



Product Features

- Meets medical & I.T.E. & LED driver safety
- 2 MOPP input to output isolation
- Touch current  $\leq 10\mu\text{A}$
- Energy efficiency level VI
- $\leq 0.075\text{W}$  standby power
- 4V-24V outputs, up to 12W
- Up to 5,000m operating altitude
- Interchangeable AC plugs
- UES12LCP-SPC(Lithium-ion battery charger) with LED indicator



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Models & Parameters

Model Number	Voltage <sup>(*)</sup> (V)	Current (A)	Rated Power	Ripple & Noise (max)	Voltage Tolerance	Line & Load Regulation	Efficiency (Average)	Start Up Delay
	4.0-5.0	0.01-2.00	10.00W	150mVpk-pk	$\pm 7\%$		79.01%	$\leq 3\text{s}$
	5.1-6.0	0.01-2.00	12.00W	150mVpk-pk	$\pm 7\%$		80.19%	$\leq 3\text{s}$
	6.1-7.0	0.01-1.71	11.97W	150mVpk-pk	$\pm 7\%$		83.30%	$\leq 3\text{s}$
	7.1-8.0	0.01-1.50	12.00W	150mVpk-pk	$\pm 7\%$		83.30%	$\leq 3\text{s}$
	8.1-9.0	0.01-1.33	11.97W	150mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	9.1-10.0	0.01-1.20	12.00W	150mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	10.1-11.0	0.01-1.09	11.99W	150mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	11.1-12.0	0.01-1.00	12.00W	150mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	12.1-13.0	0.01-0.94	12.22W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
UES12LCP-XXXXYYSPA	13.1-14.0	0.01-0.86	12.04W	200mVpk-pk	$\pm 5\%$	Line: $\pm 1\%$	83.30%	$\leq 3\text{s}$
UES12LCP-XXXXYYSPA-OP	14.1-15.0	0.01-0.80	12.00W	200mVpk-pk	$\pm 5\%$	Load: $\pm 5\%$	83.30%	$\leq 3\text{s}$
UES12LCP-XXXXYYSPC	15.1-16.0	0.01-0.75	12.00W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
UES12LCP-XXXXYYSPC-OP	16.1-17.0	0.01-0.71	12.07W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	17.1-18.0	0.01-0.67	12.06W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	18.1-19.0	0.01-0.63	11.97W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	19.1-20.0	0.01-0.60	12.00W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	20.1-21.0	0.01-0.57	11.97W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	21.1-22.0	0.01-0.55	12.10W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	22.1-23.0	0.01-0.52	11.96W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$
	23.1-24.0	0.01-0.50	12.00W	200mVpk-pk	$\pm 5\%$		83.30%	$\leq 3\text{s}$

Mechanical Details

Notes  
(\*1, 2) Other options are available, please contact our sales representative for details.

**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) 30.3(W) 48.2(H)mm
Weight	120g
MTBF	>100,000hrs MIL-HDBK-217 at 25°C

**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**

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	EN55024, CISPR 24
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	±2KV line to line (different mode) compatible with ±4KV 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	5,656VDC input to output
Insulation Resistance	10M Ohms, 500VDC input to output