



**Product Features**

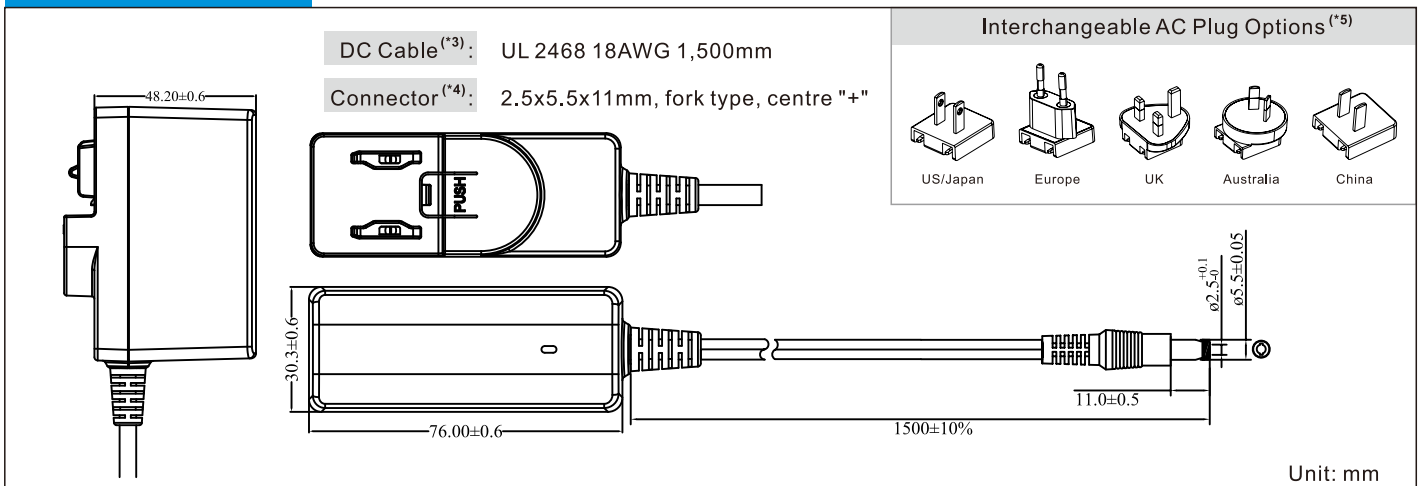
- Medical & ITE safety approvals
- 2 MOPP input to output isolation
- Suitable for medical equipment up to class BF<sup>(^)</sup>
- Low leakage current ≤ 10µA
- DOE efficiency level VI
- CoC V5 Tier 2(2016)
- ≤ 0.075W standby power
- 5V to 24V outputs, up to 12W
- Up to 5,000m operating altitude
- Interchangeable AC plugs
- UES12LCP-SPC (Lithium-ion battery charger) with LED indicator



**Models & Ratings**

Model Number	Voltage <sup>(*)</sup> (V)	Current (A)	Rated Power	Ripple & Noise (max) <sup>(*)</sup> (mVpk-pk)	Voltage Tolerance	Line & Load Regulation	Efficiency (Average)	Start Up Delay
	4.0-5.0	0.01-2.00	10W	150mVpk-pk	±7%		79.01%	≤3s
	5.1-5.9	0.01-2.00	11.8W	150mVpk-pk	±7%		80.19%	≤3s
	6.1-7.0	0.01-1.71	12W	150mVpk-pk	±7%		83.30%	≤3s
	7.1-8.0	0.01-1.50	12W	150mVpk-pk	±7%		83.30%	≤3s
	8.1-9.0	0.01-1.33	12W	150mVpk-pk	±5%		83.30%	≤3s
	9.1-10.0	0.01-1.20	12W	150mVpk-pk	±5%		83.30%	≤3s
	10.1-11.0	0.01-1.09	12W	150mVpk-pk	±5%		83.30%	≤3s
	11.1-12.0	0.01-1.00	12W	150mVpk-pk	±5%		83.30%	≤3s
	12.1-13.0	0.01-0.94	12W	200mVpk-pk	±5%		83.30%	≤3s
	13.1-14.0	0.01-0.86	12W	200mVpk-pk	±5%	Line: ±1%	83.30%	≤3s
	14.1-15.0	0.01-0.80	12W	200mVpk-pk	±5%	Load: ±5%	83.30%	≤3s
	15.1-16.0	0.01-0.75	12W	200mVpk-pk	±5%		83.30%	≤3s
	16.1-17.0	0.01-0.71	12W	200mVpk-pk	±5%		83.30%	≤3s
	17.1-18.0	0.01-0.67	12W	200mVpk-pk	±5%		83.30%	≤3s
	18.1-19.0	0.01-0.63	12W	200mVpk-pk	±5%		83.30%	≤3s
	19.1-20.0	0.01-0.60	12W	200mVpk-pk	±5%		83.30%	≤3s
	20.1-21.0	0.01-0.57	12W	200mVpk-pk	±5%		83.30%	≤3s
	21.1-22.0	0.01-0.55	12W	200mVpk-pk	±5%		83.30%	≤3s
	22.1-23.0	0.01-0.52	12W	200mVpk-pk	±5%		83.30%	≤3s
	23.1-24.0	0.01-0.50	12W	200mVpk-pk	±5%		83.30%	≤3s

**Mechanical Details**



Notes  
 (\*1, 3, 4, 5) Other options are available, please contact our sales representative for details.  
 (\*2) Measured at output connector with 20MHz bandwidth and 0.1µF ceramic in parallel with 10µF electrolytic capacitors.  
 (^) Power supplies are not medical equipment (applied parts), medical product manufacturers shall take responsibility for further evaluation of class B/BF/CF compliance of their end product.

**Input**

Input Voltage Range	90-264VAC
Frequency Range	47-63Hz
Input Current	0.5A at 90VAC
Inrush Current	50A max at 240VAC cold start
Touch Leakage Current <sup>(max)</sup>	≤10μA at 264VAC

**Environmental**

Operating Temperature	-5°C to 45°C
Storage Temperature	-25°C to 75°C
Operating Humidity	10% to 90% RH, non-condensing
Storage Humidity	5% to 90% RH
Operating Altitude	5,000m

**General**

Dimensions	76(L)x30.3(W)x48.2(H)mm
Weight	120g
MTBF	>100,000hrs MIL-HDBK-217 at 25°C
Isolation	4,000VAC Input to Output

**Protection**

Overload	120-200% rated output power, auto recovery
Over Voltage	120-150% rated output voltage input to reset
Short Circuit	Trip and restart (hiccup mode)

**Safety Approvals**

Safety Agency / Mark	Medical	ITE
CB	IEC60601-1	IEC60950-1
UL	ANSI/AAMI ES60601-1 CAN/CSA C22.2 NO. 60601-1	UL60950-1 UL62368 CAN/CSA C22.2 NO. 60950-1
TUV	EN60601-1	EN60950-1
RCM	-	AS/NZS 60950.1

**EMC**

Emissions	Medical	ITE
Conducted	IEC/EN 60601-1-2, CISPR 11	EN55022, CISPR 22
Radiated	IEC/EN 60601-1-2, CISPR 11	EN55022, CISPR 22
Harmonic Currents	EN61000-3-2, Class A	EN61000-3-2, Class A
Voltage Flicker	EN61000-3-3	EN61000-3-3
Immunity	IEC/EN 60601-1-2	EN55024, CISPR 24
ESD	EN61000-4-2	±15kV air, ±8kV contact
Radiated Immunity	EN61000-4-3	10V/m, 3V/m 80MHz - 2.7GHz
EFT/Burst	EN61000-4-4	±2kV on AC port, ±1kV on signal ports
Surge	EN61000-4-5	±2KV line to line (diff mode) compatible ±4KV line to line (diff mode)
Conducted Immunity	EN61000-4-6	3Vrms, 6Vrms (0.15MHz-80MHz)
Magnetic Field	EN61000-4-8	30 A/m
Dips & Interruptions	EN61000-4-11	0%, 70%, 0% of UT

**Others**

Dielectric Withstand Voltage	5,656VDC input to output
Insulation Resistance	10M Ohms, 500VDC input to output