



IP20 Class II (VI)

**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
- $\leq 0.075\text{W}$  standby power
- 6.1V to 52V outputs, up to 24W
- Up to 5,000m operating altitude
- ULAC plugs

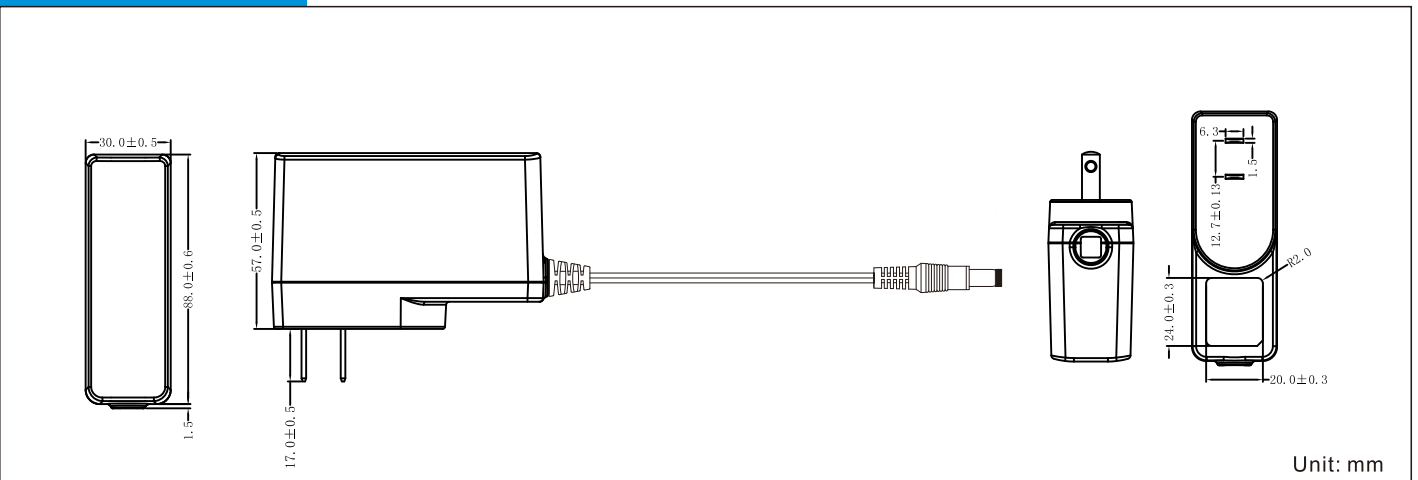
NEW



**Models & Ratings**

Model Number	Voltage <sup>(*1)</sup> (V)	Current (A)	Rated Power	Ripple & Noise (max) <sup>(*2)</sup>	Voltage Tolerance	Line & Load Regulation	Efficiency (Average)	Start Up Delay
UES24LU2-XXXYYYSIPA	6.1-7.0	0.01-3.00	21.00W	120mVpk-pk	$\pm 5\%$	Line: $\pm 1\%$ Load: $\pm 5\%$	86.2%	$\leq 3\text{s}$
	7.1-8.0	0.01-2.62	21.00W	120mVpk-pk	$\pm 5\%$		86.2%	$\leq 3\text{s}$
	8.1-9.0	0.01-2.33	21.00W	150mVpk-pk	$\pm 5\%$		86.2%	$\leq 3\text{s}$
	9.1-10.0	0.01-2.10	21.00W	150mVpk-pk	$\pm 5\%$		86.2%	$\leq 3\text{s}$
	10.1-11.0	0.01-2.18	24.00W	150mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	11.1-12.0	0.01-2.00	24.00W	150mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	12.1-13.0	0.01-1.84	24.00W	200mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	13.1-14.0	0.01-1.71	24.00W	200mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	14.1-15.0	0.01-1.60	24.00W	200mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	15.1-16.0	0.01-1.50	24.00W	200mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	16.1-17.0	0.01-1.41	24.00W	200mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	17.1-18.0	0.01-1.33	24.00W	200mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	18.1-19.0	0.01-1.26	24.00W	200mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	19.1-20.0	0.01-1.20	24.00W	240mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	20.1-21.0	0.01-1.14	24.00W	240mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	21.1-22.0	0.01-1.09	24.00W	240mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	22.0-23.0	0.01-1.04	24.00W	240mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	23.1-24.0	0.01-1.00	24.00W	240mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	45.1-46.0	0.01-0.52	24.00W	300mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
	46.1-47.0	0.01-0.51	24.00W	300mVpk-pk	$\pm 5\%$		87.0%	$\leq 3\text{s}$
47.1-48.0	0.01-0.50	24.00W	300mVpk-pk	$\pm 5\%$	87.0%	$\leq 3\text{s}$		
48.1-49.0	0.01-0.49	24.00W	300mVpk-pk	$\pm 5\%$	87.0%	$\leq 3\text{s}$		
49.1-50.0	0.01-0.48	24.00W	300mVpk-pk	$\pm 5\%$	87.0%	$\leq 3\text{s}$		
50.1-51.0	0.01-0.47	24.00W	300mVpk-pk	$\pm 5\%$	87.0%	$\leq 3\text{s}$		
51.1-52.0	0.01-0.46	24.00W	300mVpk-pk	$\pm 5\%$	87.0%	$\leq 3\text{s}$		

**Mechanical Details**



Notes

(\*1) 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	70A max at 240VAC cold start
Touch Leakage Current <sup>(max)</sup>	≤100μA at 264VAC

**Environmental**

Operating Temperature	0°C to 45°C
Storage Temperature	-20°C to 60°C
Operating Humidity	10% to 90% RH, non-condensing
Storage Humidity	5% to 90% RH
Operating Altitude	5,000m

**General**

Dimensions	88(L) 30(W) 57(H)mm
Weight	160g
MTBF	>100,000hrs MIL-HDBK-217 at 25°C

**Protection**

Overload	110-200% 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	IEC62368-1
UL	ANSI/AAMI ES60601-1 CAN/CSA C22.2 NO. 60601-1	-
TUV	-	EN62368-1
PSE	-	J62368-1

**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	±1KV 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