規 格 書

Electrical Specification

Model No：PA-1051-91

Product No：PA-1051-91A1-LF

Description：19V 50W AC Adaptor

Revision：B

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光寶科技股份有限公司

LITE-ON TECHNOLOGY CORP.

桃園縣大園鄉三石村三和路 3 巷 7 號（力信工業大樓）

7,Lane 3,San Ho Rd,San-Shin Village,Da-Yuan Hsiang,Taoyuan Hsien 337,Taiwan, R.O.C.

Approved By	Checked By	Prepared By
敦煌	X	徐振凱

Change Record			
DCN No	**REV**	**Revision Description**	**Date**
	X01	Initial	**May. 15, 2012**
	X02	1. Change the description of 3.1 Altitude. 2. Change the description of 6.3 DC Cord.	**May 29, 2012**
	A	Update to Rev. A	**Jun. 14, 2012**
	B	Change OCP to 6.0A	**Jul. 24, 2012**

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1. Description

This product is a AC to DC power transfer device, it can provide for a **50W** single DC output with constant voltage source.

2. Electrical

2.1 Input Voltage

a. **100 - 240Vac** Nominal.

b. **90 - 264Vac** Universal.

2.2 Input Frequency

47- 63Hz.

2.3 Input Current

1.3A max. at 90Vac input & dc output full-loading.

2.4 Inrush Current

Inrush peak current and Joule integral will be measure at different line voltage at high ambient temperature. Peak current is within specified limit and Joule integral well below fuse and bridge spec.

2.5 Hold-Up time

10msec min. at dc output full-loading and 115Vac input.

2.6 Input wattage

Less than **0.1W** at 230Vac input & no load condition.

2.7 Efficiency

Average efficiency **87%** minimum min. at 25%, 50%, 75% & 100% of full-loading and 115/230Vac input (**After warm up 20 minutes**).

2.8 Safety Test

a. Leakage current less than **0.25 mA** at 254Vac, 50Hz.

b. Hi-Pot test : **4242 Vdc**, 10mA, 1 – 3 Sec. between Primary to Secondary ground.

c. Insulation resistance: at dc **500Vdc**, 1 Sec. between Primary to Secondary circuit, IR shall ≧**20MΩ**.

2.9 Output Voltage and Current

Vout (V)	Range (V)	Iout (min., A)	Iout (max., A)
19V	**18.05 – 19.95**	**0**	**2.63**

2.10 Ripple and Noise

Low frequency ripple (< 100KHz) <= **380mVpp**, and Total composite Ripple and Noise. Less than **300mVp-p**, tested by dc loading side parallel with a 10uF/EC. and 0.1uF/Ceramic. Capacitors and Measured Band Width 20MHz.

2.11 Over-Shoot and under-shoot

Less than **10%** of nominal Voltage value.

2.12 Protection

a. SCP : Short circuit protection with auto. recovery function.

b. OVP : Over voltage protection with shut down & latch off function.
Tripped voltage will be less than **25Vdc**.
(**Notes: Peak over 25V could be accepted if under 250mS with a max of 28V**)

c. OCP : Over current protection with auto. recovery function,
current limit : **6.0A** (max.)

d. OTP: The adapter shall provide over temperature protection and if the temperature rises to set temperature point, the PSU shall be latch-off.

2.13 LED Indication

Green light for Nominal operation. Blank or Flash for SCP mode.

2.14 Rise time

Rise time shall be less than **50msec**., it should be measured from 10% to 90% of the output voltage.

2.15 Turn on delay time

The output voltage should turn on from AC on to settle within regulation in less than **3.5sec** at input **115Vac** condition.

2.16 Temperature Coefficient

Less than **0.2%/C**

2.17 Transient Response

Dynamic loading condition.

DC output (V)	I1 (A)	I2 (A)	dVmax.(V)	Time-max.	dI/dT
19.0	**0.0**	**0.66**	**+/- 1.0**	**10 msec.**	**≧50mA/usec.**
19.0	**0.66**	**1.32**	**+/- 1.0**	**10 msec.**	**≧50mA/usec.**
19.0	**1.32**	**2.63**	**+/- 1.0**	**10 msec.**	**≧50mA/usec.**

50% of duty cycle.

3. Environment

3.1 Temperature

a. Operation : **0 to 40** ℃

b. Storage : -40 to 70 ℃

3.2 Humidity

a. Operation : **20 to 80%**

b. Storage : 10 to 90%

3.3 Altitude

From sea level to **5000m** (operation) and for tropical regions.

4. EMC

4.1 EMS

Test Item	Test Specification	IEC Standards
ESD	Contact **+/- 8KV**	61000-4-2
ESD	Air **+/- 15KV**	61000-4-2
RS	FR: 26MHz-1.0GHz, Field Strength: 3V/M	61000-4-3
EFT	**+/- 1KV (DM) & +/- 2KV (CM)**	61000-4-4
SURGE	**+/- 1KV (DM) & +/- 2KV (CM)**	61000-4-5
CS	3V/M	61000-4-6
DIPS	0% 250Cy, 70% 25 Cy, 0% 0.5Cy	61000-4-11

4.2 EMI

Standards	Specification
FCC	**Part 15,class B**
VCCI	**Class B**
CISPR	**Part 22,class B**

(**Notes: The conduction test shall be warn up after 10 minutes**)

5. Reliability

5.1 Life (E-cap.)

30,000 hours at DC output 80% load, AC 115/230 Vac input & ambient temperature 35℃.

5.2 M.T.B.F.

50,000 Power On Hours at 25℃.

5.3 Temperature Rise.

Less than **45℃** at nominal AC input / DC output full-loading and environment temperature 25+/-1℃ on Top/Bottom of plastic case.

5.4 Burn-in

100% Burn-In with **80~100% full-loading** & **35~45℃** Environment temperature.

5.5 Vibration Test

a. Non operation vibration with shipping container shall be 2G'S peak/7-50Hz, 4G'S /50-500Hz, after test no abnormally to be found.

b. Operation vibration shall be 0.5G'S peak/10-60Hz, 3 AXES, after test no abnormally to be noted.

5.6 Drop-Test

Test height is 100cm, after drop test no function abnormally to be noted.

6. Mechanical

6.1 Plastic enclosure：**PC** material.

6.2 Physical Size：**108.5 mm(L) * 48 mm (W) * 30.5 mm (H)**.

6.3 DC cord: **1500 mm & 20** wires.

6.4 Weight : **200(±10%)**.