



SAMSUNG LED

SPECIFICATION No. _____

DATE OF ISSUE : 2009. 05. 15

LED Street Light Module

REV. NO.

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SPECIFICATION

MODEL : LLMSUR024ANCWS01

CUSTOMER :

CUSTOMER :	
CHECKED	APPROVED
2009. . .	2009. . .

SAMSUNG LED

DRAWN	CHECKED		APPROVED
	SALES	QA	
2009. . .	2009. . .	2009. . .	2009. . .

SAMSUNG LED CO.,LTD.
314. MAETAN3-DONG, YEONGTONG-GU,
SUWON, GYUNGGI-DO, KOREA, 443-743



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1. APPLICATION

- This is a specification of 90W LED Street Light by Samsung LED Co. Ltd.

2. FUNDAMENTAL SPECIFICATIONS

No.	ARTICLE	SPECIFICATIONS					
2-1	Photometric & Electric Specification						
	Items	Symbol	MIN	TYP	MAX	Unit	Remarks
	Luminous Flux	LF	5,400	6,300	-	lm	
	Color Temperature	CT	4,000	5,000	6,000	K	
	Power Consumption	P	80	89	99	W	Based on input
2-2	Dimension	- Lighting Module : 245(L) × 186.5(W) × 83.6(H) [mm] ±1.0[mm] - Power Supply : 195(L) × 103.5(W) × 37(H) [mm] ±1.0[mm] (Exclude connecting cables)					
2-3	Weight	- Lighting Module : 2.7[kg] ± 0.5[kg] - Power Supply : Max 1.3[kg] - Total : 4.7kg ± 0.5 [kg] / 1box with Packing					
2-4	Operating Temperature	-30[°C] ~ +50[°C]					
2-5	Storage Temperature	-40[°C] ~ +85[°C]					

No.	ARTICLE	SPECIFICATIONS					
		Symbol	MIN	TYP	MAX	Unit	Remarks
2-6	Operating Current	Iop		1350		mA	
2-7	Operating Voltage	Vdc	54	57	62	V	
2-8	Configuration	3 channel x [LED 6 Series x 3 Parallel / channel]					



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3.COMPONENTS SPECIFICATIONS

No.	ARTICLE	SPECIFICATIONS
3-1	LED	- Part Number : SLHNNWW629T3SOSXS3 (Sunnix 6) - Dimension : 8.0(L)×8.0(W)×4.0(H) [mm] - Vf : 8.9 ~ 11.0V (at 180 mA)
3-2	PCB	- Dimension : 216.0(L)×120.0(W)×1.65(H) [mm] - Type : Metal Core
3-3	Array Lens Cover	- Dimension : 238(L)×142(W)×12.6(H) [mm] - Type ① Poly Carbonate ② Thickness : 2.3 [mm]
3-4	Seal Rubber	- Dimension : 218(L)×142(W)×2(H) [mm] - Type : Silicon
3-5	Thermal Pad	- Dimension : 216(L)×120(W)×0.5(H) [mm] - Type : Silicon
3-6	Heat Sink	- Dimension : 245(L)×186.5(W)×83.6(H) [mm] - Type : AL
3-7	Cable Harness	- Dimension : 300[mm] ± 10 [mm], Cable Gland, 6C Wire
3-8	Power Supply	- Input : 208 ~277Vac , - Output : 54~62Vdc, 450mA × 3CH, - Dimming : 0~10V DIMMING(Less than 1V, Power OFF)

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No.	Stress Test	Stress Condition	Duration	Sample size
1	RTOL	25℃, Typical Current	250hr	4
2	HTOL	70℃, Typical Current	250hr	4
3	WHTOL	50℃, 95%RH, Typical Current	250hr	4
4	LTOL	-30℃, Typical Current	250hr	4
5	HTS	85℃	250hr	4
6	WHTS	60℃, 95%RH	250hr	4
7	LTS	-40℃	250hr	4
8	TS	-40℃/30min. ↔ 85℃/30min.	100cycle	4
9	Vibration (BOX)	10~35 Hz, 3mm, X.Y.Z each 30min	1cycle	4
10	Drop (BOX)	Drop Test (6 Surface, 3 Edge, 1 Corner1, Free fall, 70cm)	1 Time	4
11	IP	IP65	1 Time	2

NO	Article	Test Condition	Specification	
			Min	Max
1	Im	Standard Test Condition	Initial Result x 0.90	Initial Result x1.10
2	CCT	Standard Test Condition	Initial Result - 500K	Initial Result +500K
3	Power Consumption	Standard Test Condition	Initial Result -3W	Initial Result +3W



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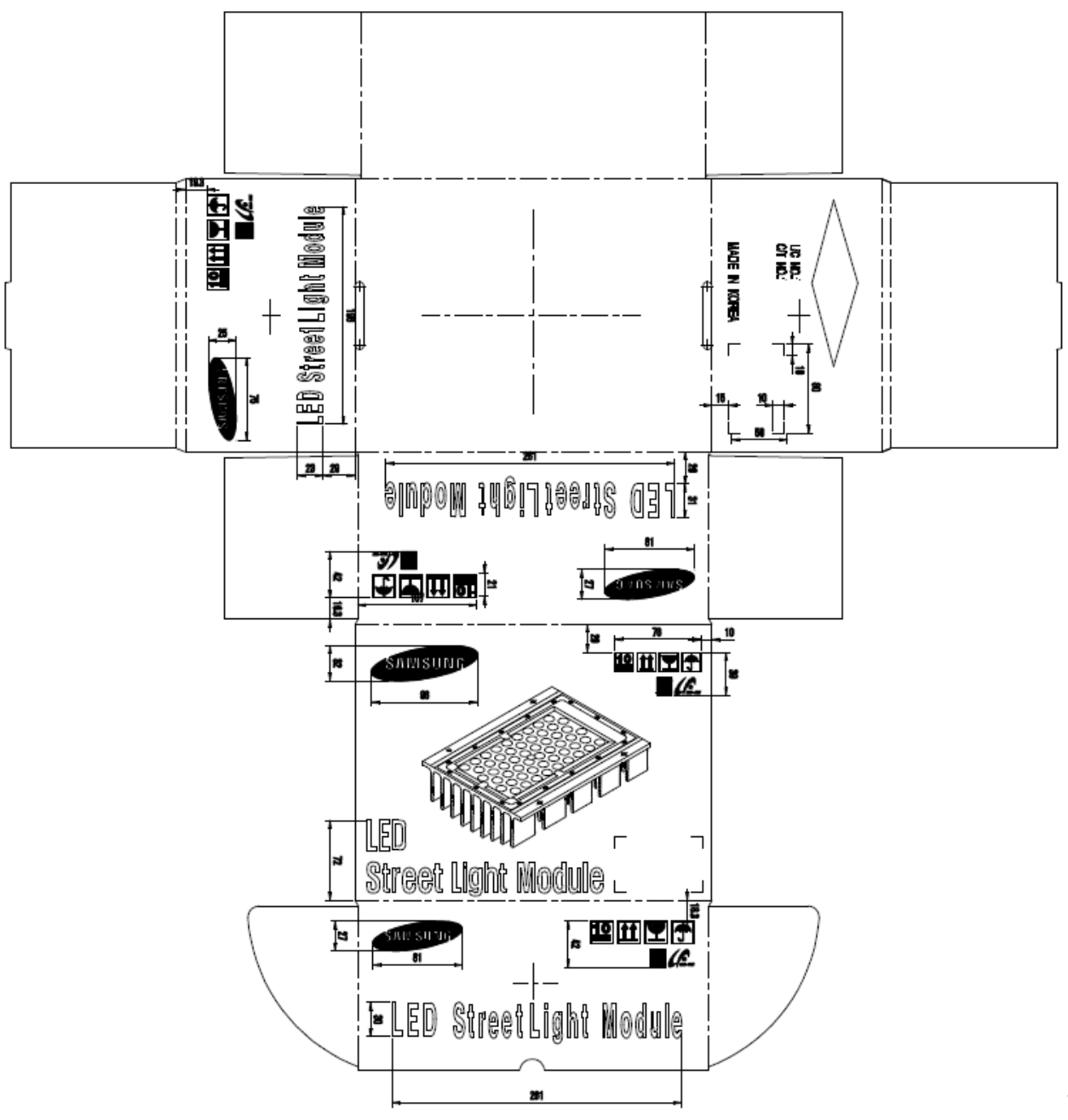
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5. PACKING

5-1. Printing Format



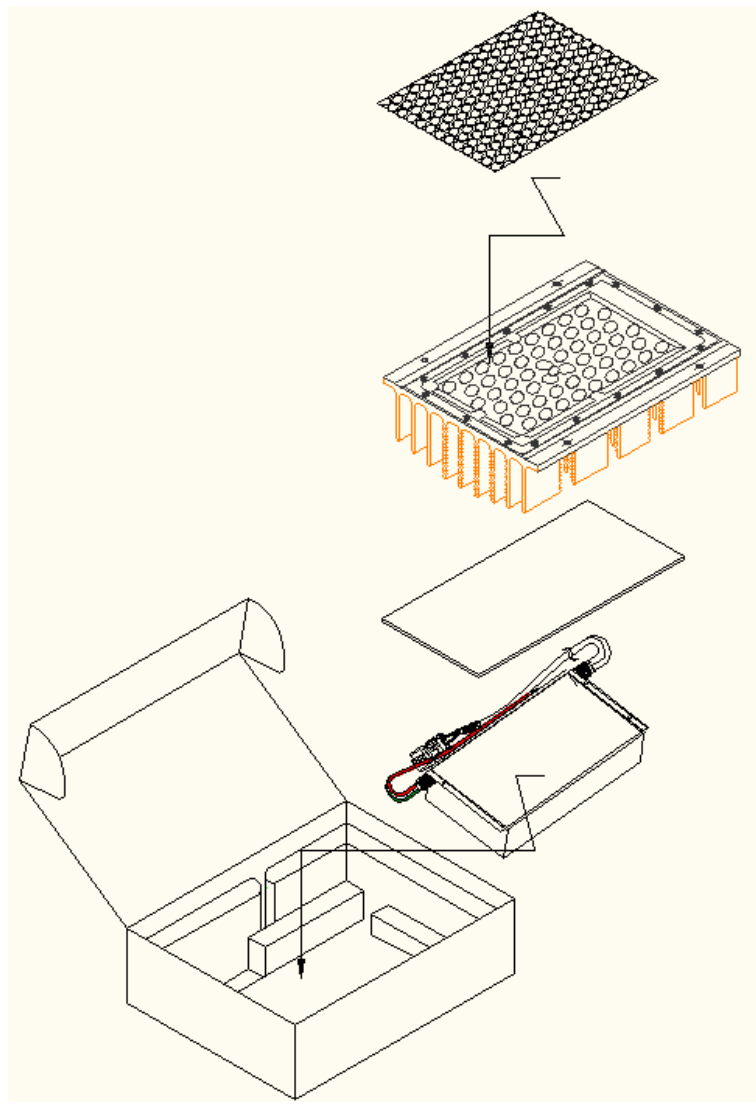
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5-2. Packing Order





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6.PRECAUTIONS IN HANDLING

- 1) The LED Lighting module is an electronic device designed safely and operate only together with the dedicated power supply unit provided along with the module. And any replacement by unauthorized power supply unit is prohibited.

- 2) Array Lens cover and cable harness are critical parts to water protection and improper treatment of the heat sink is subject to failure in the thermal management in the course of disassembling and reassembling.

- 3) Handling
 - To prevent the LED Lighting Module from making any defectives, please handle the LED Lighting Module with care as follows.
 - a. Don't drop the unit and don't give the unit any shocks.

 - b. Don't make Array Lens Cover scratched by sharp tools during the luminaire assembly process.

 - c. Don't store the LED Lighting Module in a dusty place or room.

 - d. Don't take the unit to pieces.

 - e. Don't touch the Array Lens Cover with your naked fingers.

 - f. Take care not to pull the wire with hand or to give the unit any shocks in the course of movement of LED modules.



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g. Don't touch the heat sink with your naked fingers not to get hurt from the sharp edges of the heat sink.

4) Cleaning

- When the cleaning of the lens surface after installation is necessary, water jet at an appropriate pressure is recommended.

5) Storage

- The LED Street Light Module must be stored in the temperature range of $-40 \sim 85^{\circ}\text{C}$.

6) Others

- If over voltage which exceeds the absolute maximum rating is applied to the LED Power, it will cause damage to the LED Power and result in destruction.
- Do not directly look into lighted LED with naked eyes.

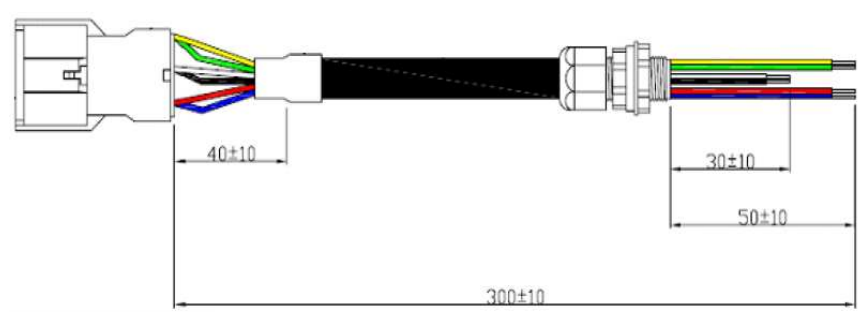
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APPENDIX 1. PCB Connection to Wire Cable



NO.	Terminal name	Remark	Channel
1	(+)	Anode (Red Wire)	1
2	(-)	Cathode (Blue Wire)	
3	(+)	Anode (White Wire)	2
4	(-)	Cathode (Black Wire)	
5	(+)	Anode (Yellow Wire)	3
6	(-)	Cathode (Green)	



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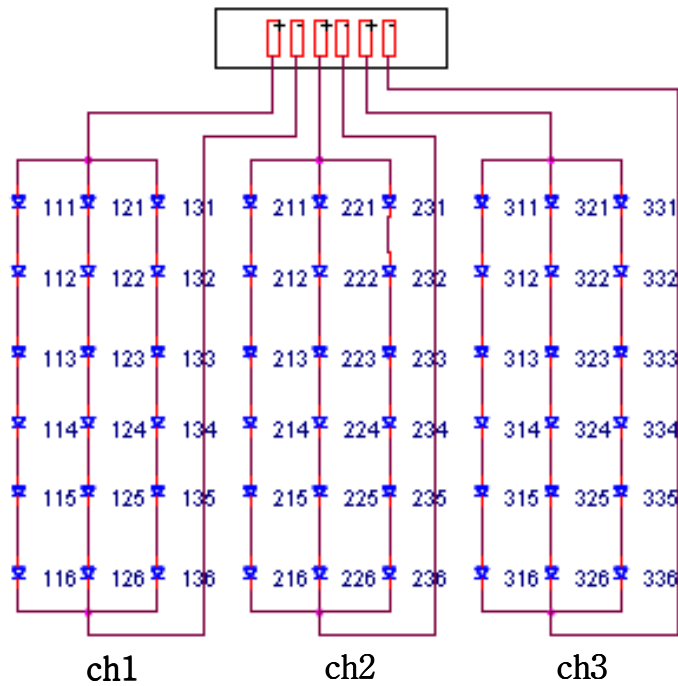
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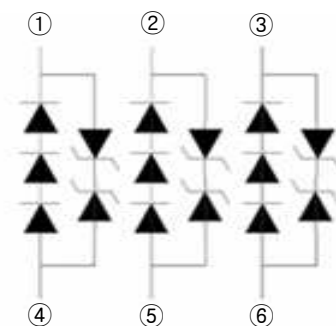
APPENDIX 2. CIRCUIT DIAGRAM

PCB



PKG(SUNNIX6)

Circuit



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APPENDIX 3. Specification of Power Supply

1. Input

Article	MIN	TYP	MAX	Unit	Remarks
Input Voltage	208		277	Vac	
Power Consumption	80	89	99	W	
Input Current			0.7	A	
Input Frequency		50/60		Hz	
Inrush Current			50	A	
Power Factor	90			%	

2. Output

Article	MIN	TYP	MAX	Unit	Remarks
Output Voltage	54	57	62	Vdc	
Output Current		450 ± 22		mA	

3. Others

Article	MIN	TYP	MAX	Unit	Remarks
Efficiency	85			%	Typical input voltage, Vo=57V
Dimming	0~ 10V Analog Input				
EMI	CLASS B				

4. Dimming :

Input : 0~ 10V Analog

Less Than 1V : Power OFF

1V ~ 10V : Output current is change proportionally

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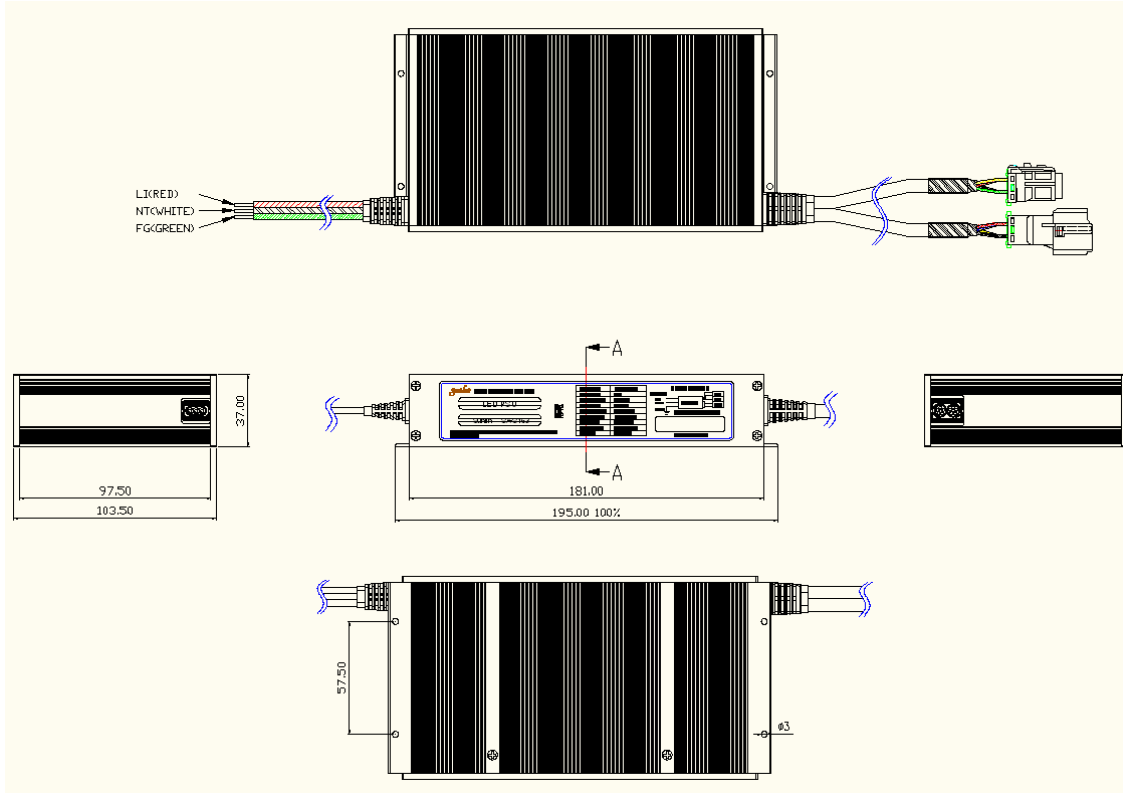
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APPENDIX 4. Mechanical DRAWING of Power Supply

1. Mechanical



W x D x H = 103.50 x 195.00 x 37.00 [mm], (公差: ± 0.5 mm)

2. Label

Sunlin Electronics Co., Ltd.		E327532		[Block Diagram]	
LED PSU		Input Voltage AC 208 - 277V		AC Input	
Sunlin SA-S163		Input Current 0.7A		RED	
913-3, Hoge 2-Dong, Dongan-Gu, Anyang-City, Kyunggi-Do, Korea Tel. 031-454-1114		Input Frequency 50 / 60Hz		WHITE	
		Power Factor 90% Min		GREEN	
		Operating Temp. -40°C ~ 60°C		DIM	
		Output Channel 450mA * 3CH		12V	
		LED Voltage DC 54 ~ 62V		LED	
		Output Voltage DC 12V / 0.1A		Suitable for Damp Location	
		DIMMING DC 1 - 10V		MADE IN KOREA	

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APPENDIX 5. PIN ASSIGNMENT of Power Supply

1. Output Cable

Output Connector Figure	Wire Color	Function
<p style="text-align: center;">Female</p>	Red	CH1 +
	Blue	CH1 -
	White	CH2 +
	Black	CH2 -
	Yellow	CH3 +
	Green	CH3 -

2. Dimming Cable

Dimming Connector Figure	Wire Color	Function
<p style="text-align: center;">Male</p>	Red	+12V
	Blue	Dimming Input
	White	N.A
	Black	N.A
	Yellow	N.A
	Green	Ground

※ +12Vdc is power source for external Dimmer

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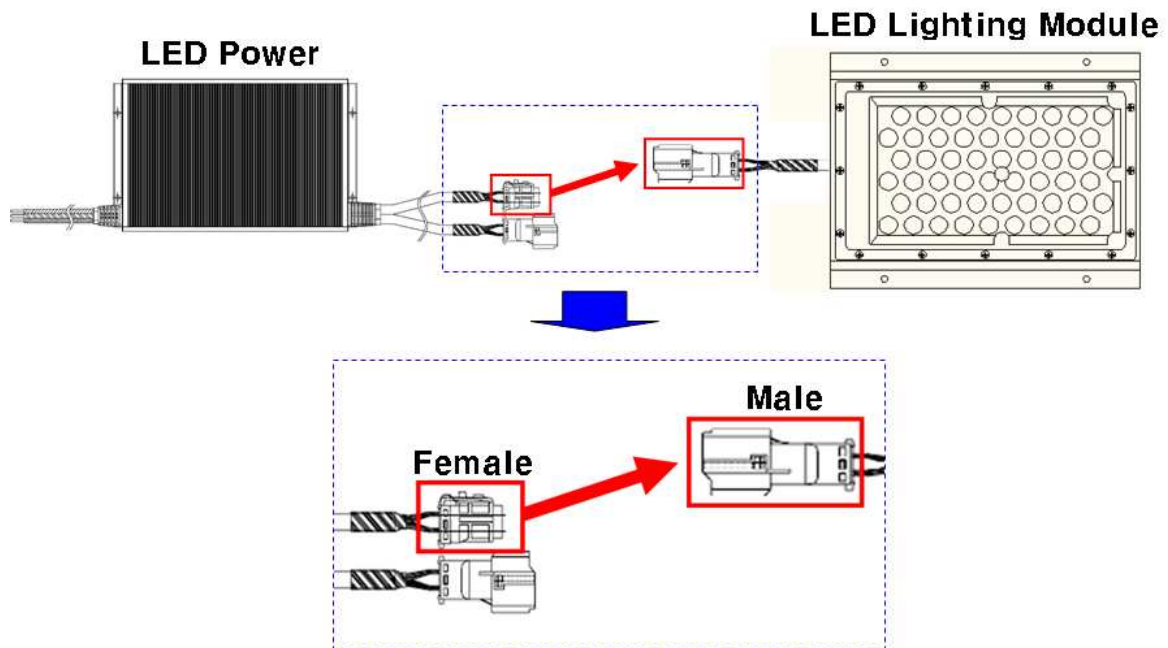
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APPENDIX 6. CONNECTION of LED Lighting Module

1. Input Cable of Power Supply

Power Supply Input Wire	Wire Color	Function
LI<RED>	Red	Live
NT<WHITE>	White	Neutral
FG<GREEN>	Green	Ground

2. Connection Power Supply to LED Lighting Module



3. Connection Power Supply to Dimmer

