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LED Driver

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SPECIFICATION

MODEL : STIFP218740N024KOR

CUSTOMER :	
CHECKED	APPROVED
20 . . .	20 . . .

SAMSUNG			
DRAWN	CHECKED		APPROVED
	SALES	QA	
20 . . .	20 . . .	20 . . .	20 . . .

SAMSUNG ELECTRONICS CO., LTD.
SAMSUNG #2, NONGSEO-DONG, GIHEUNG-GU,
YONGIN-CITY, GYEONGGI-DO, KOREA, 446-711

SPECIFICATION No.	
DATE OF ISSUE	2013. 07. 22



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REVISION OF SPECIFICATION

	00	The First Specification established.		2013.07.22	SC.Kwon	CH,Baek
SYMBOL	REV	REVISION	PAGE	DATE	TRACED	APPRO.



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LED Driver

1. APPLICATION

This specification defines the general specification and performance of the Non Dimming driver.

2. FUNDAMENTAL SPECIFICATION

No.	ARTICLE	SPECIFICATION
2-1	PSU (Power Supply Unit)	<ul style="list-style-type: none"> • Dimensions : 212 × 41 × 30.5mm(length / Width / Height) (Tol: ±2.0mm) • Input Power Maximum Consumption (50W) • Input Voltage (220Vac ~ 240Vac) • Output Current (40W : 700mA ± 5%) • Output Voltage (24Vdc)
2-2	Weight	• 220 ± 30g
2-3	Ambient Temperature (Ta)	• -20[°C] ~ +50[°C], Surrounding Temp. of LED Driver within Fixture
2-4	Storage Temperature	• -40[°C] ~ 85[°C]
2-5	Listings	• CE / ENEC / VDE / KC
2-6	EMI	• EN55015
2-7	Surge	• IEC 61547
2-8	Hi-Pot	• IEC 61347-1 , IEC 61347-2-13
2-9	Hazardous Substances in Products	• RoHS compliant, REACH , WEEE
2-10	Lifetime	• 50,000hr(MTBF)

3. APPEARANCE AND STRUCTURE

No.	ARTICLE	SPECIFICATION
3-1	Appearance	See the Appendix 1
3-2	Structure	See the Appendix 1



LED Driver

4. PERFORMANCE

- Electric Specification

No.	ARTICLE	SPECIFICATION					
		Symbol	Min.	Typ.	Max.	Unit	Remarks
4-1	Power Consumption	P	35	40	45	W	Vac=240V/50Hz @24.0V, measured with electronic load
4-2	Input Current	I	0.13	-	0.25	A	Each channel Vac=240V/50Hz @24.0V
4-3	Output Current	Io	665	700	735	mA	Each channel Vac=240V/50Hz @24.0V
4-4	Output Voltage	Vo	20	24	26	Vdc	Each channel
4-5	Efficiency	-	84	87	-	%	Vac=240V/50Hz @24.0V
4-6	Power Factor	PF	0.9	-	-	-	Vac=240V/50Hz @24.0V
4-7	THD	%	-	10	15	%	Vac=240V/50Hz @24.0V
4-8	Turn On Time				0.5	sec	Vac=240V/50Hz @24.0V, measured with electronic load
4-9	Ripple Current				30	%	Output current \pm 30%
4-10	Inrush current	Ipeak			20	A	
		Tduration			300	μ S	@50% of Ipeak
4-11	No load Power consumption	-	-	-	1	W	@no load
4-12	O.V.P	-	-	-	43	V	Auto Recovery
4-13	O.T.P	-	-	-	150	°C	Auto Recovery
4-14	Ambient Temperature	-	-20	-	50	°C	
4-15	Case Temperature	-			85	°C	Case of LED Driver
4-16	Lifetime(E-cap)		50,000			hour	MTBF

※ Keep the same Tc with fixture or without fixture

※ E-Load Condition : LED & CR Mode



LED Driver

- Final Test Items

No.	ARTICLE	SPECIFICATION					
		Symbol	Min.	Typ.	Max.	Unit	Remarks
4-1	Power Consumption	P	35	40	45	W	Vac=240V/60Hz @24V
4-2	Output Current	Io	665	700	735	mA	2 channel
4-3	Output Voltage	Vo	20	24	26	Vdc	2 channel
4-4	Efficiency	-	84	87	-	%	Vac=240V/60Hz @24V
4-5	Power Factor	PF	0.9	-	-	-	Vac=240V/60Hz @24V
4-6	THD	%	-	10	15	%	Vac=240V/60Hz @24V

※ All Test Results are recorded with 100% Products

※ E-Load Condition : LED & CR Mode



LED Driver

5. STANDARD TESTING CONDITION

5-1 Standard testing environment

Generally all tests are performed in normal room temperature and humidity. If the problem occurs, re-tests are performed at $25\pm 3^{\circ}\text{C}$ and $60\pm 5\%$ relative humidity.

5-2 Standard testing method

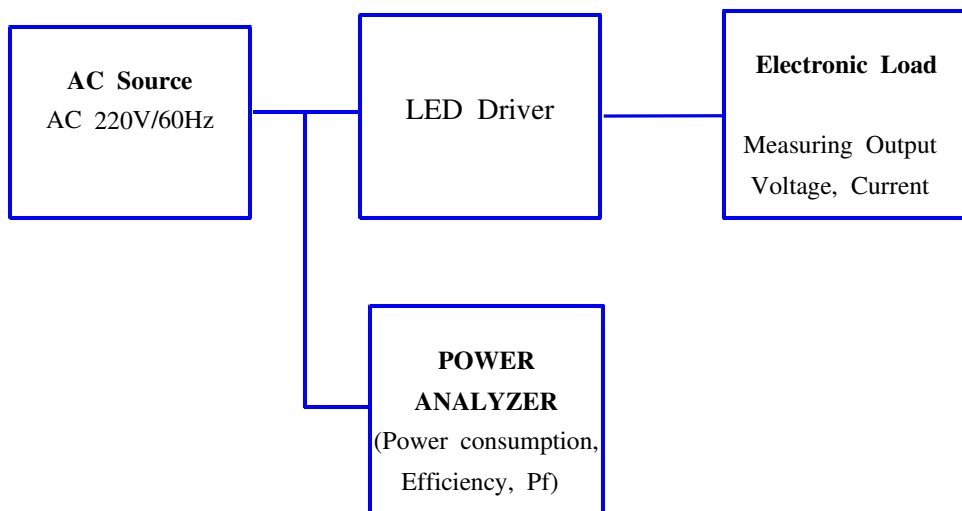
1) Testing equipment

Type	Company	Model (Reference)
AC Input Driver	Chroma	AC Source 61504
Power Consumption measuring equipment	YOKOGAWA	PRECISION POWER ANALYZER WT3000
Electrical Load	Chroma	DC Electronic Load 63110A

2) Testing equipment Condition

Measuring Equipment	Condition
AC Source	AC 220V / 60Hz
DC Electronic Load	DC Electronic load, @ 24.5V, LED & CR Mode

3) Measurement Method





LED Driver

6. PRECAUTIONS IN HANDLING

- 1) This LED Driver is only for 45W Non Dimming driver.
- 2) Handling

To prevent the LED Driver from any defect, please handle it with care as follows.

 - a. Don't drop the unit and don't give the unit any shocks.
 - b. Don't store the product in a dusty place or room.
 - c. Don't take the product apart.
 - d. Don't pull wire with hand in case of carry or move the product.
- 3) Static Electricity

Static electricity or surge voltage damages the LED Driver. Please keep the working process anti-static electricity condition to prevent the luminaire from damage.

 - a. Anyone who handles the unit should be well grounded. (earth ring or anti-static glove)
 - b. Anyone who handles the unit should wear anti-electrostatic working clothes.
 - c. All kinds of device and instruments, such as working table, measuring instruments and assembly jigs in production line should be well grounded.
- 4) Others
 - a. If over voltage which exceeds the absolute maximum rating is applied to LED Driver, it will cause damaging circuits and result in malfunction.
 - b. Do not use the mixed polarity of Ch1 and Ch2.

Module Interface			
Module1		Module2	
Ch1 +	Ch1 -	Ch2+	Ch2-

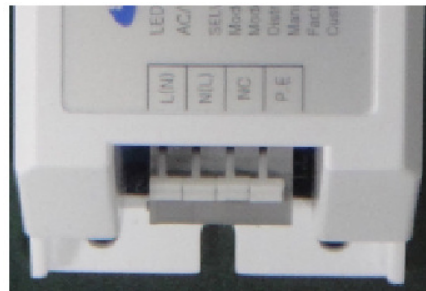


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7. TERMINAL INFORMATION

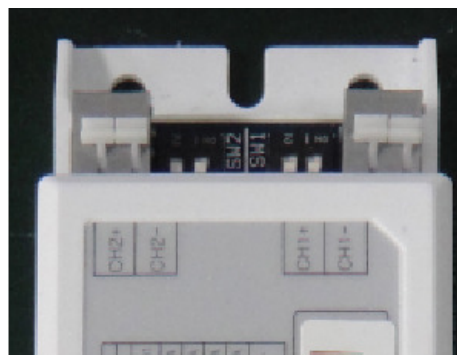
1) Input Interface

PIN	SYMBOL	COLOR	DESCRIPTION
1	Live	Gray	AC Input
2	Neutral	Gray	AC Input
3	NC	Gray	No Connect
4	P.E	Gray	Protective Earth



2) Output Interface

PIN	SYMBOL	COLOR	DESCRIPTION
2	CH2 +	Gray	Positive(Anode) LED output(CH2+)
1	CH2 -	Gray	Negative(Cathode) LED output(CH2-)
3	CH1 +	Gray	Positive(Anode) LED output(CH1+)
4	CH1 -	Gray	Negative(Cathode) LED output(CH1-)





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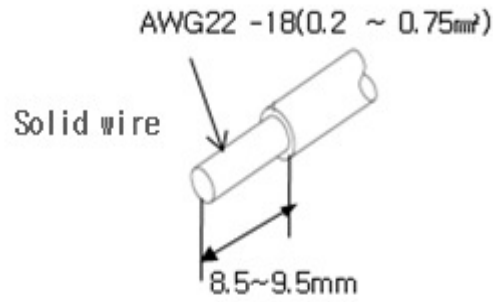
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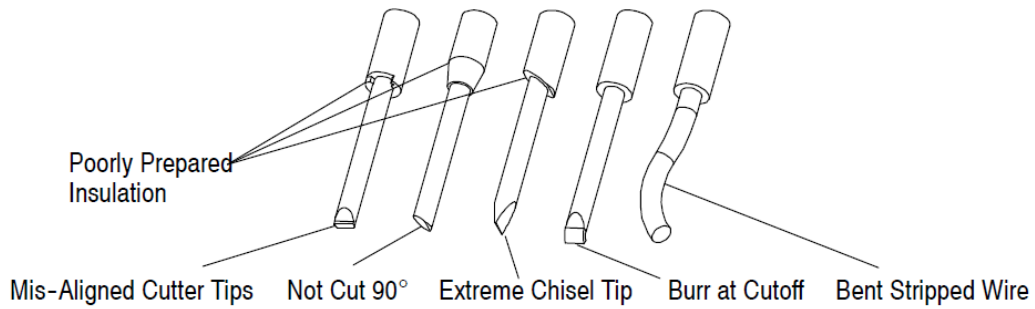
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8. WIRE SELECTION AND PREPARATION

1) Acceptable



2) Non-Acceptable



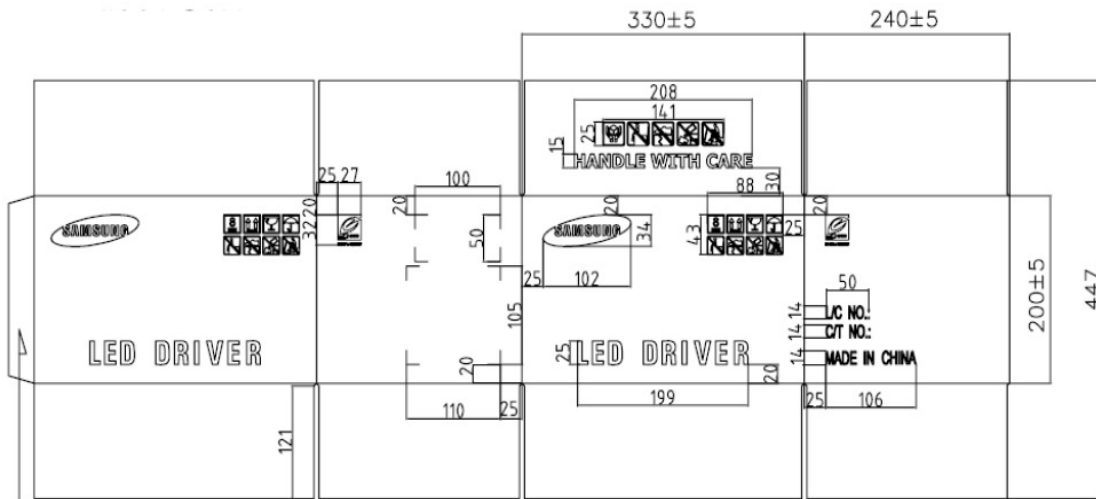


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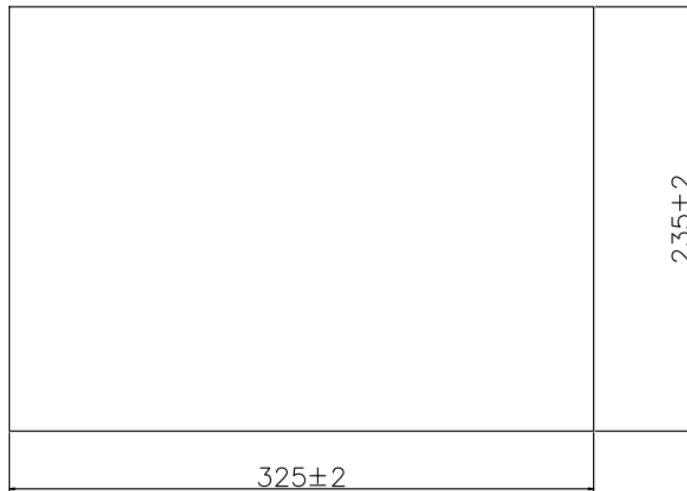
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9. PACKING SPECIFICATION

1) Out Box



2) Nil-Pad

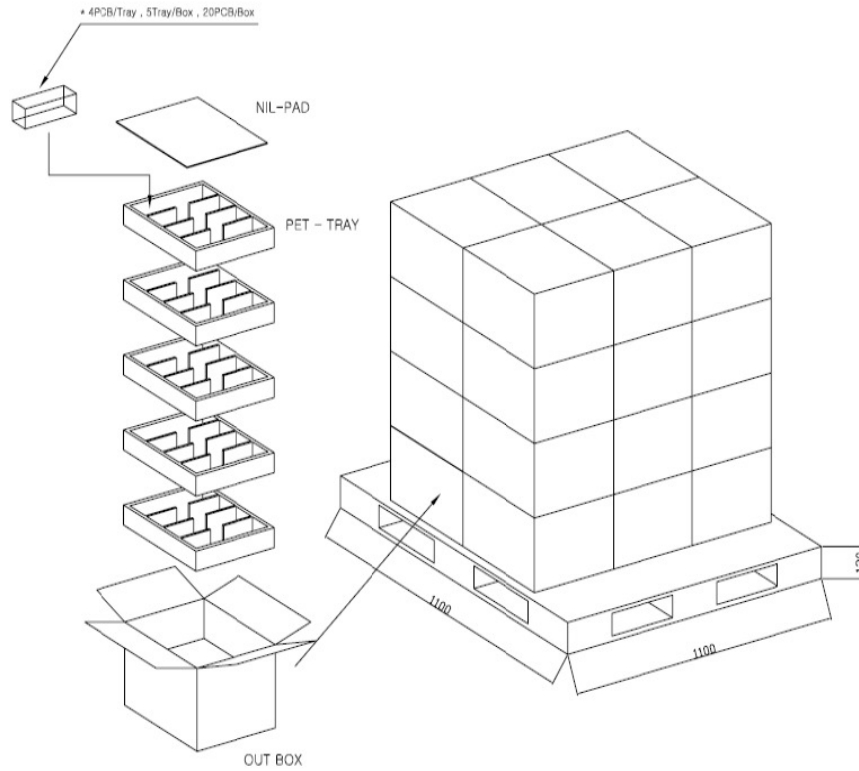




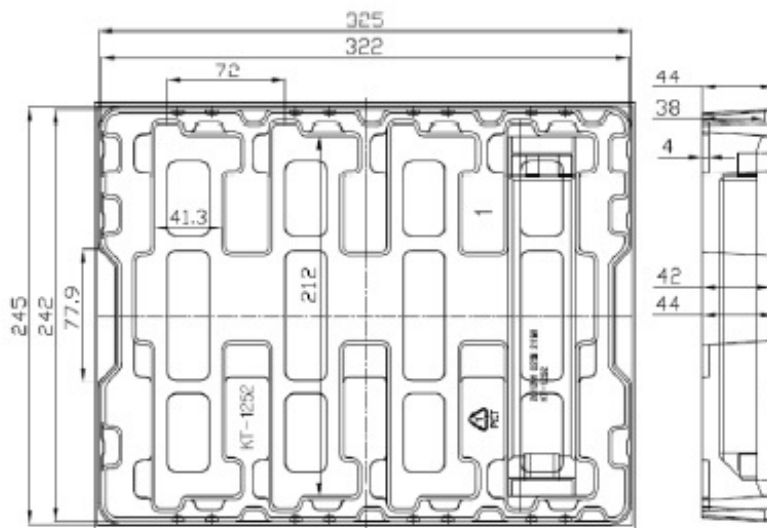
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3) Stock Pattern



4) Tray





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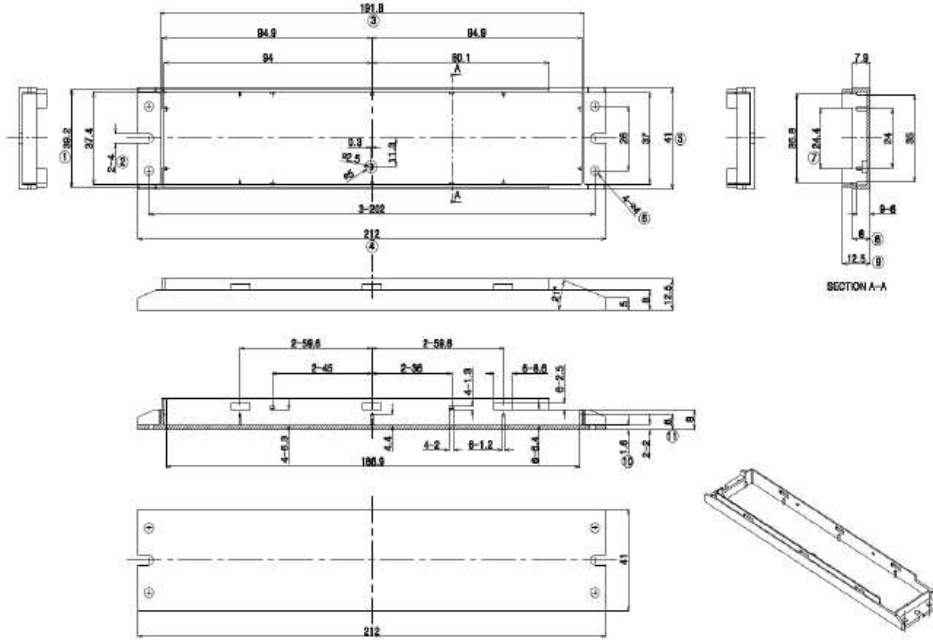
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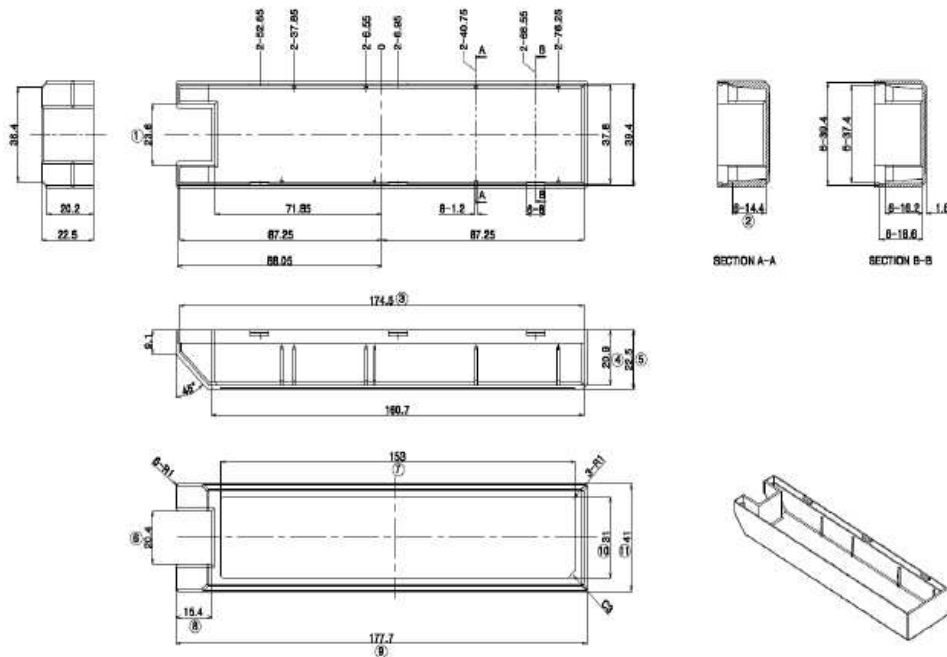
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APPENDIX 1. Appearance Drawing (in mm)

1) Housing



2) Cover





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APPENDIX 2. Label Drawing

1) Main Label

SAMSUNG 조명기구용컨버터(LED램프용) AC/DC LED전원 공급장치 SELV-물들 모델 코드 : ST1FP21B740N024KOR 모델명 : KLP-AD040H-02NDK 판매사 : SAMSUNG ELECTRONICS Co., Ltd. 제조사 : Qingdao Fuyuan Electronics Co., Ltd.(중국) A/S연락처 : +82-55-290-7487 (한국대량유선) ※ 본 제품은 LED컨버터로서 LED램프 전용 제품임.	정격입력전력 40W 정격입력전압 220~240V~ 정격입력전류 0.18A 정격입력주파수 50/60Hz 효율 $\eta \geq 0.95$ 허용온도범위(Ta) -20℃ ~ +50℃ Case온도범위(Tc) 85℃ Max 출력방식 정전류방식 최대출력전압(무부하) DC 40V(1차별임) 출력출력전압 DC 24V(1차별임) 정격출력전류 DC 0.70A(1차별임)	Block Connection 	<table border="1"> <thead> <tr> <th rowspan="2">Input Power</th> <th colspan="4">Output Current Setting</th> </tr> <tr> <th>SW1</th> <th>SW2</th> <th>Current</th> <th>Current</th> </tr> </thead> <tbody> <tr> <td>35W</td> <td>-</td> <td>630mA</td> <td>-</td> <td>630mA</td> </tr> <tr> <td>40W</td> <td>ON</td> <td>700mA</td> <td>ON</td> <td>700mA</td> </tr> <tr> <td>45W</td> <td>ON</td> <td>770mA</td> <td>ON</td> <td>770mA</td> </tr> <tr> <td>50W</td> <td>ON</td> <td>840mA</td> <td>ON</td> <td>840mA</td> </tr> </tbody> </table> <p>Before use, always check dipswitch setting. SW1,SW2 must be set the same condition.</p>	Input Power	Output Current Setting				SW1	SW2	Current	Current	35W	-	630mA	-	630mA	40W	ON	700mA	ON	700mA	45W	ON	770mA	ON	770mA	50W	ON	840mA	ON	840mA
	Input Power	Output Current Setting																														
		SW1	SW2	Current	Current																											
	35W	-	630mA	-	630mA																											
	40W	ON	700mA	ON	700mA																											
45W	ON	770mA	ON	770mA																												
50W	ON	840mA	ON	840mA																												
L(N)			CH2+																													
N(L)			CH2-																													
NC			CH1+																													
P.E			CH1-																													
S/N																																

2) Barcode Label



- Serial Number : 0000~9999
- Revision : PCB Revision(1=>REV 1.0)
- ITEM Name : 4digit
- Manufactured Factory(M:Korea Taiyo Yuden, E:Chiniss EMS)
- Manufactured Maker(T:Taiyo Yuden)
- Manufactured Year/Month/Day