



Product Specification for Approval

WE ARE PLEASED TO SUBMIT THIS SPECIFICATION AND SAMPLES FOR YOUR APPROVAL

CUSTOMER : _____

DESCRIPTION : **14V1.5A US Adapter**

MODEL NO. : **MAUS-1401502100**

MNC P/N : **MP2100-UA-00**

REVISION : **A0**

CUSTOMER P/N : _____

ISSUED DATE : **2021/3/12**

WEIGHT : _____

MADE IN : **CHINA**

APPROVED BY MNC		
PREPARED	CHECKED	APPROVED
吕强	林升界	王瑞博

APPROVED BY CUSTOMER
SIGNATURE OR STAMP

1. PLEASE RETURN TO US A COPY OF THE SPECIFICATION WITH YOUR STAMP OR SIGNATURE ONCE SAMPLES HAVE BEEN APPROVED.
2. IT WILL BE DEEMED THE SAMPLES TO BE APPROVED IF NO FEEDBACK RECEIVED.

Mentech Technology USA, Inc.

TEL: 512-954-1804

Address: 15101 Concord Circle, Suite 200D, Morgan Hill, CA 95037

CHANGE RECORDS

P/N	REV.	Description of Change	Date
MP2100-UA-00	A0	FIRST ISSUE	2021/3/12

Contents

1. SUMMARY	4
2. INPUT CHARACTERISTICS	4
3. DC OUTPUT CHARACTERISTICS	4
4. ELECTROMAGNETIC COMPATIBILITY	6
5. SAFETY STANDARDS	7
6. ENVIRONMENTAL PERFORMANCE	7
7. RELIABILITY.....	7
8. MECHANICAL	8
9. LABELING	9
10. STRUCTURE AND DIMENSIONS	10
11. PACKAGING	11

P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

1. SUMMARY



1.1 Description

Adapter-Wall Mount LED Driver

Adapter-Desk-Top Charger

Open Frame Other

1.2 The product shall comply with RoHS and REACH

1.3 Class of equipment

(The product image is for reference purposes) Class I Class II ClassIII Not Classified

2. INPUT CHARACTERISTICS

Item	Units	Minimum	Normal	Maximum	Remark
Input voltage	Vac	90	100-240	264	-
Input Frequency	Hz	47	50-60	63	-
Input Current	A	-	-	0.8	at 100Vac/60Hz~240Vac/50Hz
Inrush Current	A	-	-	-	No damage,cold start,at 240Vac input & 25°C

3. OUTPUT CHARACTERISTICS

3.1 Output voltage and current

Rated output voltage (V)	Rated output current (A)	Output voltage range (V)	Ripple & Noise (mVpp)
+14	1.5	+13.3~+14.7	<150

Ripple & Noise:Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF aluminum electrolytic capacitor. (test condition: 25°C,rated input and rated output)

Parameter	Min current	Rate current	Peak load current	Test mode
CC:14V	0 A	1.5A	-	CC
CV:-	-	-	-	-

3.2 Line/Load Regulation

Output	Load condition		Load Regulation	Line Regulation
	Min Load	Max Load		
+14V	0.0A	1.5A	±5%	±5%

P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

3.3 Dynamic response

The Dynamic output voltage range is rated output voltage ±10% over 25% to 75% full load changing at a rate of about 0.1A/usec with 50Hz dynamic load frequency.

3.4 Output overshoot

Overshoot voltage less than output voltage 10% at 100-240Vac rated input.

3.5 Turn on delay time

3 S max. @ 115Vac input & rated load.

3.6 Rise time and Fall time

At rated load, Rise time shall be ≤ 100mS. Fall time shall be ≤ 100mS.

3.7 Hold up time

5 mS min @ 230Vac/50Hz input & rated load.

3.8 Efficiency

Item	Efficiency	DOE		ERP		Remark
		V	VI	V	VI	
Output voltage (V)	14	-	14	-	-	Burn-in 30 minutes & 115Vac/60Hz, 230Vac/50Hz
Output current (A)	1.5	-	1.5	-	-	
Output power (W)	21	-	21	-	-	
Efficiency (%)		-	85.68	-	-	
10% Load Efficiency 10% (%)		-	-	-	-	
No-load power consumption (W)		-	0.1	-	-	

Note: the calculation formula is as follow

		DOE		ERP	
		V	VI	V	VI
1W<Po ≅ 49W	>6V full load	$\cong 0.0626 * \ln(Po) + 0.622$	$\cong 0.071 * \ln(Po) - 0.0014 * Po + 0.67$	$\cong 0.063 \ln(Po) + 0.622$	$\cong 0.071 * \ln(Po) - 0.0014 * Po + 0.67$
	>6V 10% load	-	-	-	-
	≤6V full load	$\cong 0.075 * \ln(Po) + 0.561$	$\cong 0.0834 * \ln(Po) - 0.0014 * Po + 0.609$	$\cong 0.075 * \ln(Po) + 0.561$	$\cong 0.0834 * \ln(Po) - 0.0014 * Po + 0.609$
	≤6V 10% load	-	-	-	-

3.9 Over Current Protection

At 100-240Vac input, OCP rang is 1.65~3.0 A.

P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

3.10 Over Voltage Protection

The unit supports OVP at the rated input voltage and self-recovers when the fault condition is removed.

3.11 Short Circuit Protection

The input power shall decrease when the output rail is shorted. The power supply shall not be damaged, and shall self-recover when the fault condition is removed.

4. ELECTROMAGNETIC COMPATIBILITY

4.1 Radiated Emission

Test criteria: EN55032/FCC Part 15, class B/ GB9254.

4.2 Conducted Emission

Test criteria: EN55032/FCC Part 15, class B/ GB9254.

4.3 Electrostatic Discharge(ESD)

EN 55024:2010; IEC 61000-4-2:2008

Air Discharge: ±8 KV

Contact Discharge: ±4 KV

Performance Criteria B

4.4 Radio-Frequency Electromagnetic Field Amplitude Modulated(RS)

EN 55024:2010; IEC 61000-4-3:2006+A1+A2

80MHz to 2700MHz ;10V/m ;80% and 1.0kHz Modulation(level 3)

Performance Criteria A

4.5 Electrical Fast Transient/Burst (EFT)

EN 55024:2010; IEC 61000-4-4:2004

Power line: ±1 KV

Performance Criteria B

4.6 Lightning Surge Attachment

CISPR 35:2016;IEC 61000-4-5:2005

Differential mode standard: ±1.0 KV

Common mode standard: ±2.0 KV

Performance Criteria B

4.7 Radio-Frequency Continuous Conducted(CS)

EN 55024:2010; EN61000-4-6:2008

0.15-80 MHz, 3V/m, 80%AM,1KHz

Performance Criteria A

4.8 Voltage Dips and Interruptions

EN 55024:2010; IEC 61000-4-11:2004

Voltage Dips, 30% reduction- 10ms, Performance Criterion B,

60% Reduction – 100ms, Performance Criterion C,

Voltage Interruptions>95% Reduction- 5000ms, Performance Criterion C.

P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

5. SAFETY STANDARDS

5.1 Safety

Item	Country	Standard	Certified Status
CCC	China	GB4943	-
CE	Europe	EN62368-1	-
UL/cUL	America/Canada	UL 62368-1, 2nd Ed, 2014-12-01 CAN/CSA C22.2 No. 62368-1-14, 2nd Ed	Meets
GS	Gearmany	EN60950-1	-
PSE	Japan	J60950	-
KCC	Korean	K60950	-
CB	Global	IEC60950-1	-
TUV Mark	United Kingdom	BS EN60950-1	-
SAA	Australia	AS/NZS60950-1	-
-	-	-	-
-	-	-	-

5.2 HI-POT

Primary-to-Secondary: 3000Vac for 60 seconds, the leakage current 5 mA max.

5.3 LEAKAGE CURRENT

0.25 mA max. at 264Vac/50Hz input.

5.4 INSULATION RESISTANCE

50 M Ω min, at primary to secondary add a 500Vdc test voltage.

6. ENVIRONMENTAL PERFORMANCE

6.1 Operating Ambient Temperature: 0°C to + 40 °C

6.2 Operating Ambient Relative Humidity: 5% to 90% RH

6.3 Storage Temperature: -45°C to +75°C

6.4 Altitude: Safe use below sea level: 5000 meters.

7. RELIABILITY

7.1 MEAN TIME BETWEEN FAILURE(MTBF)

The MTBF should not be less than 50000 hours at the temperature of 25°C.(BELLCORE TR-332)

P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

7.2 Drop test

The unit was dropped from a height of (1.0 ± 0.01) m onto a 20mm hard wood surface, one time per surface. No mechanical damages or failures and no electrical degradation or failures were observed.

8. MECHANICAL

8.1 Connector type

AC Input pin : US 2PIN

DC Output wire : 20AWG UL1185 1.5m ; Plug : Peeling tin 5mm

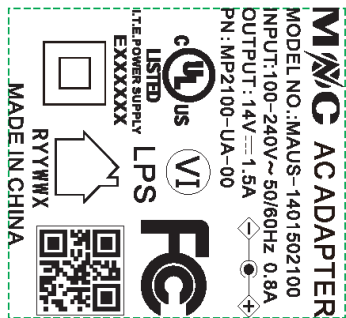
P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

9. LABEL

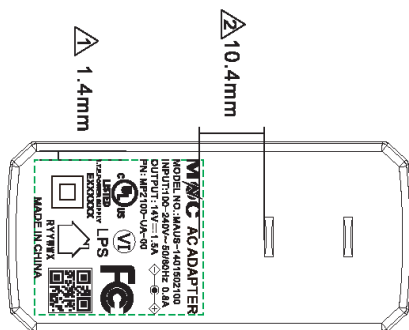
Company: **MNC AC ADAPTER**
 Model No. : MODEL NO.: MAUS-1401502100
 Part No. : PN: MP2100-UA-00
 Manufacturer: MADE IN CHINA

RYYYWWX
 X: The line of production
 Y: The products meet RoHS requirements
 WW: Year of production
 X: The line of production
 Ais for the first line day shift;
 ais for the first line night shift;
 Bis for the second line day shift;
 bis for the second line night shift;
 Z stands for day shift of NPI line;
 z stands for NPI line night shift;
 Samples are identified with Y

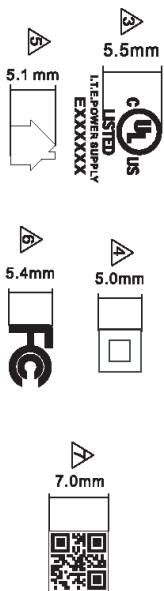
QR Code Content: XXXXXXXXXXXX00001
 XXXXXXXX:(8-bits) Wk sheet No.
 (provide by planning agency)
 00001 : (5-bits) Pipeline No.



SCALE: 2:1

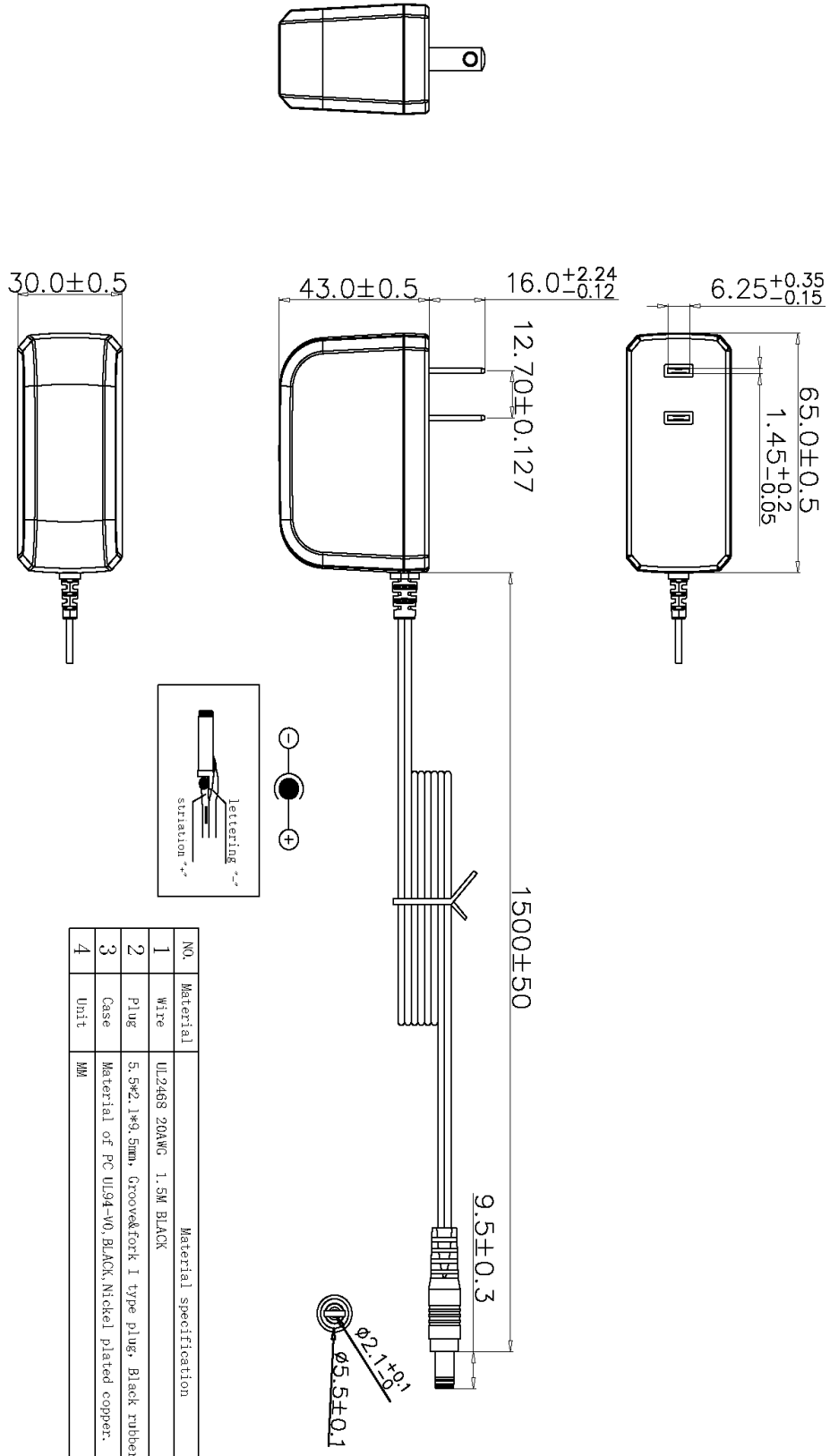


Safety symbol size:



P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

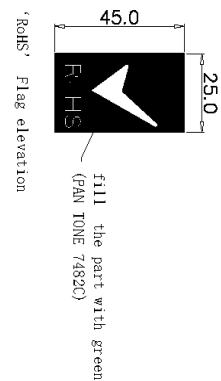
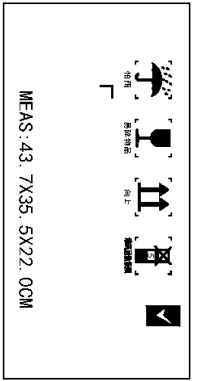
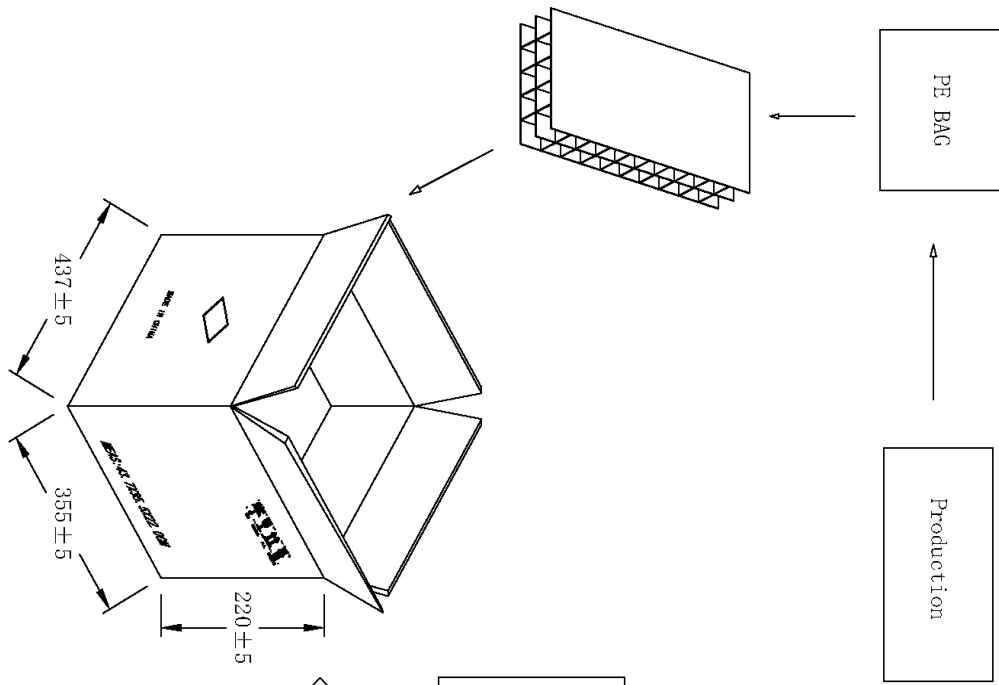
10. STRUCTURE AND DIMENSIONS



No.	Material	Material specification
1	Wire	UL2468 20AWG 1.5M BLACK
2	Plug	5.5*2.1*9.5mm, Groove&fork I type plug, Black rubber core
3	Case	Material of PC UL94-V0, BLACK, Nickel plated copper.
4	Unit	MM

P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021

11. PACKAGING



- notes:
1. each box 100PCS, 2 level in total
 2. put a flat card on each level
 3. product packaging: PE bag+knife cards

P/N	REV.	Date
MP2100-UA-00	A0	3/12/2021