

Anex

Lian Li EDGE 1300

Lab ID#: LL13002454
 Receipt Date: May 17, 2024
 Test Date: May 24, 2024

Report: 24PS2454A
 Report Date: May 24, 2024

DUT INFORMATION	
Brand	Lian Li
Manufacturer (OEM)	Helly Technology
Series	EDGE
Model Number	EG1300
Serial Number	
DUT Notes	

DUT SPECIFICATIONS	
Rated Voltage (Vrms)	100-240
Rated Current (Arms)	15-7.5
Rated Frequency (Hz)	50-60
Rated Power (W)	1300
Type	ATX12V
Cooling	120mm Fluid Dynamic Bearing Fan (HA1225M12F-Z)
Semi-Passive Operation	✓
Cable Design	Fully Modular

TEST EQUIPMENT	
Electronic Loads	Chroma 63601-5 x2 Chroma 63600-2 63640-80-80 x10 63610-80-20
AC Sources	Chroma 6530, APM SP300VAC4000W-P
Power Analyzers	RS HMC8015, N4L PPA1530, N4L PPA5530
Oscilloscopes	Picoscope 4444, Rigol DS7014, Siglent SDS2104X PLUS
Sound Analyzer	Bruel & Kjaer 2270 G4
Microphone	Bruel & Kjaer Type 4955-A
Temperature Logger	Picoscope TC-08
Tachometer	UNI-T UT372
Multimeters	Keysight 34465A, Keithley 2015 - THD
UPS	FSP Champ Tower 3kVA, CyberPower OLS3000E 3kVA
Isolation Transformer	4kVA

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RESULTS

Temperature Range (°C /°F)	30-32 / 86-89.6
ErP Lot 3/6 Ready	✓
(EU) No 617/2013 Compliance	✓
ALPM (Alternative Low Power Mode) compatible	✓
ATX v3.1 PSU Power Excursion	✓

115V

Average Efficiency	89.595%
Efficiency With 10W (≤500W) or 2% (>500W)	73.670
Average Efficiency 5VSB	80.228%
Standby Power Consumption (W)	0.0129000
Average PF	0.989
Avg Noise Output	34.21 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	Standard++

230V

Average Efficiency	91.835%
Average Efficiency 5VSB	80.102%
Standby Power Consumption (W)	0.1009000
Average PF	0.970
Avg Noise Output	33.79 dB(A)
Efficiency Rating (ETA)	PLATINUM
Noise Rating (LAMBDA)	Standard++

POWER SPECIFICATIONS

Rail		3.3V	5V	12V	5VSB	-12V
Max. Power	Amps	20	20	108	3	0.3
	Watts	120		1296	15	3.6
Total Max. Power (W)		1300				

HOLD-UP TIME & POWER OK SIGNAL (230V)

Hold-Up Time (ms)	23.9
AC Loss to PWR_OK Hold Up Time (ms)	21.3
PWR_OK Inactive to DC Loss Delay (ms)	2.6

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CABLES AND CONNECTORS

Modular Cables

Description	Cable Count	Connector Count (Total)	Gauge	In Cable Capacitors
ATX connector 20+4 pin (495mm)	1	1	16-22AWG	No
4+4 pin EPS12V (550mm)	1	1	16AWG	No
8 pin EPS12V (550mm)	1	1	16AWG	No
6+2 pin PCIe (550mm)	4	4	16AWG	No
12+4 pin PCIe (720mm) (600W)	1	1	16-26AWG	No
2x SATA (400mm+125mm)	1	4	18AWG	No
SATA (305mm+15mm+15mm+15mm)	1	4	18AWG	No
SATA (405mm+150mm+150mm+150mm)	2	8	18AWG	No
SATA (455mm+150mm) /4-pin Molex (+150mm+150mm)	1	2 / 2	18AWG	No

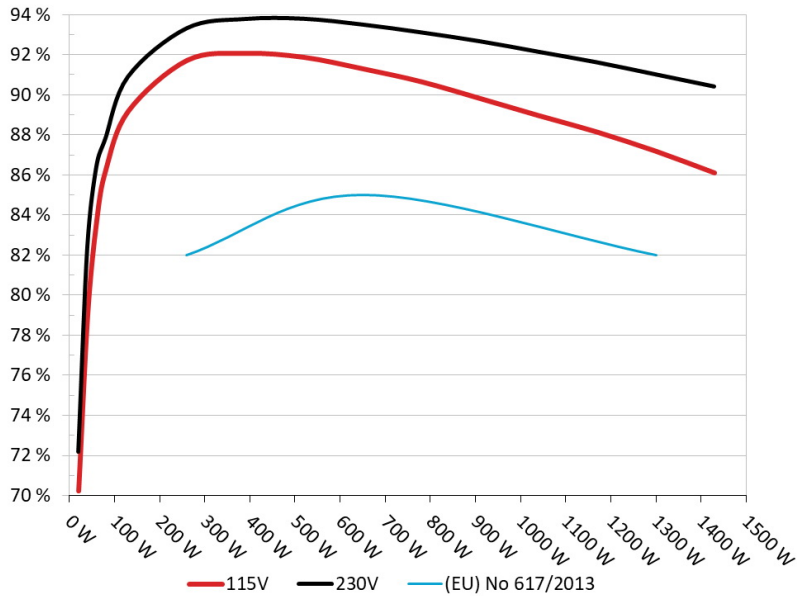
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EFFICIENCY UNDER HIGH AMBIENT TEMPERATURE

Efficiency: Lian Li EDGE 1300

Ambient: 37°C - 47°C (98.6°F - 116.6°F)



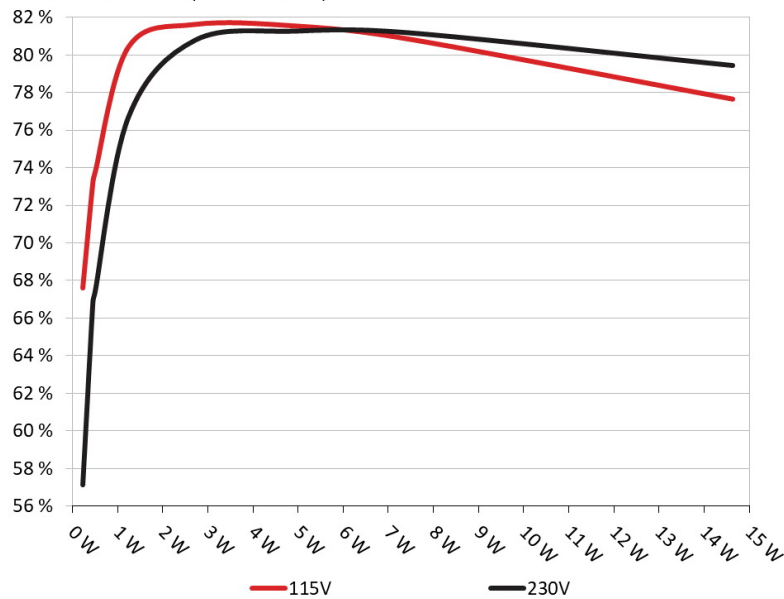
INFO

The PSU's efficiency under high ambient temperatures with 115V and 230V input. For this graph the results of the 10-110% load regulation table are used

5VSB EFFICIENCY

5VSB Efficiency: Lian Li EDGE 1300

Ambient: 34°C - 36°C (93.2°F - 96.8°F)



INFO

This graph depicts the efficiency levels of the 5VSB rail with 115V and 230V input

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5VSB EFFICIENCY (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.223W	67.617%	0.045
	4.942V	0.33W		114.94V
2	0.09A	0.445W	73.227%	0.081
	4.941V	0.608W		114.94V
3	0.55A	2.712W	81.616%	0.335
	4.931V	3.323W		114.91V
4	1A	4.921W	81.536%	0.45
	4.921V	6.035W		114.91V
5	1.5A	7.366W	80.87%	0.513
	4.91V	9.108W		114.91V
6	3A	14.63W	77.65%	0.58
	4.877V	18.84W		114.9V

5VSB EFFICIENCY -230V (ERP LOT 3/6 & CEC)

Test #	5VSB	DC/AC (Watts)	Efficiency	PF/AC Volts
1	0.045A	0.222W	57.128%	0.016
	4.942V	0.389W		229.88V
2	0.09A	0.445W	66.819%	0.027
	4.941V	0.666W		229.88V
3	0.55A	2.712W	80.801%	0.127
	4.931V	3.356W		229.88V
4	1A	4.921W	81.282%	0.212
	4.921V	6.054W		229.88V
5	1.5A	7.366W	81.21%	0.284
	4.91V	9.07W		229.88V
6	3A	14.63W	79.453%	0.391
	4.877V	18.413W		229.88V

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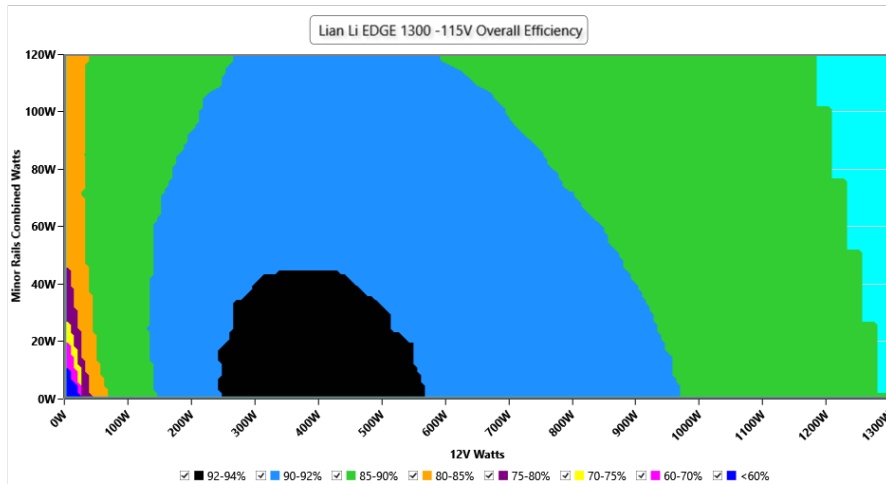
115V

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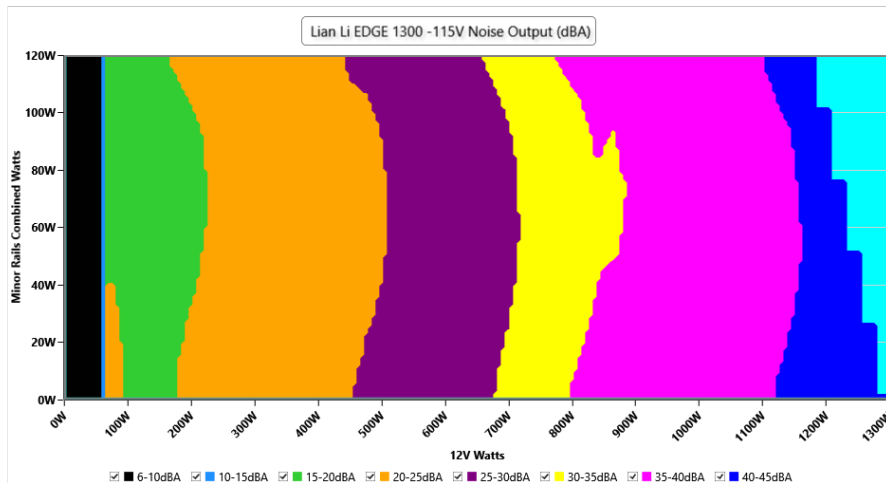
EFFICIENCY GRAPH 115V



INFO

This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

NOISE GRAPH 115V



INFO

The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -115V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	115.07 V	115.03 V	113.85 V	115.11 V	116.15 V	PASS
Mains Frequency:	60.00 Hz	59.99 Hz	59.40 Hz	60.01 Hz	60.60 Hz	PASS
Mains Voltage CF:	1.416	1.415	1.340	1.418	1.490	PASS
Mains Voltage THD:	0.13 %	0.09 %	N/A	0.18 %	2.00 %	PASS
Real Power:	0.013 W	0.008 W	N/A	0.017 W	N/A	N/A
Apparent Power:	7.026 W	6.928 W	N/A	7.112 W	N/A	N/A
Power Factor:	0.002	N/A	N/A	N/A	N/A	N/A

INFO

This graph is generated by the PPA Standby Power Analysis software which takes full control of the power analyzer during the whole procedure. This application features all of the EN50564 & IEC62301 test limits for standby power software testing

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10-110% LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	8.868A	1.988A	1.957A	1.001A	129.992	89.171%	1129	23.7	40.18°C	0.969
	12.223V	5.029V	3.372V	4.997V	145.789				44.39°C	114.89V
20%	18.748A	2.985A	2.939A	1.202A	259.951	91.703%	1205	25.7	40.91°C	0.981
	12.217V	5.025V	3.369V	4.991V	283.47				45.43°C	114.82V
30%	28.955A	3.485A	3.432A	1.405A	389.579	92.058%	1298	27.9	41.12°C	0.988
	12.210V	5.022V	3.366V	4.981V	423.195				46.2°C	114.79V
40%	39.195A	3.985A	3.925A	1.61A	519.531	91.86%	1415	30.4	41.71°C	0.992
	12.204V	5.019V	3.363V	4.971V	565.569				47.27°C	114.74V
50%	49.118A	4.985A	4.911A	1.813A	649.691	91.288%	1727	36.3	42.27°C	0.994
	12.199V	5.016V	3.36V	4.965V	711.674				48.34°C	114.69V
60%	59.050A	5.986A	5.9A	2A	779.737	90.641%	1870	38.5	42.78°C	0.995
	12.194V	5.012V	3.356V	4.959V	860.243				49.38°C	114.64V
70%	68.985A	6.989A	6.891A	2.221A	909.914	89.805%	2010	40.5	43.25°C	0.996
	12.189V	5.009V	3.353V	4.952V	1013.213				50.32°C	114.59V
80%	78.933A	7.991A	7.883A	2.322A	1039.529	88.954%	2164	42.1	43.77°C	0.997
	12.183V	5.004V	3.349V	4.951V	1168.612				51.87°C	114.54V
90%	89.277A	8.495A	8.367A	2.426A	1169.777	88.128%	2174	42.2	44.58°C	0.997
	12.178V	5.002V	3.346V	4.946V	1327.371				53.65°C	114.48V
100%	99.360A	9A	8.883A	3.053A	1299.371	87.176%	2184	42.3	45.59°C	0.997
	12.174V	4.999V	3.344V	4.913V	1490.522				55.68°C	114.44V
110%	109.378A	10.007A	9.971A	3.051A	1429.581	86.096%	2189	42.4	47.21°C	0.996
	12.172V	4.996V	3.34V	4.917V	1660.439				58.12°C	114.37V
CL1	0.113A	14.437A	14.24A	0A	121.291	81.619%	1708	36.1	40.91°C	0.97
	12.229V	5V	3.35V	5.156V	148.614				48.62°C	114.86V
CL2	0.113A	22.002A	0A	0A	111.294	80.443%	1410	30.3	40.39°C	0.966
	12.230V	4.996V	3.369V	5.228V	138.353				46.33°C	114.86V
CL3	0.113A	0A	21.684A	0A	73.996	74.264%	1427	31.1	41.39°C	0.954
	12.230V	5.027V	3.349V	5.036V	99.639				45.31°C	114.88V
CL4	106.795A	0A	0A	0A	1299.951	87.99%	2184	42.3	44.76°C	0.997
	12.172V	5.023V	3.364V	4.999V	1477.387				54.79°C	114.44V

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20-80W LOAD TESTS 115V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.214A	0.496A	0.488A	0.199A	19.996	70.224%	0	<6.0	39.68°C	0.892
	12.222V	5.036V	3.378V	5.031V	28.471				36.59°C	114.9V
40W	2.674A	0.695A	0.684A	0.298A	39.995	78.998%	1034	21.1	37.2°C	0.925
	12.225V	5.036V	3.378V	5.027V	50.63				40.46°C	114.9V
60W	4.133A	0.894A	0.879A	0.398A	59.994	83.695%	1057	21.9	38.37°C	0.941
	12.225V	5.035V	3.377V	5.023V	71.647				42.02°C	114.89V
80W	5.588A	1.093A	1.075A	0.498A	79.936	86.22%	1102	23.1	39.55°C	0.949
	12.225V	5.033V	3.376V	5.018V	92.721				43.51°C	114.89V

RIPPLE MEASUREMENTS 115V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	13.56mV	9.86mV	8.55mV	11.26mV	Pass
20% Load	16.01mV	11.65mV	9.52mV	12.69mV	Pass
30% Load	17.29mV	11.70mV	10.03mV	12.68mV	Pass
40% Load	16.37mV	11.65mV	9.72mV	13.50mV	Pass
50% Load	16.42mV	10.42mV	9.00mV	11.51mV	Pass
60% Load	18.47mV	14.30mV	10.79mV	14.84mV	Pass
70% Load	18.72mV	16.50mV	10.44mV	17.80mV	Pass
80% Load	19.08mV	17.93mV	13.04mV	17.80mV	Pass
90% Load	20.41mV	20.08mV	14.94mV	20.20mV	Pass
100% Load	30.93mV	23.36mV	17.02mV	22.34mV	Pass
110% Load	31.56mV	25.39mV	17.88mV	23.31mV	Pass
Crossload1	22.76mV	12.83mV	10.97mV	14.13mV	Pass
Crossload2	16.11mV	17.62mV	9.97mV	13.45mV	Pass
Crossload3	14.58mV	12.52mV	11.76mV	13.66mV	Pass
Crossload4	30.42mV	21.77mV	16.33mV	23.15mV	Pass

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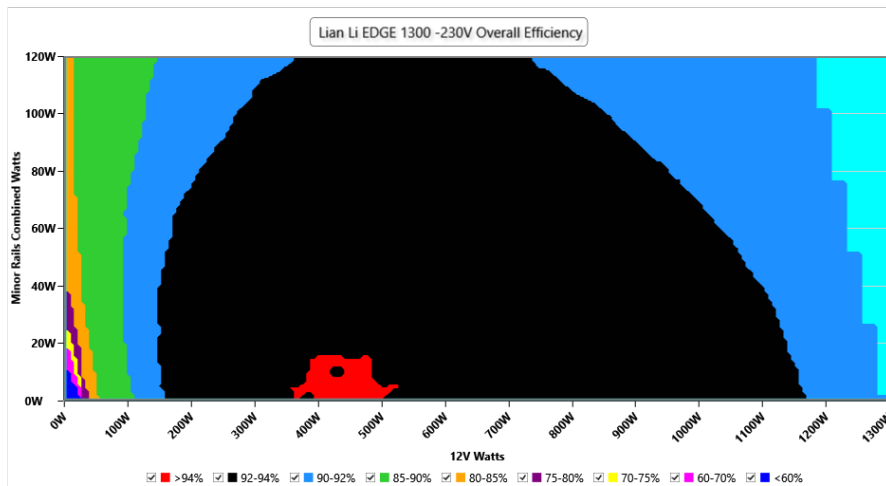
230V

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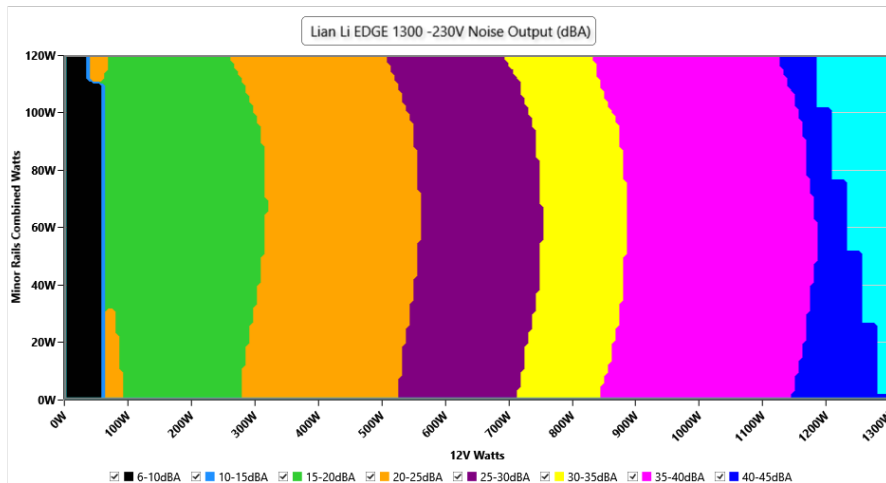
EFFICIENCY GRAPH 230V



INFO

This graph depicts the PSU's efficiency throughout its entire operational range. For the generation of the efficiency and noise graphs we set our loaders to auto mode through our custom-made software before trying thousands of possible load combinations

NOISE GRAPH 230V



INFO

The PSU's noise in its entire operational range and under 30-32 °C ambient is depicted in this graph. The X axis represents the load on the +12V rail(s) while the Y axis is the load on the minor rails

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VAMPIRE POWER -230V

Detailed Results

	Average	Min	Limit Min	Max	Limit Max	Result
Mains Voltage RMS:	231.00 V	230.89 V	227.70 V	231.07 V	232.30 V	PASS
Mains Frequency:	50.00 Hz	49.99 Hz	49.50 Hz	50.01 Hz	50.50 Hz	PASS
Mains Voltage CF:	1.417	1.416	1.340	1.419	1.490	PASS
Mains Voltage THD:	0.17 %	0.14 %	N/A	0.28 %	2.00 %	PASS
Real Power:	0.101 W	0.085 W	N/A	0.243 W	N/A	N/A
Apparent Power:	23.263 W	23.068 W	N/A	23.464 W	N/A	N/A
Power Factor:	0.004	N/A	N/A	N/A	N/A	N/A

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10-110% LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
10%	8.870A	1.989A	1.957A	1.001A	130.015	90.891%	1123	23.6	40.15°C	0.923
	12.222V	5.028V	3.372V	4.996V	143.041				44.35°C	229.87V
20%	18.750A	2.986A	2.939A	1.203A	259.985	93.303%	1197	25.6	40.55°C	0.957
	12.218V	5.024V	3.369V	4.989V	278.644				45.11°C	229.85V
30%	28.960A	3.486A	3.432A	1.406A	389.712	93.769%	1308	28.1	41.2°C	0.97
	12.212V	5.021V	3.366V	4.98V	415.614				46.28°C	229.82V
40%	39.195A	3.986A	3.925A	1.61A	519.66	93.78%	1443	31.3	41.8°C	0.976
	12.207V	5.019V	3.364V	4.97V	554.129				47.43°C	229.8V
50%	49.118A	4.986A	4.911A	1.814A	649.813	93.492%	1749	36.7	42.23°C	0.98
	12.201V	5.015V	3.36V	4.963V	695.047				48.27°C	229.78V
60%	59.049A	5.988A	5.899A	2.001A	779.876	93.1%	1885	38.7	42.95°C	0.983
	12.196V	5.012V	3.357V	4.958V	837.678				49.48°C	229.75V
70%	68.989A	6.991A	6.89A	2.222A	910.031	92.659%	2022	40.6	43.27°C	0.986
	12.189V	5.008V	3.354V	4.951V	982.138				50.27°C	229.73V
80%	78.946A	7.993A	7.881A	2.324A	1039.639	92.137%	2158	42.0	43.82°C	0.987
	12.182V	5.004V	3.35V	4.95V	1128.363				51.86°C	229.71V
90%	89.296A	8.497A	8.365A	2.43A	1169.865	91.609%	2180	42.3	44.1°C	0.988
	12.177V	5.001V	3.348V	4.939V	1277.021				53.26°C	229.68V
100%	99.391A	9.001A	8.879A	3.055A	1299.449	91.009%	2183	42.3	45.69°C	0.989
	12.171V	4.999V	3.345V	4.911V	1427.8				55.74°C	229.65V
110%	109.429A	10.009A	9.967A	3.053A	1429.627	90.403%	2189	42.4	46.88°C	0.99
	12.166V	4.995V	3.342V	4.914V	1581.403				57.78°C	229.63V
CL1	0.115A	14.435A	14.237A	0A	121.307	82.689%	1766	37.0	40.57°C	0.926
	12.228V	5.001V	3.351V	5.158V	146.702				48.64°C	229.86V
CL2	0.113A	22.005A	0A	0A	111.3	81.969%	1380	29.7	40.07°C	0.919
	12.224V	4.995V	3.368V	5.228V	135.784				45.02°C	229.87V
CL3	0.113A	0A	21.68A	0A	73.997	75.766%	1385	29.8	40.1°C	0.886
	12.224V	5.027V	3.349V	5.035V	97.664				44.29°C	229.87V
CL4	106.844A	0A	0A	0A	1299.957	91.652%	2186	42.4	44.94°C	0.989
	12.166V	5.022V	3.363V	4.998V	1418.355				54.57°C	229.66V

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20-80W LOAD TESTS 230V

Test	12V	5V	3.3V	5VSB	DC/AC (Watts)	Efficiency	Fan Speed (RPM)	PSU Noise (dB[A])	Temps (In/Out)	PF/AC Volts
20W	1.216A	0.496A	0.488A	0.199A	20	72.191%	0	<6.0	39.58°C	0.612
	12.221V	5.037V	3.379V	5.031V	27.704				36.51°C	229.92V
40W	2.674A	0.695A	0.684A	0.298A	40	82.398%	0	<6.0	41.19°C	0.771
	12.221V	5.036V	3.378V	5.027V	48.543				37.89°C	229.9V
60W	4.134A	0.894A	0.879A	0.398A	60.001	86.405%	1077	22.2	38.74°C	0.84
	12.222V	5.036V	3.378V	5.024V	69.448				42.24°C	229.88V
80W	5.588A	1.093A	1.075A	0.498A	79.952	87.802%	1109	23.3	39.27°C	0.876
	12.225V	5.033V	3.376V	5.018V	91.056				42.93°C	229.88V

RIPPLE MEASUREMENTS 230V

Test	12V	5V	3.3V	5VSB	Pass/Fail
10% Load	15.40mV	11.09mV	9.87mV	13.55mV	Pass
20% Load	17.24mV	11.29mV	11.00mV	13.76mV	Pass
30% Load	15.70mV	10.88mV	10.28mV	12.63mV	Pass
40% Load	38.83mV	20.84mV	20.00mV	26.50mV	Pass
50% Load	17.29mV	12.82mV	10.79mV	13.76mV	Pass
60% Load	16.68mV	12.72mV	9.77mV	14.12mV	Pass
70% Load	17.65mV	17.32mV	12.02mV	16.16mV	Pass
80% Load	18.47mV	18.24mV	13.20mV	17.91mV	Pass
90% Load	18.93mV	18.85mV	14.22mV	18.62mV	Pass
100% Load	31.13mV	21.54mV	16.33mV	20.54mV	Pass
110% Load	32.67mV	23.97mV	17.20mV	22.96mV	Pass
Crossload1	23.36mV	12.79mV	10.71mV	11.75mV	Pass
Crossload2	14.99mV	16.35mV	8.59mV	10.95mV	Pass
Crossload3	15.85mV	11.34mV	11.36mV	11.51mV	Pass
Crossload4	30.47mV	21.32mV	15.83mV	21.09mV	Pass

All data and graphs included in this test report can be used by any individual on the following conditions:

- > It should be mentioned that the test results are provided by Cybenetics
- > The link to the original test results document should be provided in any case

Anex

Lian Li EDGE 1300

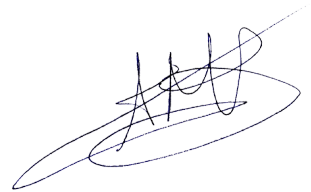


Top side



Power specifications label

CERTIFICATIONS 115V

Aristeidis Bitziopoulos
Lab Director

CERTIFICATIONS 230V



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