



Universal 12 Watt - UES12LCP-SPA Series
Universal 12 Watt - UES12LCP-SPC Series

Product Features

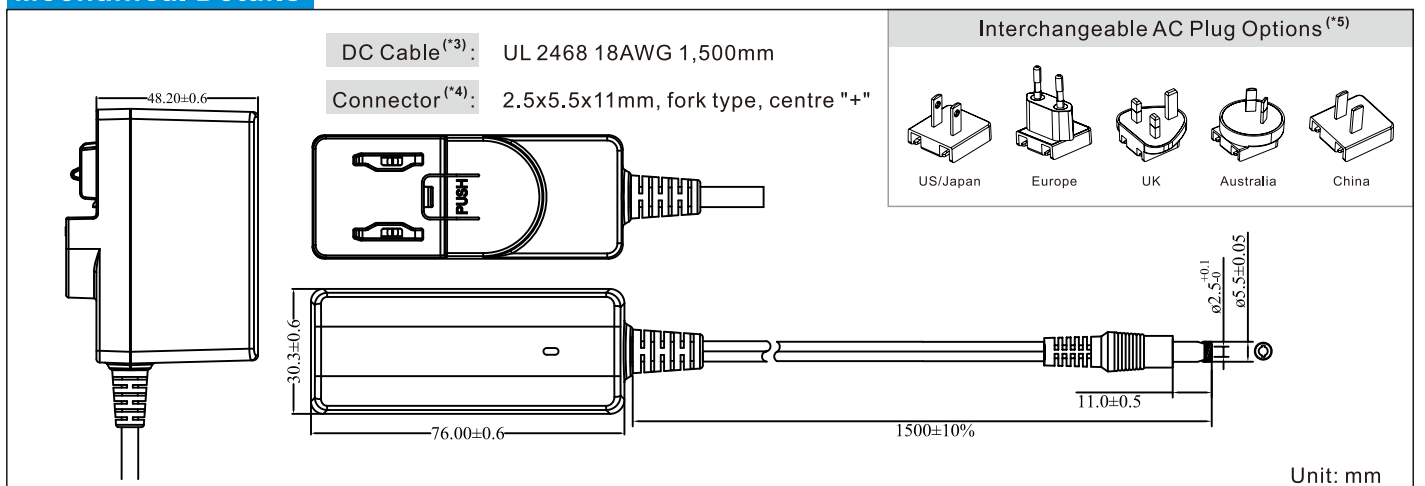
- Medical & ITE safety approvals
- 2 MOPP input to output isolation
- Low leakage current $\leq 10\mu\text{A}$
- DOE efficiency level VI
- CoC V5 Tier 2(2016)
- $\leq 0.075\text{W}$ standby power
- 5V to 24V outputs, up to 12W
- Up to 5,000m operating altitude
- Interchangeable AC plugs
- UES12LCP-SPC (Lithium-ion battery charger) with LED indicator



Models & Ratings

Model Number	Voltage ^(*1) (V)	Current (A)	Rated Power	Ripple & Noise (max) ^(*2)	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
UES12LCP-XXXXYYSPA	13.1-14.0	0.01-0.86	12W	200mVpk-pk	±5%	Line: ±1%	83.30%	≤3s
UES12LCP-XXXXYYSPA-OP	14.1-15.0	0.01-0.80	12W	200mVpk-pk	±5%	Load: ±5%	83.30%	≤3s
UES12LCP-XXXXYYSPC	15.1-16.0	0.01-0.75	12W	200mVpk-pk	±5%		83.30%	≤3s
UES12LCP-XXXXYYSPC-OP	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 0.1uF ceramic in parallel with 10uF electrolytic capacitors.

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 ^(max)	≤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 IEC62368-1
UL	ANSI/AAMI ES60601-1 CAN/CSA C22.2 NO. 60601-1	UL60950-1 UL62368-1 CAN/CSA C22.2 NO. 60950-1
TüV Rheinland/Mark	EN60601-1	-
TüV Rheinland/GS	-	EN60950-1 EN62368-1
RCM	-	AS/NZS 60950.1
CE	-	EN62368
CCC	-	GB4943.1
PSE	-	J60950 J62368
KC	-	K60950-1
FCC	-	FCC PART 15

EMC

Emissions	Medical	ITE
Conducted	IEC/EN 60601-1-2, CISPR 11	EN55032, CISPR 32
Radiated	IEC/EN 60601-1-2, 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/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