6             | 3Vrms, 6Vrms (0.15MHz-80MHz)          |
| Magnetic Field       | IEC61000-4-8             | 30 A/m                                |
| Dips & Interruptions | IEC61000-4-11            | 0%, 70%, 0% of UT                     |

## Others

|                              |                                   |
|------------------------------|-----------------------------------|
| Dielectric Withstand Voltage | 4000VAC input to output           |
| Insulation Resistance        | 100M Ohms, 500VDC input to output |