

1.0 Reference and Address			
Report Number	190200085HZH-001	Original Issued: 21-Feb-2019	Revised: 11-Nov-2022
Standard(s)	Luminares [UL 1598:2021 Ed.5] Luminares [CSA C22.2#250.0:2021 Ed.5]		
Applicant	ShenZhen Minglight Co., Ltd	Manufacturer	<b>ShenZhen Minglight Co., Ltd</b>
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<b>2.0 Product Description</b>	
Product	LED Fixed Light
Brand name	Minglight, JMKGML, CINOTON
Description	The product covered by this report is LED light and provided with leads for field wiring supply connection, suitable for wet location use.
Models	<p>MLWPB-42W-, MLWPB-60W-, MLWPB-80W-, MLWPB-100W- or MLWPB-120W-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>MLWPB-42W-, MLWPB-60W-, MLWPB-80W-, MLWPB-100W- or MLWPB-120W-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character; followed by -G.</p> <p>MLWPB2-42W-, MLWPB2-60W-, MLWPB2-80W-, MLWPB2-100W- or MLWPB2-120W-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>MLWPC2-42W-, MLWPC2-60W-, MLWPC2-80W- or MLWPC2-100W-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>ML-WPA-12W-277V- or ML-WPA-13W-277V-; followed by two characters; followed by K-; followed by one character.</p> <p>ML-WPD-20W-, ML-WPA-18W-, ML-WPA-26W-, ML-WPD-30W-, ML-WPD-60W- or ML-WPD-80W-; followed by two characters.</p> <p>FL35- followed by 15W, 26W, 30W, 50W, 80W, 100W, 150W or 200W; followed by four characters; may be followed by -D, -P or -S.</p> <p>PLC followed by 150W/100W/75W, 240W/200W/150W or 300W/240W/200W; followed by four characters; may be followed by -D, -P or -S.</p> <p>PLC followed by 50W, 75W, 100W, 150W, 200W, 240W or 300W; followed by I; followed by four characters; may be followed by -D, -P or -S.</p> <p>PLC followed by 100W, 150W, 200W, 240W or 300W; followed by HVI; followed by four characters; may be followed by -D, -P or -S.</p> <p>ML-WPD2- followed by 20W, 30W, 40W, 60W, 80W, 100W or 120W; followed by four characters; may be followed by -D, -P or -S.</p> <p>ML-HBC- followed by 100W, 150W, 200W or 240W; followed by four characters; may be followed by -D, -P or -S.</p> <p>ML-HBC- followed by 100W, 150W, 200W, 240W or 300W; followed by four characters; may be followed by -D, -P or -S; followed by -X.</p> <p>ML-HBC- followed by 100W, 150W, 200W, 240W or 300W; followed by four characters; may be followed by -D, -P or -S; followed by -HV.</p>

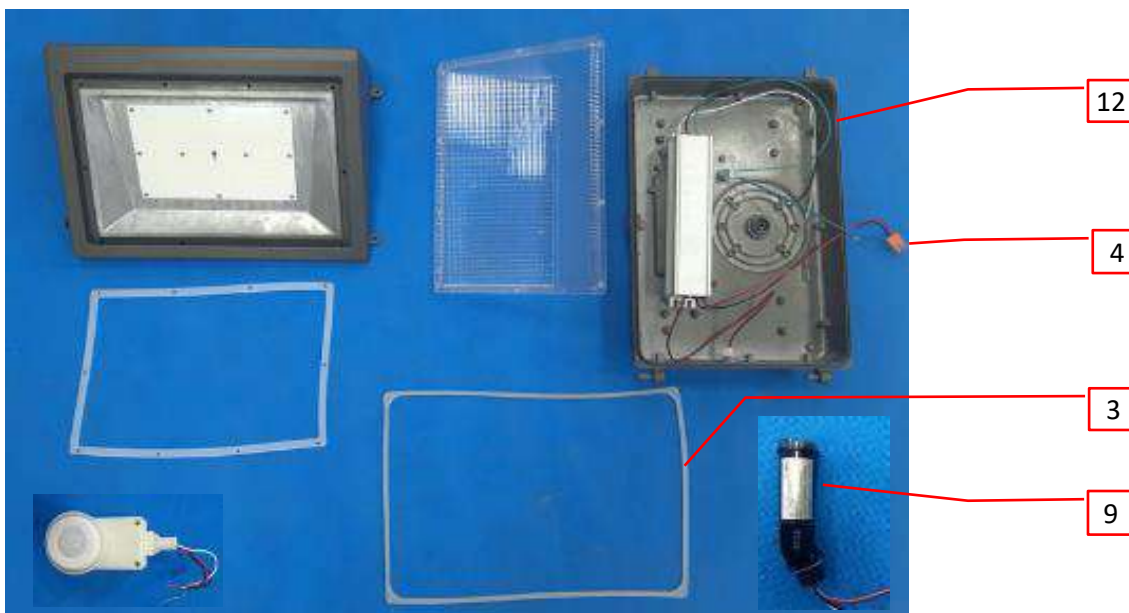
2.0 Product Description	
Model Similarity	<p>For series of models MLWPB-, MLWPB2- or MLWPC2-, all models are similar in mechanical and electrical construction. Differences among them are outlook, number of LEDs, LED driver and total wattage.                      Suffix "XXX" represents rated input voltage, 277=100-277Vac input voltage, 347=100-347Vac input voltage;                      Suffix "XXK" represents CCT, can be 30K=3000K, 35K=3500K, 40K=4000K, 45K=4500K, 50K=5000K, 57K=5700K, 65K=6500K;                      Suffix "X" can be N, P or M, where N=No sensor nor Photo Cell, P=with Photo Cell, M=with sensor. For example MLWPB-42W-277-57K-N.</p> <p>For series of models ML-WPA-12W-277V- or ML-WPA-13W-277V-, all models are have similar electrical and mechanical construction. Differences among them are outlook, number of LEDs, LED driver and total wattage.                      Suffix "XXK" represents CCT, can be 30K=3000K, 40K=4000K, 50K=5000K, 57K=5700K;                      Suffix "X", represents type of function, can be P or N, P=Sensor, N=Normal.                      (Refer to 7.0 Illustrations)                      For example: ML-WPA-26W-30K-N.</p> <p>For series of models ML-WPD-20W-, ML-WPA-18W-, ML-WPA-26W-, ML-WPD-30W-, ML-WPD-60W- or ML-WPD-80W-, all models are have similar electrical and mechanical construction. Differences among them are outlook, number of LEDs, LED driver and total wattage.                      Suffix "XX" represents CCT, can be 30K=3000K, 40K=4000K, 50K=5000K, 57K=5700K;                      For example: ML-WPA-26W-30.</p> <p>For series FL35, all models have similar electrical and mechanical construction. Differences among them are size, number of LEDs, LED driver and total wattage.                      Suffix followed by four character represents CCT.                      Suffix may be followed by -D, -P, -S represents sensor type, D=DC0-10V dimming, P=light sensation, S=Motion Sensor, blank=No sensor.</p> <p>For series PLC, all models have similar electrical and mechanical construction. Differences among them are size, number of LEDs, LED driver, Input voltage and total wattage.                      Suffix followed by four character represents CCT.                      Suffix may be followed by -D, -P, -S represents sensor type, D=DC0-10V dimming, P=light sensation, S=Motion Sensor, blank=No sensor.</p> <p>For series ML-WPD2, all models have similar electrical and mechanical construction. Differences among them are size, number of LEDs, LED driver and total wattage.                      Suffix followed by four character represents CCT.                      Suffix may be followed by -D, -P, -S represents sensor type, D=DC0-10V dimming, P=light sensation, S=Motion Sensor, blank=No sensor.</p> <p>For series ML-HBC, all models have similar electrical and mechanical construction. Differences among them are size, number of LEDs, LED driver and total wattage.                      Suffix followed by four character represents CCT.                      Suffix may be followed by -D, -P, -S represents sensor type, D=DC0-10V dimming, P=light sensation, S=Motion Sensor, blank=No sensor.</p>
Ratings	Refer to Sec.7.0 III.10a, 10b, 10c for details.
Other Ratings	Ta=50°C, for series of models MLWPB-, MLWPB2- & MLWPC2-; Ta=40°C, for series of models ML-WPA-, ML-WPD-, FL35, PLC, ML-WPD2, ML-HBC.

**3.0 Product Photographs**

**Photo 1** - External view of MLWPB-120W-XXX-XXK-X, Also represent MLWPB-42W-XXX-XXK-X, MLWPB-60W-XXX-XXK-X, MLWPB-80W-XXX-XXK-X, MLWPB-100W-XXX-XXK-X and MLWPB-120W-XXX-XXK-X except different in LED Driver and LED quantity



**Photo 2** - Disassembly view of MLWPB-120W-XXX-XXK-X, Also represent MLWPB-42W-XXX-XXK-X, MLWPB-60W-XXX-XXK-X, MLWPB-80W-XXX-XXK-X, MLWPB-100W-XXX-XXK-X and MLWPB-120W-XXX-XXK-X except different in LED Driver and LED quantity



### 3.0 Product Photographs

**Photo 3** - External view of MLWPB-120W-XXX-XXK-X-G

Also represent MLWPB-42W-XXX-XXK-X-G, MLWPB-60W-XXX-XXK-X-G,  
except different in LED Driver and LED quantity

MLWPB-80W-XXX-XXK-X-G, MLWPB-100W-XXX-XXK-X-G and MLWPB-120W-XXX-XXK-X-G



### 3.0 Product Photographs

**Photo 4 - Disassembly view of MLWPB-120W-XXX-XXK-X-G**

Also represent MLWPB-42W-XXX-XXK-X-G, MLWPB-60W-XXX-XXK-X-G, MLWPB-80W-XXX-XXK-X-G, MLWPB-100W-XXX-XXK-X-G and MLWPB-120W-XXX-XXK-X-G except different in LED Driver and LED quantity



### 3.0 Product Photographs

**Photo 5** - External view of MLWPB2-120W-XXX-XXK-X

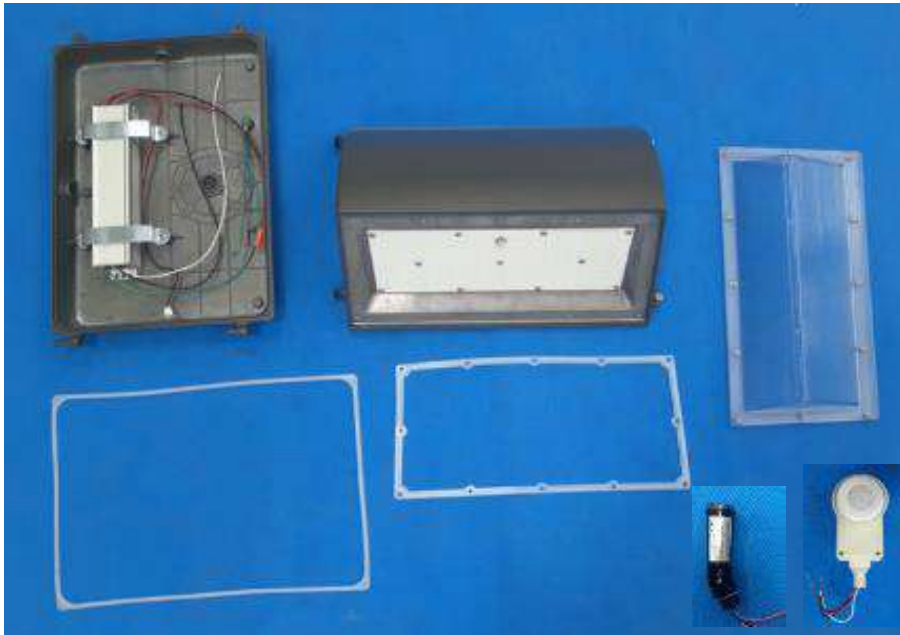
Also represent MLWPB2-42W-XXX-XXK-X, MLWPB2-60W-XXX-XXK-X, MLWPB2-80W-XXX-XXK-X  
MLWPB2-100W-XXX-XXK-X and MLWPB2-120W-XXX-XXK-X  
except different in LED Driver and LED quantity



### 3.0 Product Photographs

**Photo 6** - Disassembly view of MLWPB2-120W-XXX-XXK-X

Also represent MLWPB2-42W-XXX-XXK-X, MLWPB2-60W-XXX-XXK-X, MLWPB2-80W-XXX-XXK-X  
MLWPB2-100W-XXX-XXK-X and MLWPB2-120W-XXX-XXK-X  
except different in LED Driver and LED quantity



### 3.0 Product Photographs

**Photo 7** - External view of MLWPC2-100W-XXX-XXK-X

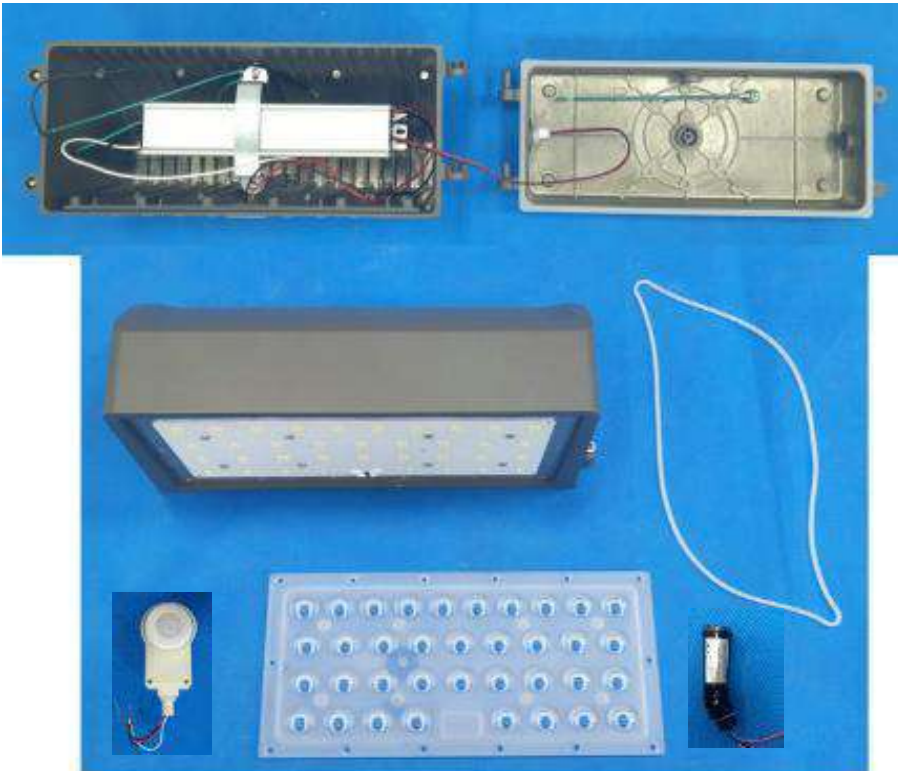
Also represent MLWPC2-42W-XXX-XXK-X, MLWPC2-60W-XXX-XXK-X, MLWPC2-80W-XXX-XXK-X  
except different in LED Driver and LED quantity



**3.0 Product Photographs**

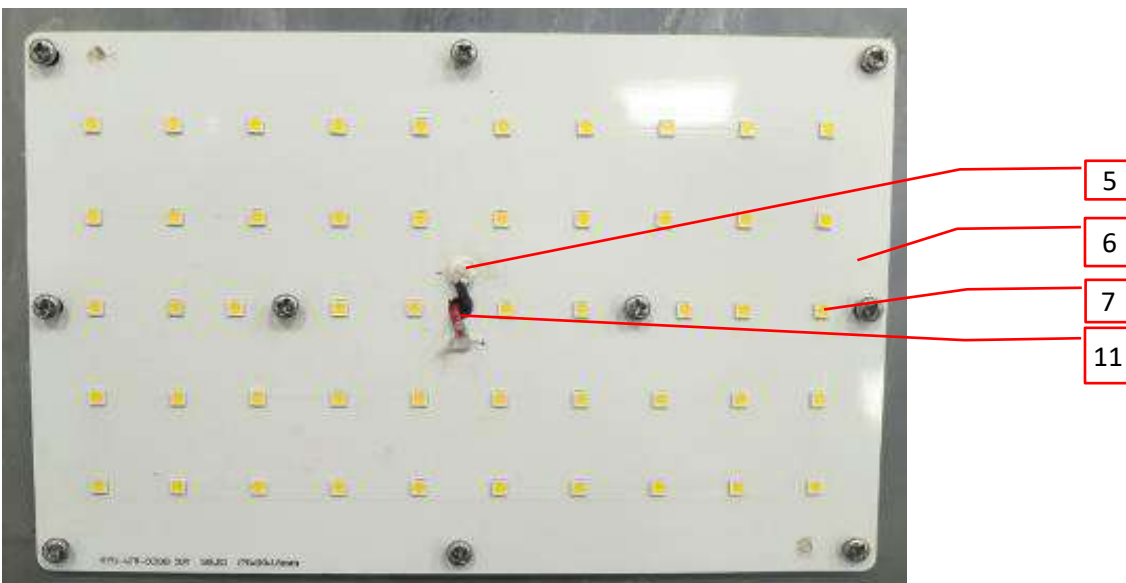
**Photo 8 - Disassembly view of MLWPC2-100W-XXX-XXK-X**

Also represent MLWPC2-42W-XXX-XXK-X, MLWPC2-60W-XXX-XXK-X, MLWPC2-80W-XXX-XXK-X except different in LED Driver and LED quantity



**Photo 9 - LED PCB of MLWPB-42W-XXX-XXK-X**

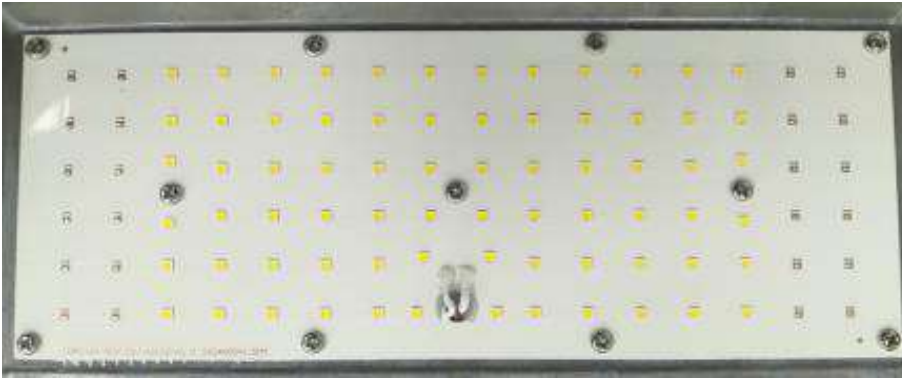
Same as Models MLWPB--42W-XXX-XXK-X-G, MLWPB2-42W-XXX-XXK-X and MLWPC2-42W-XXX-XXK-X



### 3.0 Product Photographs

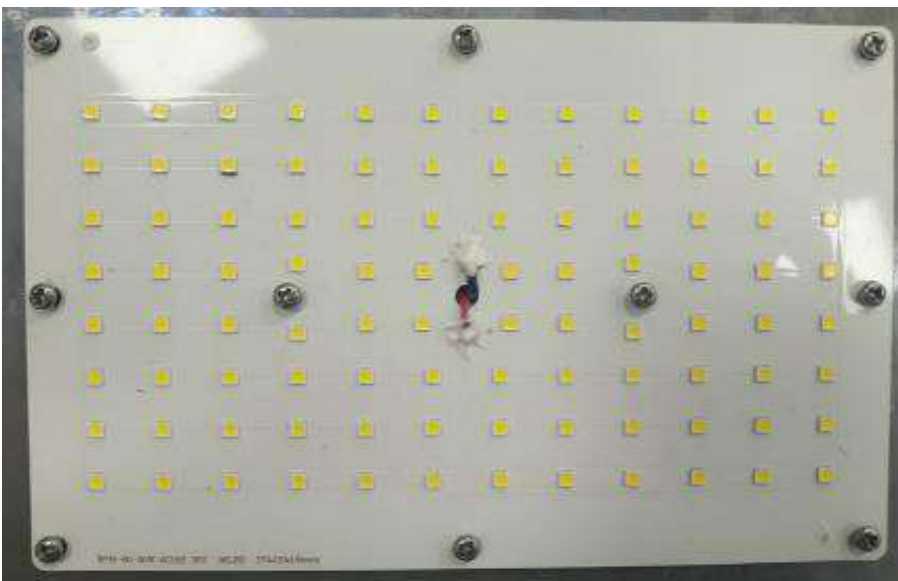
**Photo 10** - LED PCB of MLWPB-60W-XXX-XXK-X

Same as Models MLWPB-60W-XXX-XXK-X-G, MLWPB2-60W-XXX-XXK-X  
and MLWPC2-60W-XXX-XXK-X



**Photo 11** - LED PCB of MLWPB-80W-XXX-XXK-X

Same as Models MLWPB-80W-XXX-XXK-X-G, MLWPB2-80W-XXX-XXK-X  
and MLWPC2-80W-XXX-XXK-X



**Photo 12** - LED PCB of MLWPB-100W-XXX-XXK-X

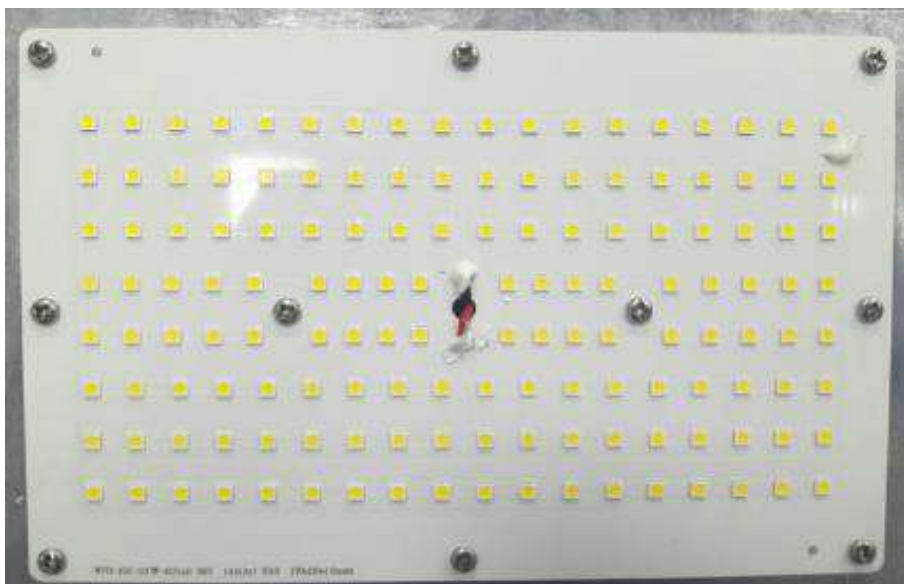
Same as Models MLWPB-100W-XXX-XXK-X-G, MLWPB2-100W-XXX-XXK-X  
and MLWPC2-100W-XXX-XXK-X.



### 3.0 Product Photographs

**Photo 13** - LED PCB of MLWPB-120W-XXX-XXK-X

Same as Models MLWPB-120W-XXX-XXK-X-G, MLWPB2-120W-XXX-XXK-X



**Photo 14** - Photo of Motion Sensor



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**3.0 Product Photographs**

**Photo 15 - Photo of Light Sensor**



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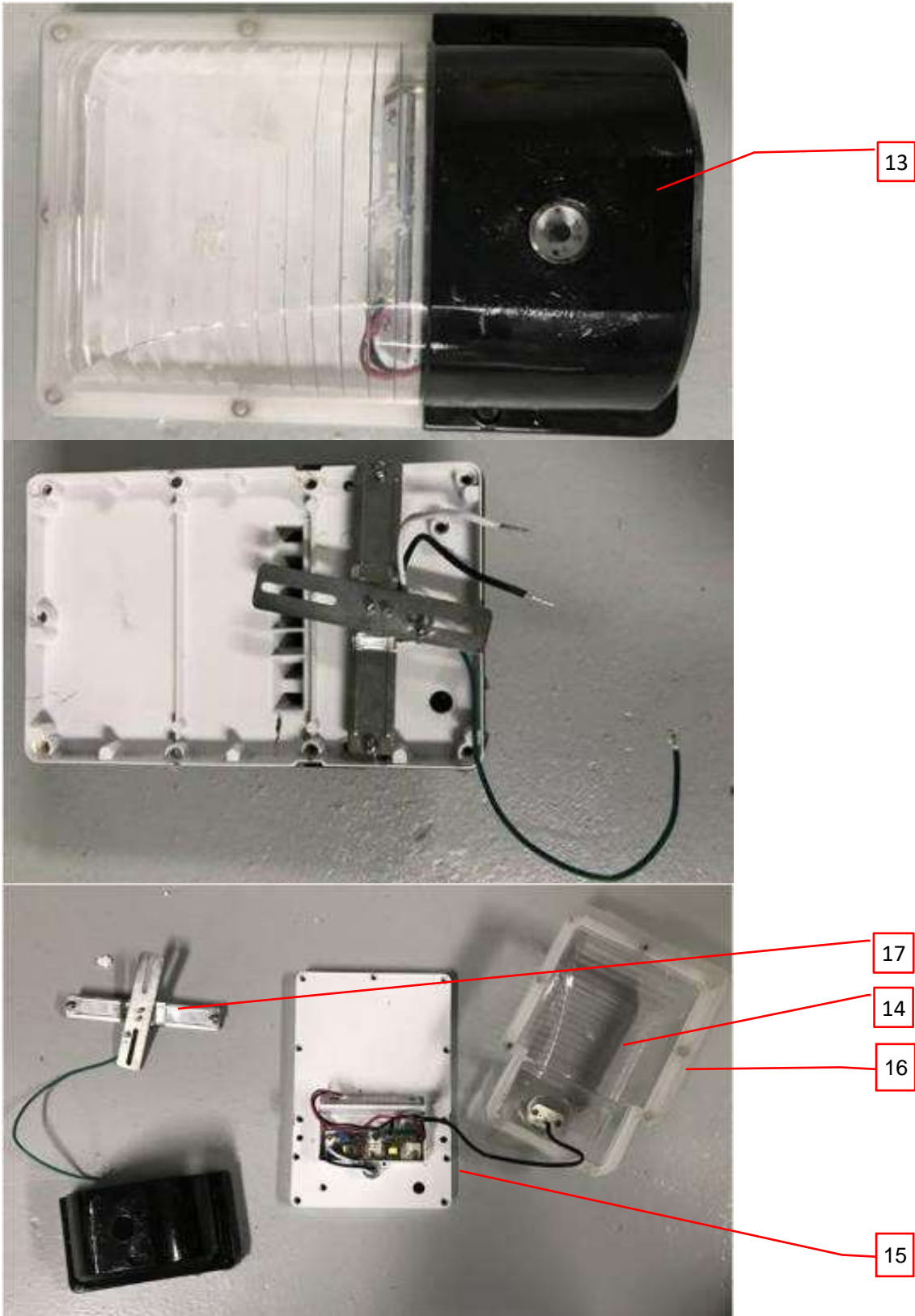
**Photo 16 - Photo of Sensor**



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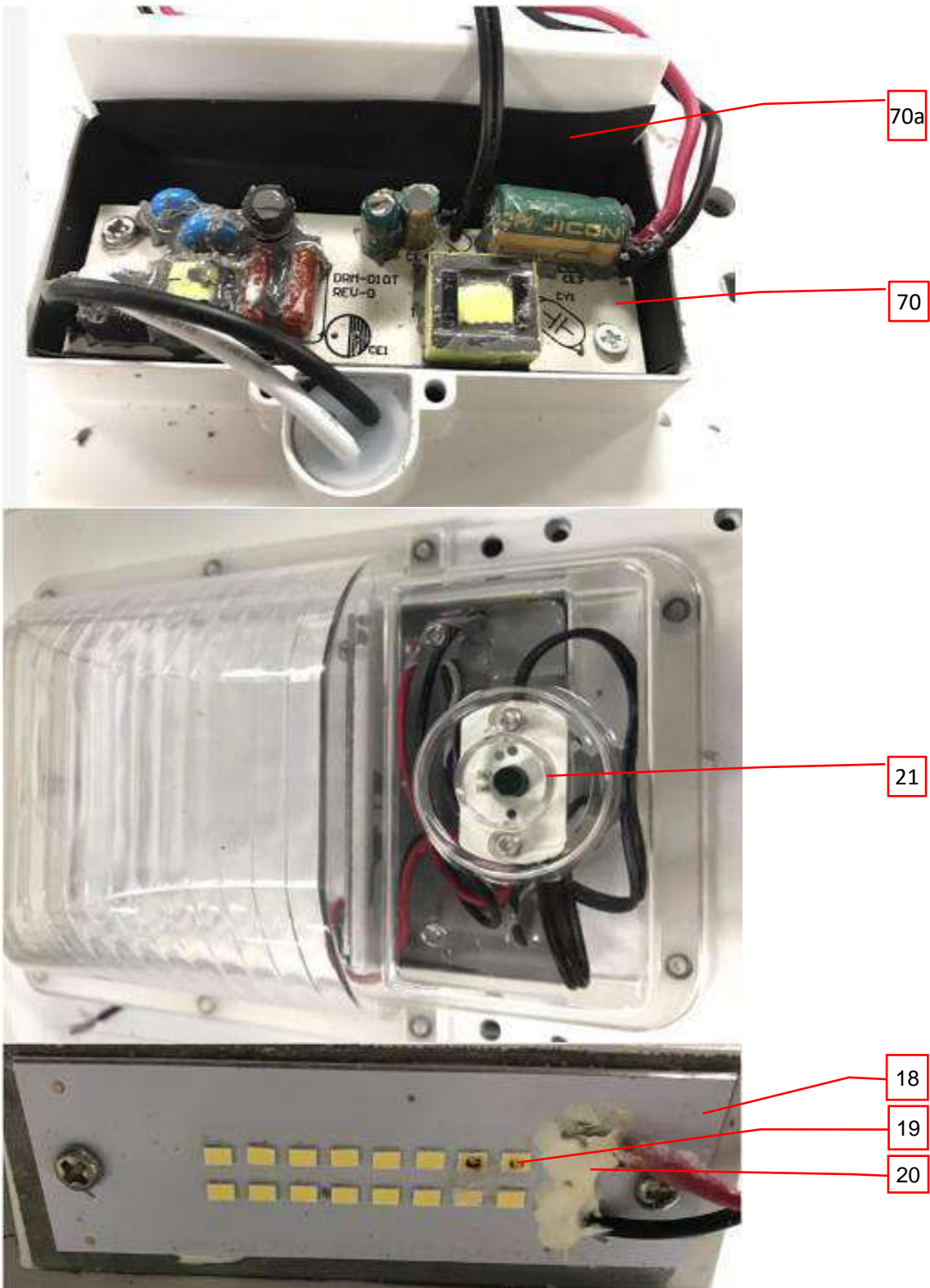
**3.0 Product Photographs**

**Photo 17** - External View of model ML-WPA-13W-277V-XXK-X  
(Also represents model ML-WPA-12W-277V-XXK-X)



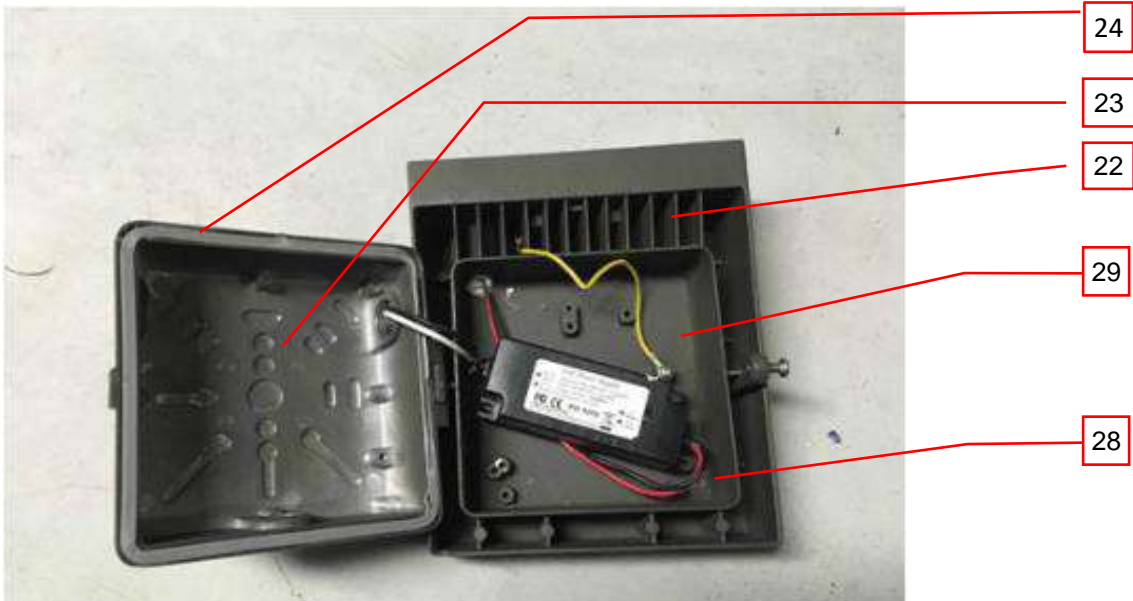
**3.0 Product Photographs**

**Photo 18 - Disassembled View of model ML-WPA-13W-277V-XXK-X**  
(Also represents model ML-WPA-12W-277V-XXK-X)



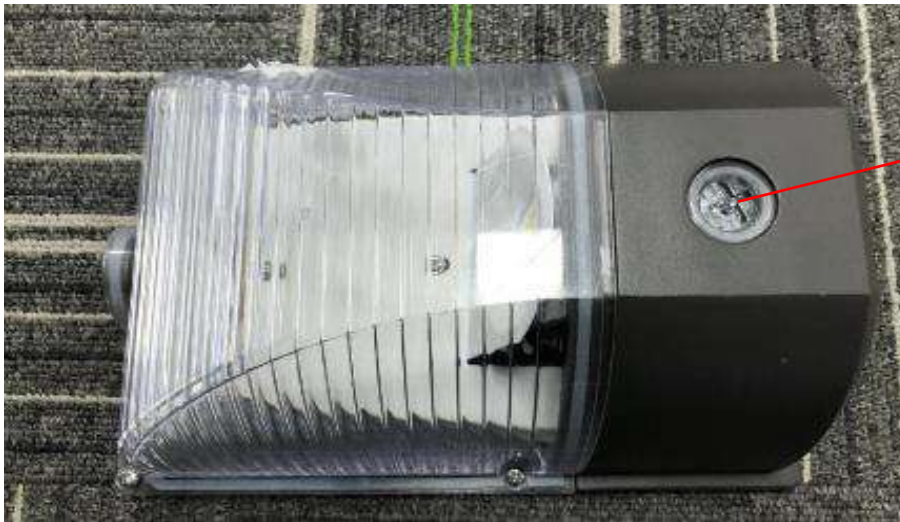
**3.0 Product Photographs**

**Photo 19 - Internal View of ML-WPD-20W-XX**



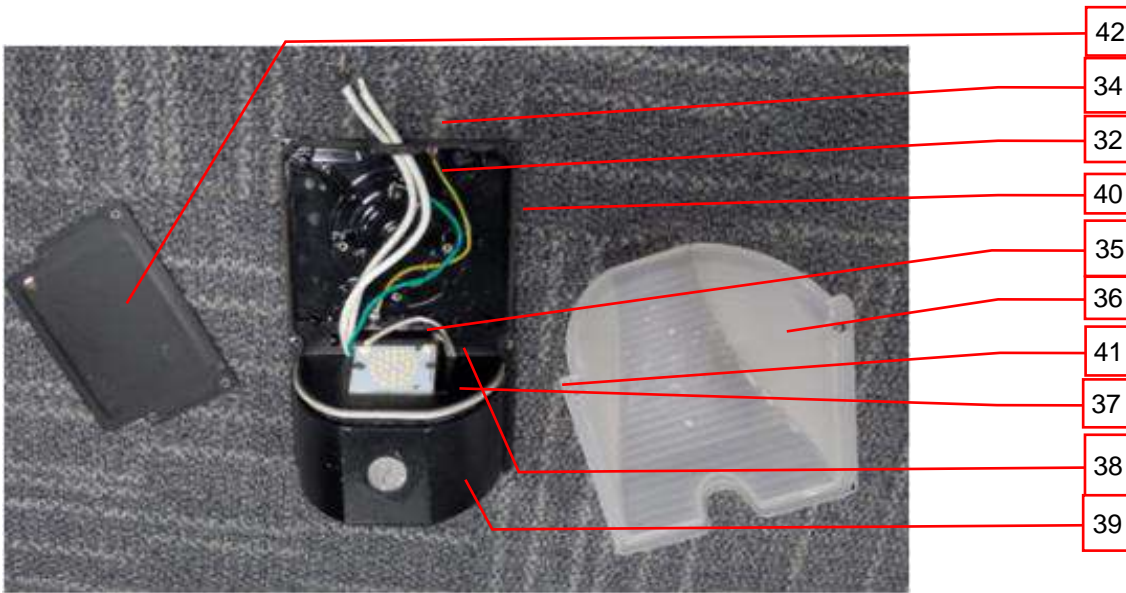
**3.0 Product Photographs**

**Photo 20 - External View of model ML-WPA-18W-XX, also represented model ML-WPA-26W-XX**



**3.0 Product Photographs**

**Photo 21** - Internal View of model ML-WPA-18W-XX, also represented model ML-WPA-26W-XX



**Photo 22** - Internal View of model ML-WPA-18W-XX, also represented model ML-WPA-26W-XX



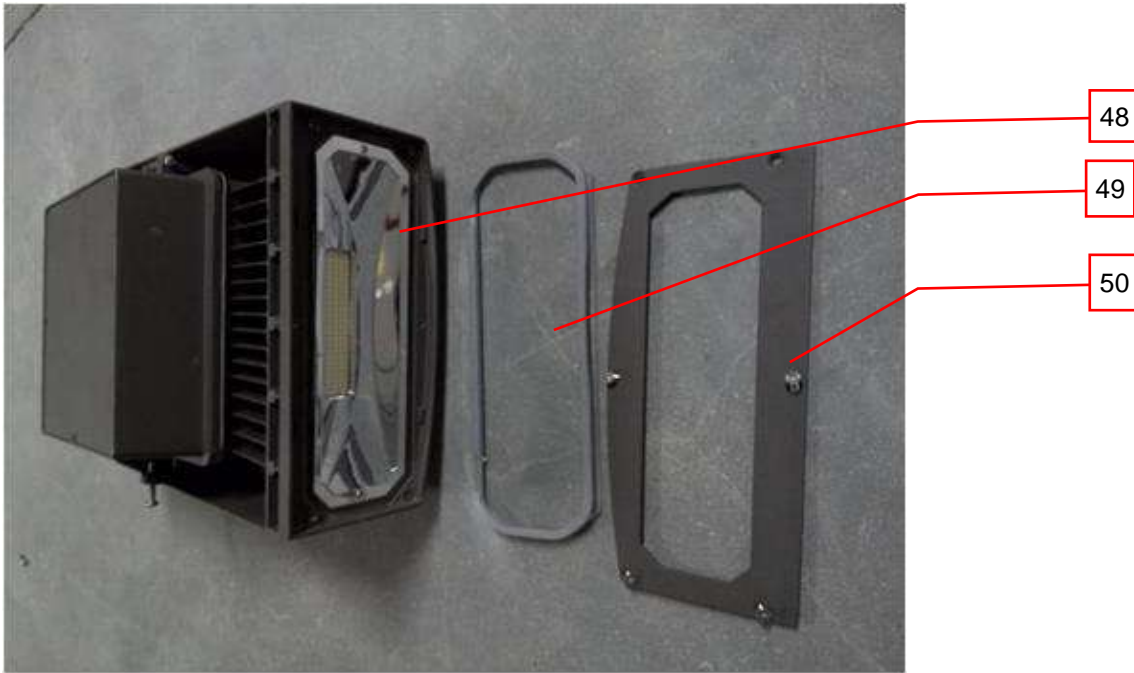
**3.0 Product Photographs**

**Photo 23 - External View of model ML-WPD-80W-XX,**

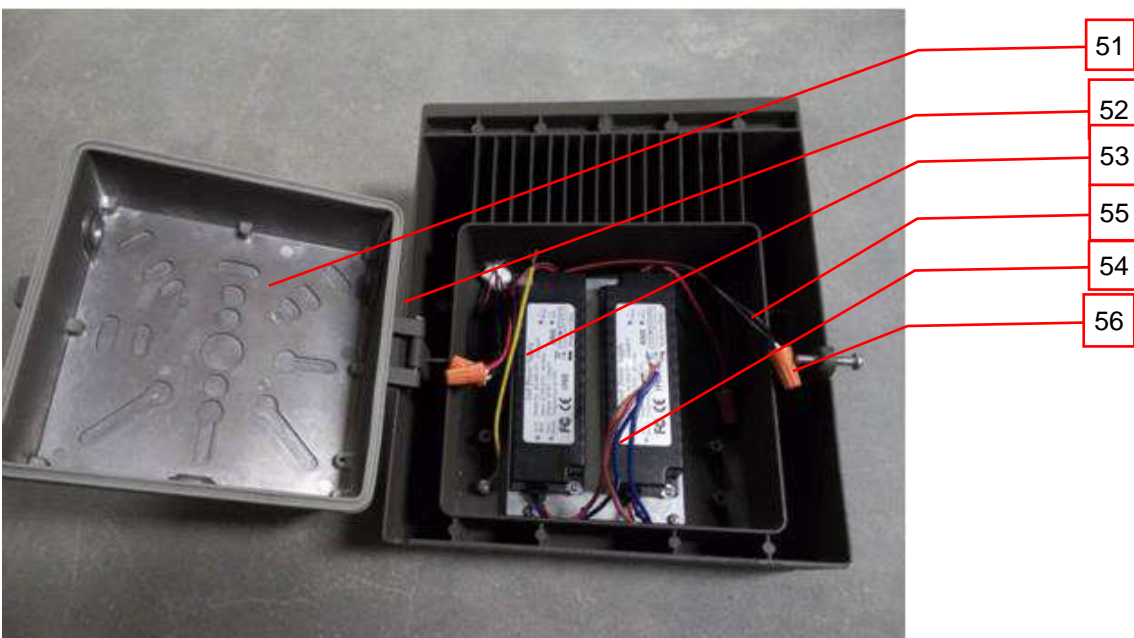


**3.0 Product Photographs**

**Photo 24** - Internal View of model ML-WPD-80W-XX,  
also represented ML-WPD-30W-XX, ML-WPD-60W-XX



**Photo 25** - Internal View of model ML-WPD-80W-XX,  
also represented ML-WPD-30W-XX, ML-WPD-60W-XX

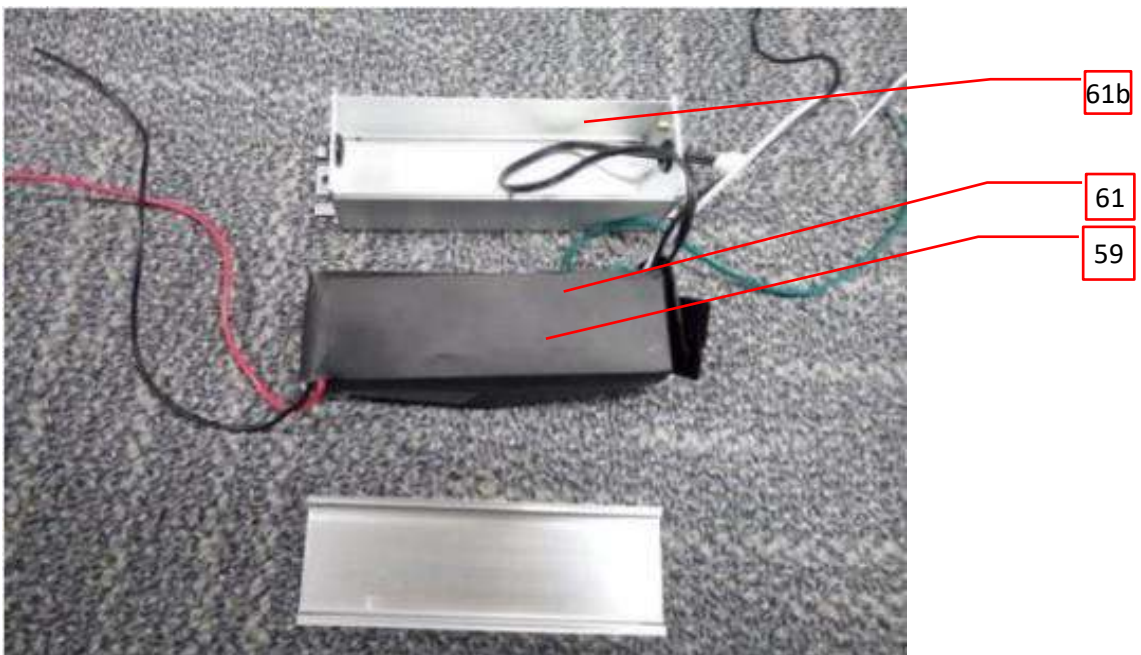


**3.0 Product Photographs**

**Photo 26** - External View of LED Driver models DRM-060T360160  
also represented DRM-060T360120

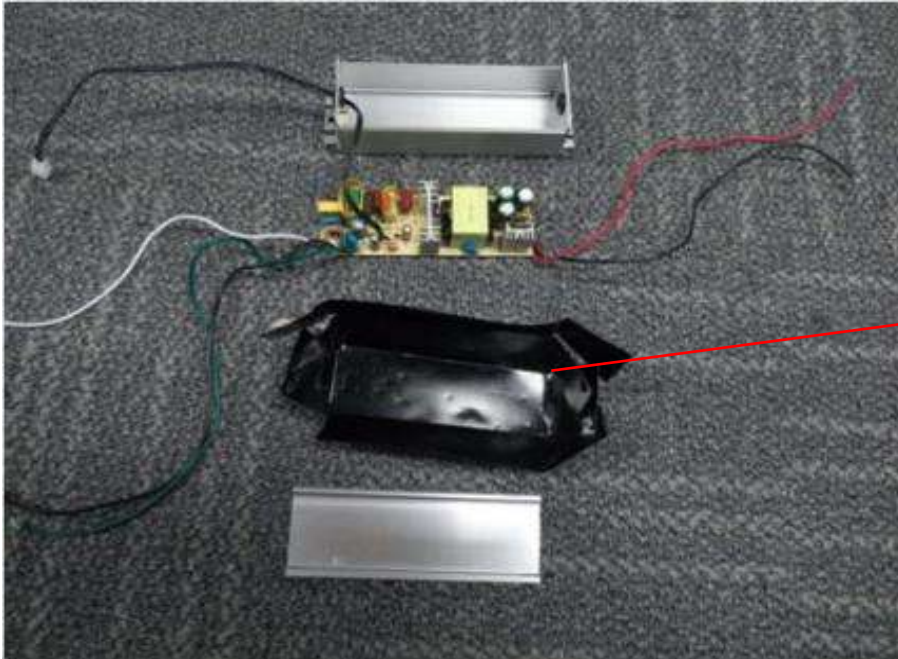


**Photo 27** - Internal View of LED driver for DRM-060T360160-1  
also represented DRM-060T360120-1



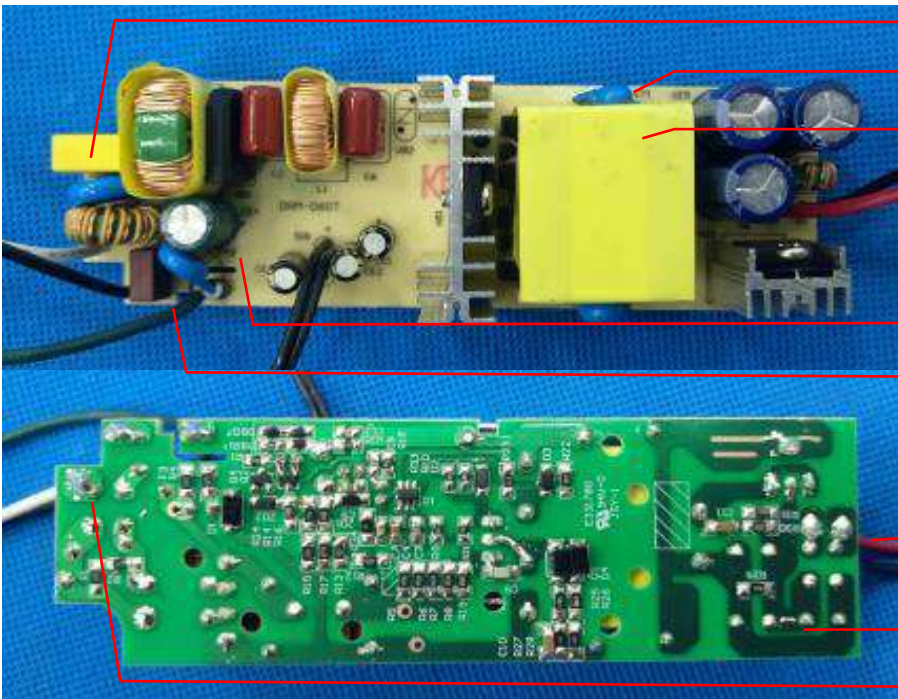
**3.0 Product Photographs**

**Photo 28** - Internal View of LED driver for DRM-060T360160-1  
also represented DRM-060T360120-1



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**Photo 29** - Top View of PCB of LED Driver models DRM-060T360160  
also represented DRM-060T360120, RM-060T360120-1 & DRM-060T360160-1



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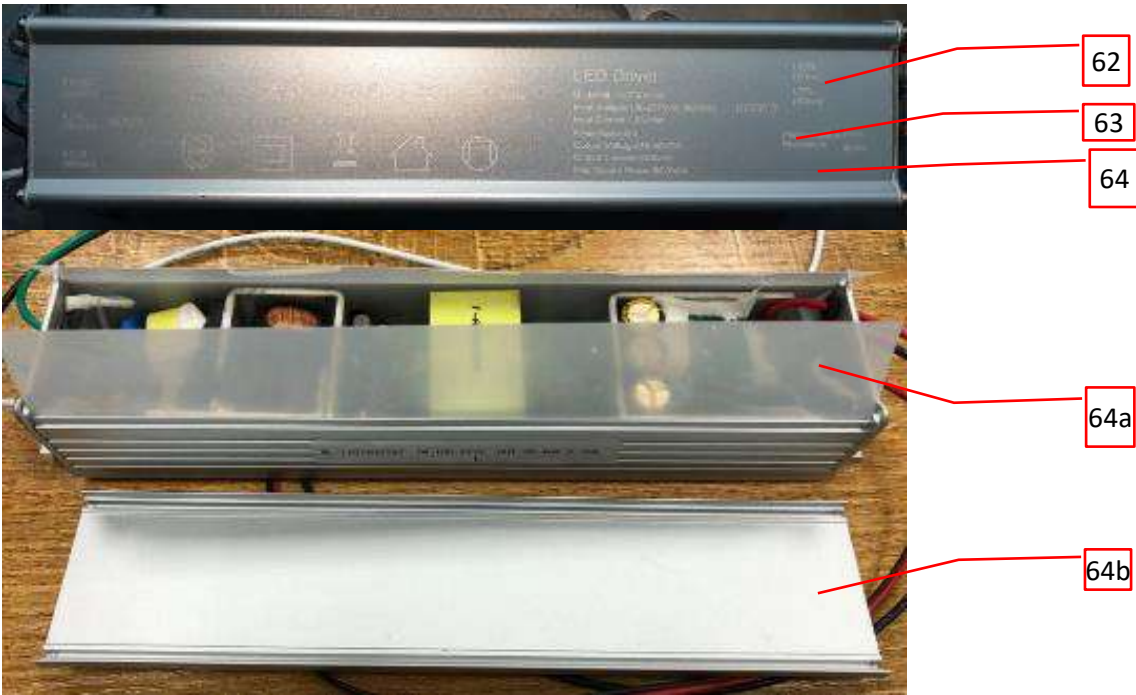
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61i

**3.0 Product Photographs**

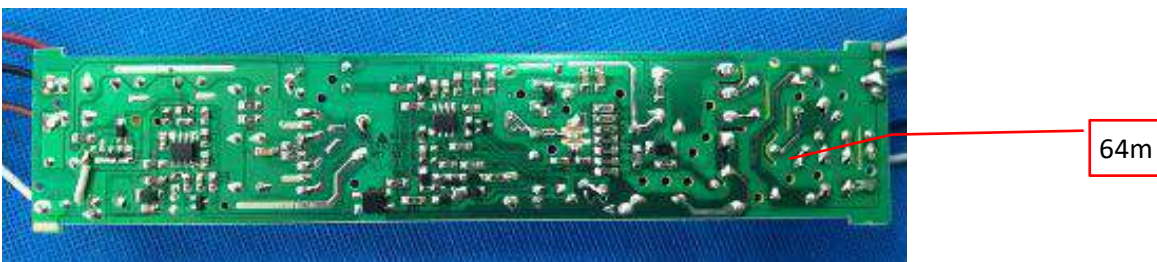
**Photo 30** - External View of LED Driver models ML-100T402300  
also represented ML-080T40200, ML-120T402750



**Photo 31** - Top View of PCB of LED Driver models ML-100T402300  
also represented ML-080T40200, ML-120T402750

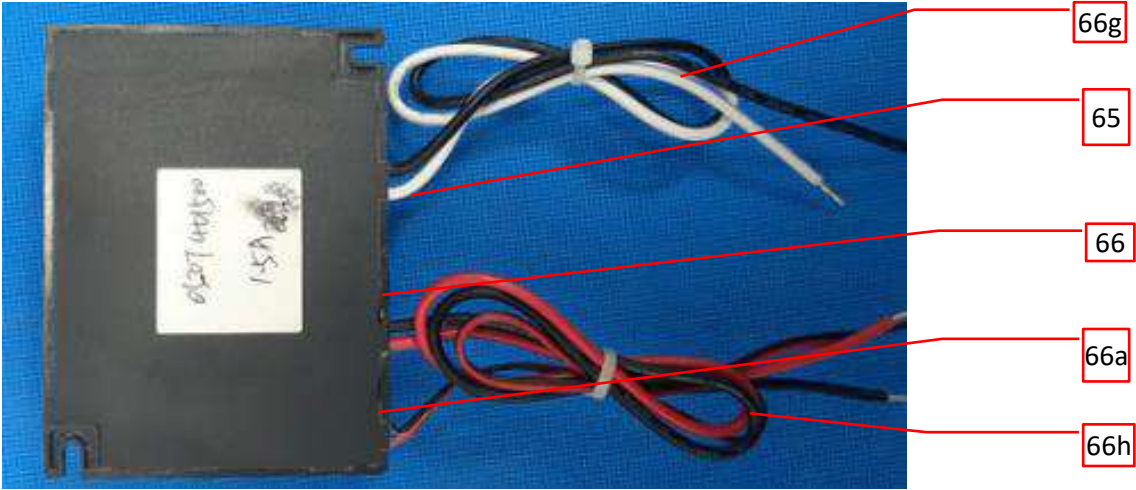


**Photo 32** - Bottom View of PCB of LED Driver models ML-100T402300  
also represented ML-080T40200, ML-120T402750

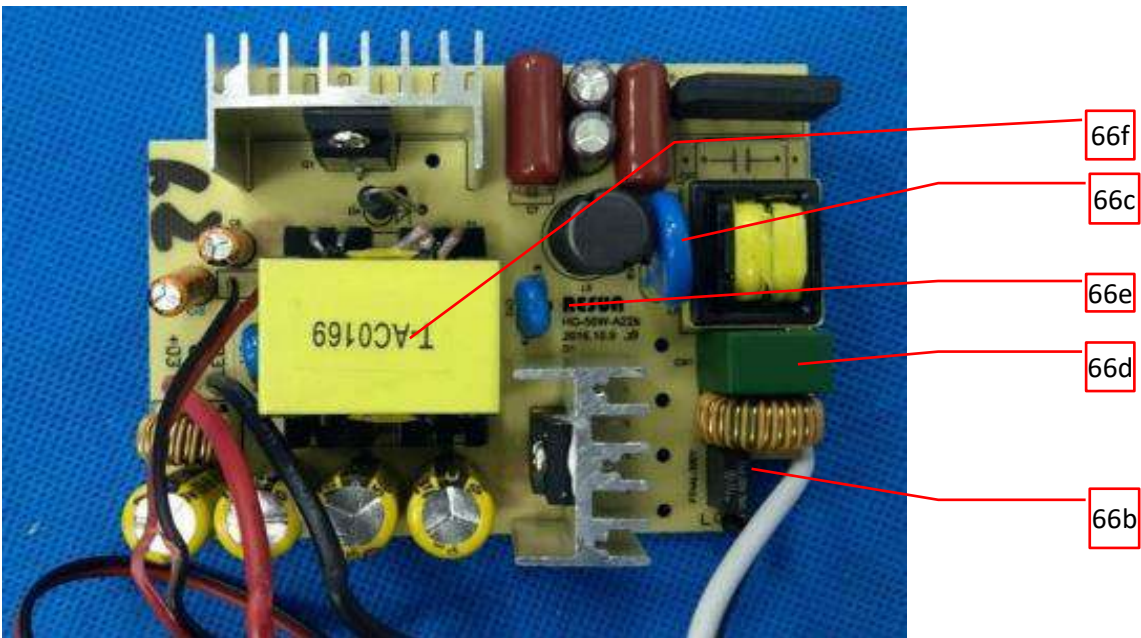


**3.0 Product Photographs**

**Photo 33** - External View of LED Driver models ML-HV-060T40150  
also represented ML-HV-050T40120

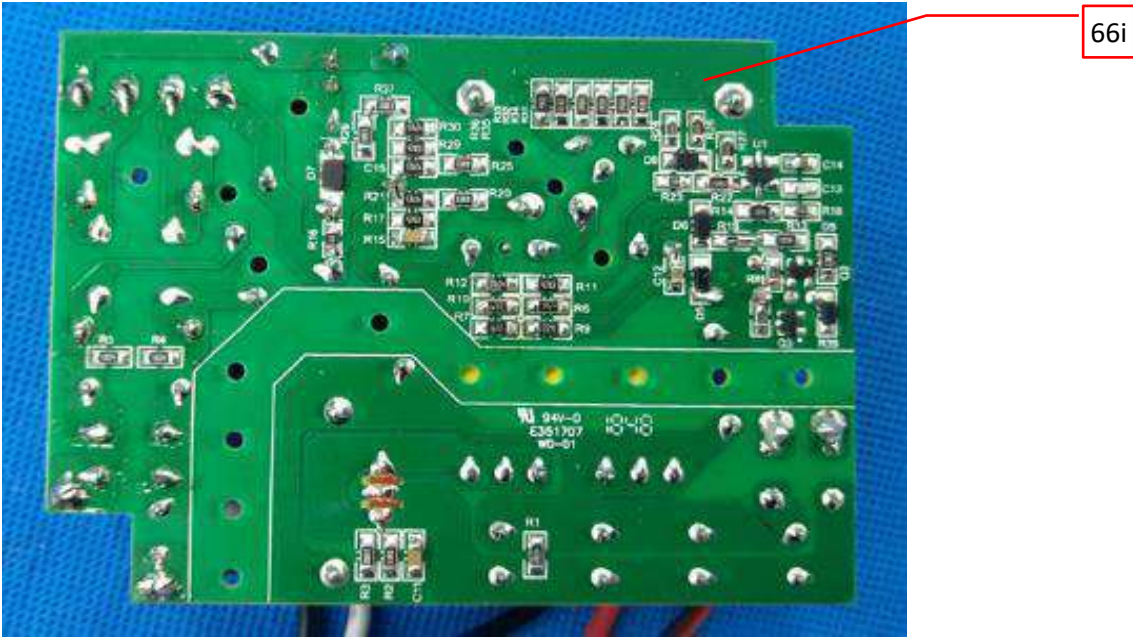


**Photo 34** - Top View of PCB of LED Driver models ML-HV-060T40150  
also represented ML-HV-050T40120

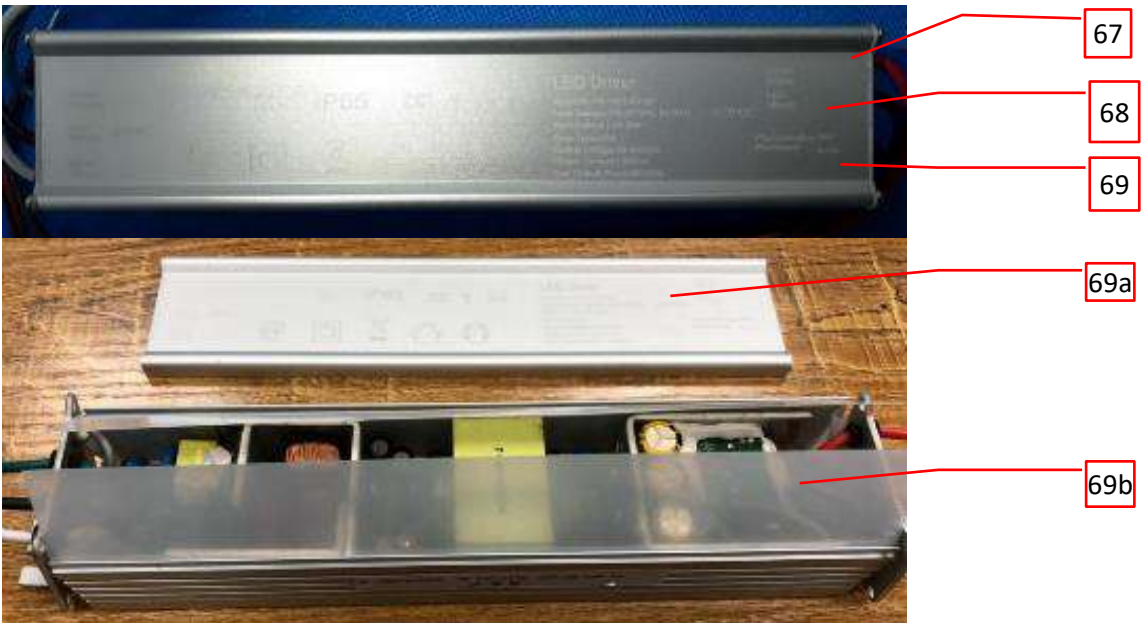


**3.0 Product Photographs**

**Photo 35 - Bottom View of PCB of LED Driver models ML-HV-060T40150 also represented ML-HV-050T40120**

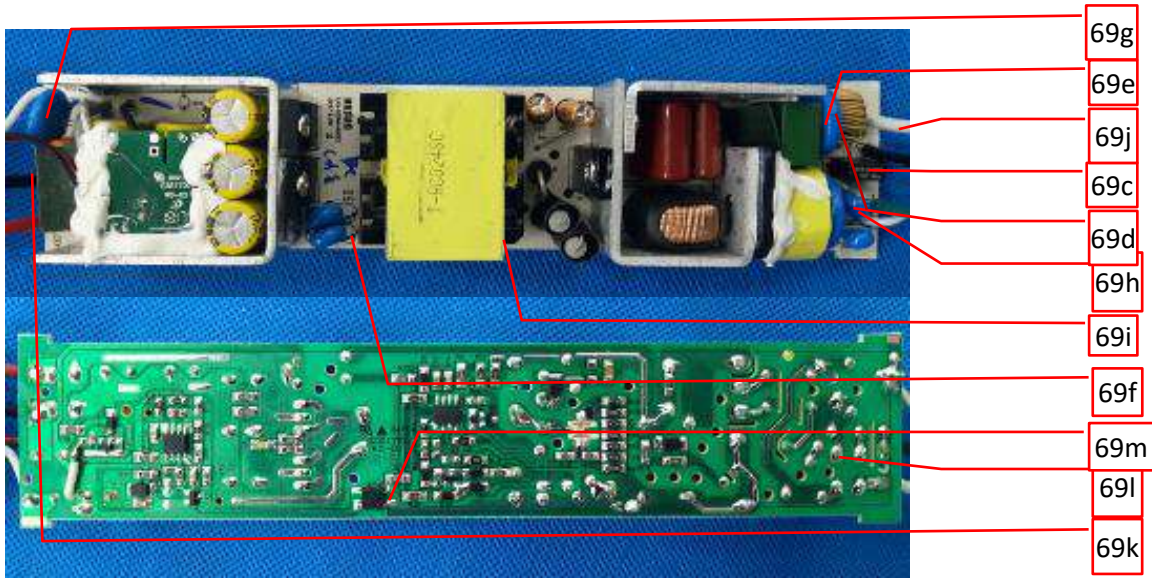


**Photo 36 - External View of LED Driver models ML-HV-100T402300 also represented ML-HV-080T40200 and ML-HV-120T402750**

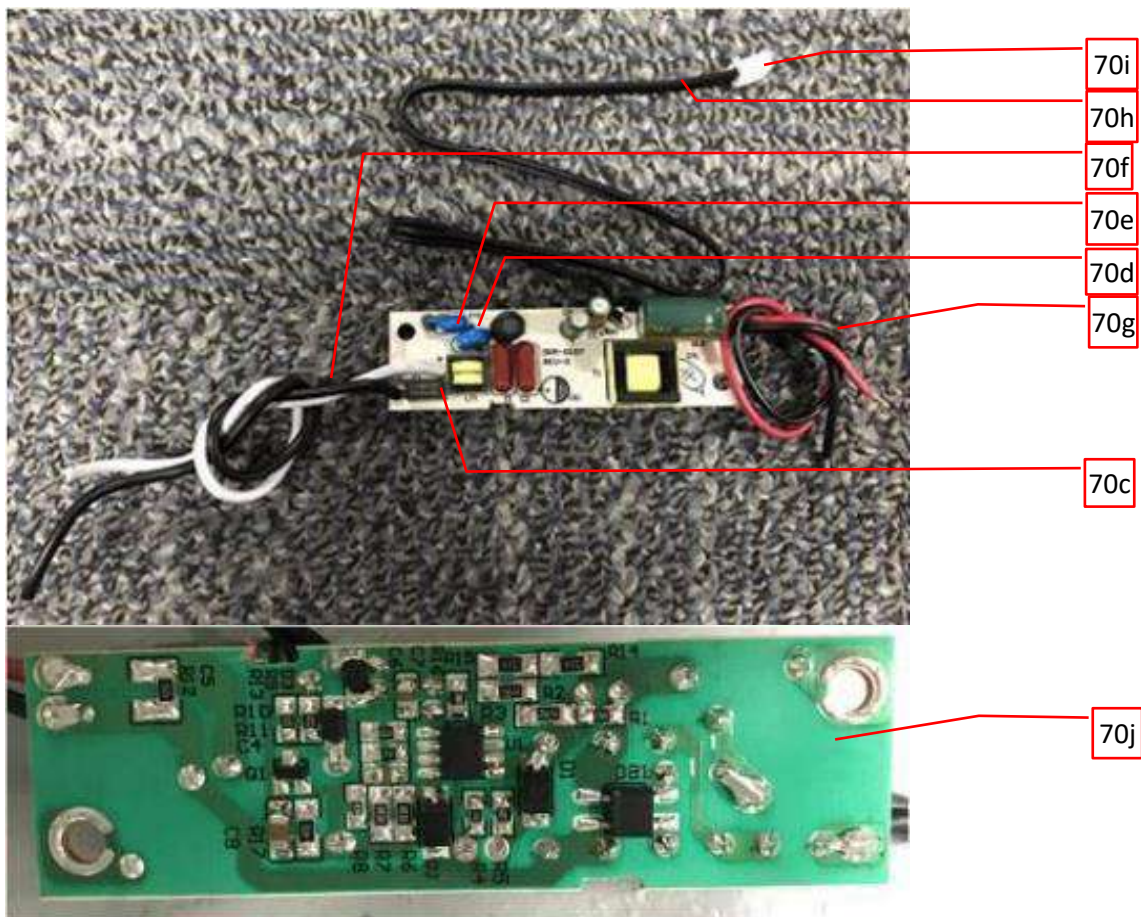


**3.0 Product Photographs**

**Photo 37 - View of PCB of LED Driver models ML-HV-100T402300 also represented ML-HV-080T40200 and ML-HV-120T402750**

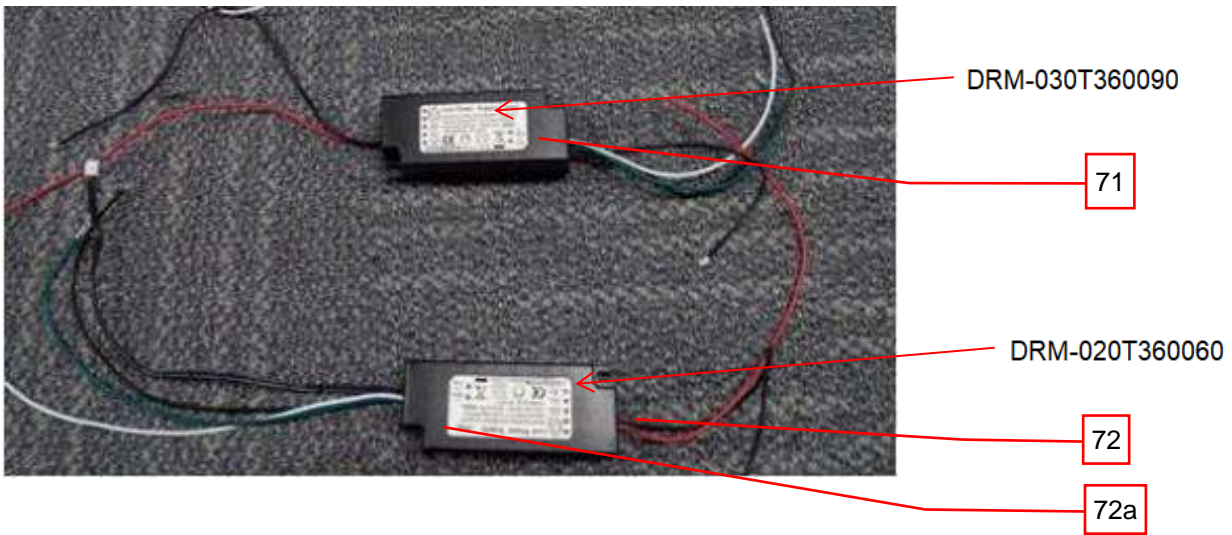


**Photo 38 - LED driver DRM-010T800017 also represents DRM-010T800015**

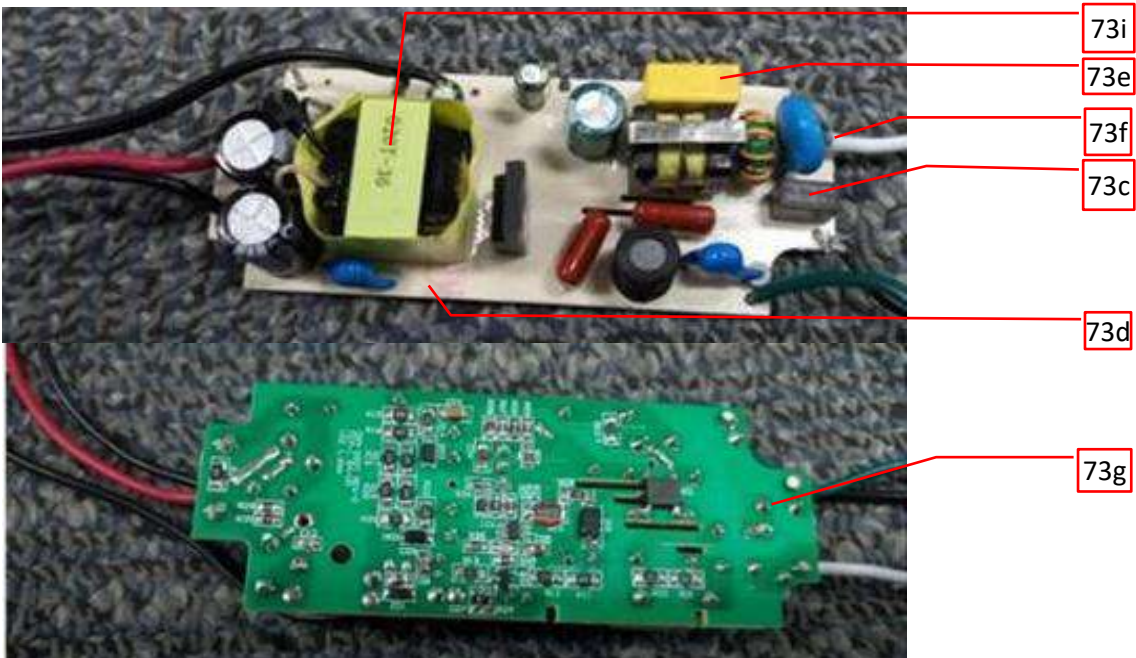


**3.0 Product Photographs**

**Photo 39 - LED driver DRM-020T360060 and DRM-030T360090**

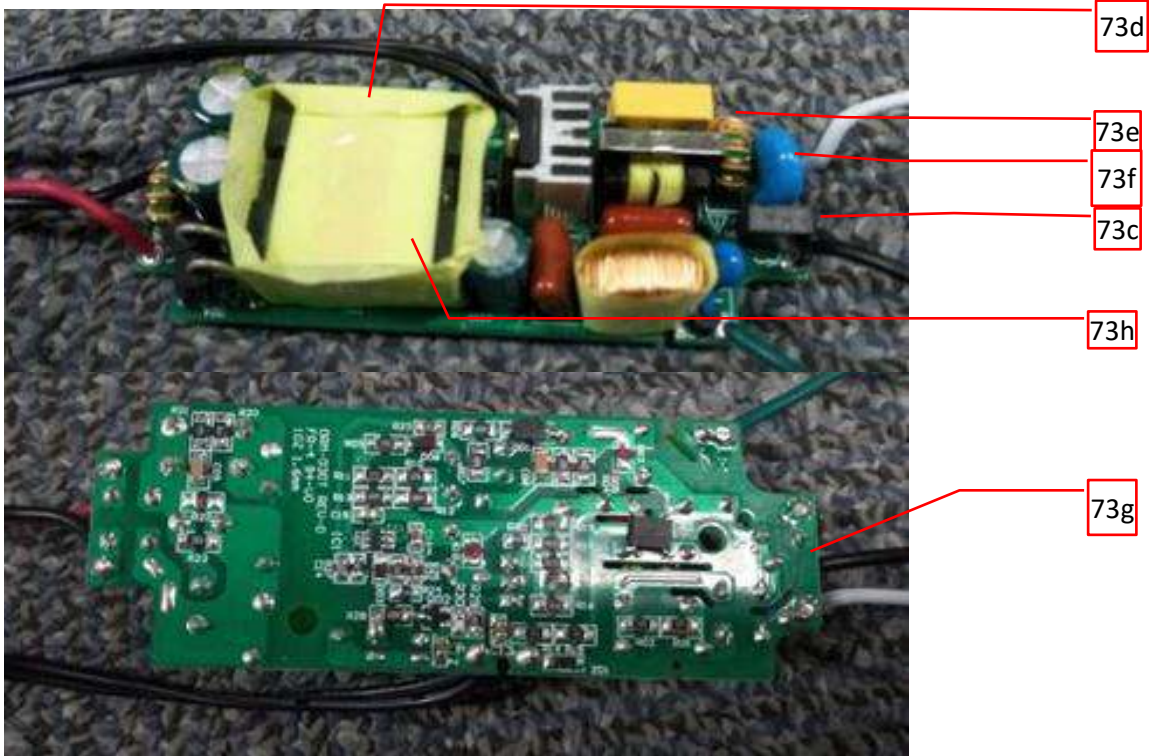


**Photo 40 - LED driver DRM-020T360060**



**3.0 Product Photographs**

**Photo 41 - LED driver DRM-030T360090**

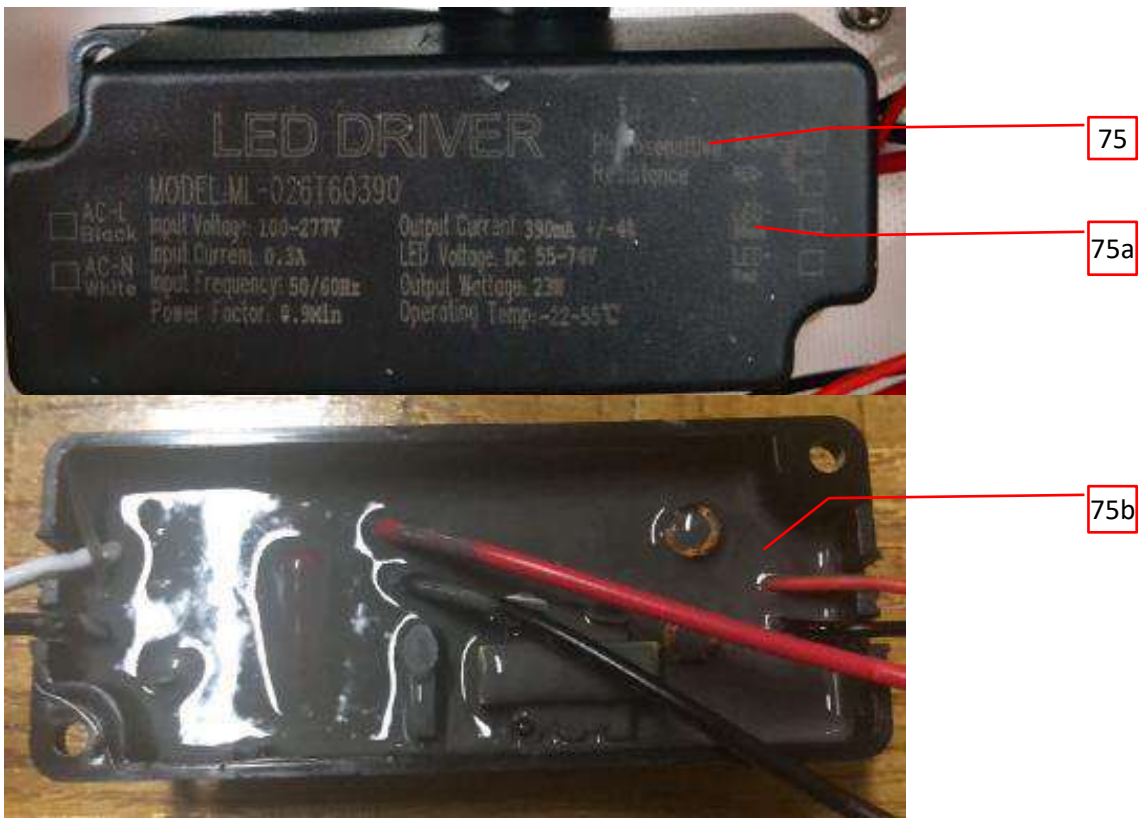


**Photo 42 - Photo of LED driver ML-018T60270**

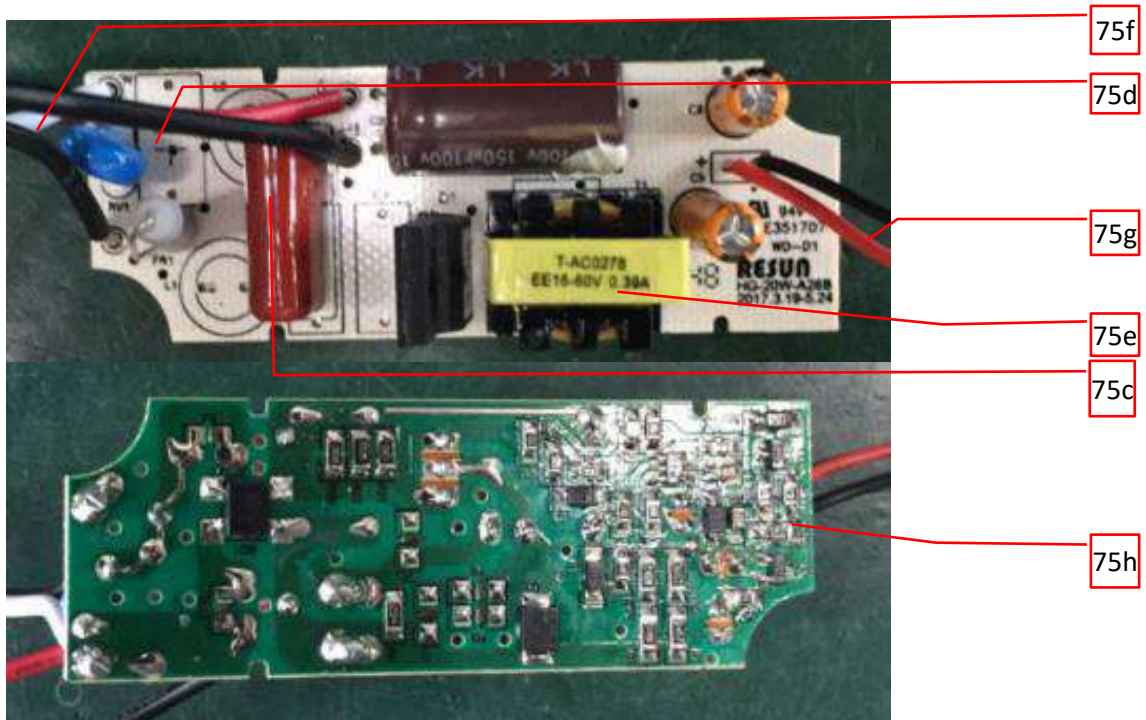


**3.0 Product Photographs**

**Photo 43 - Photo of LED driver ML-026T60390**



**Photo 44 - Photo of PCB of LED driver ML-026T60390, also represent ML-018T60270**



### 3.0 Product Photographs

**Photo 45** - Photo of Emergency Driver BLD-CM08E-480220

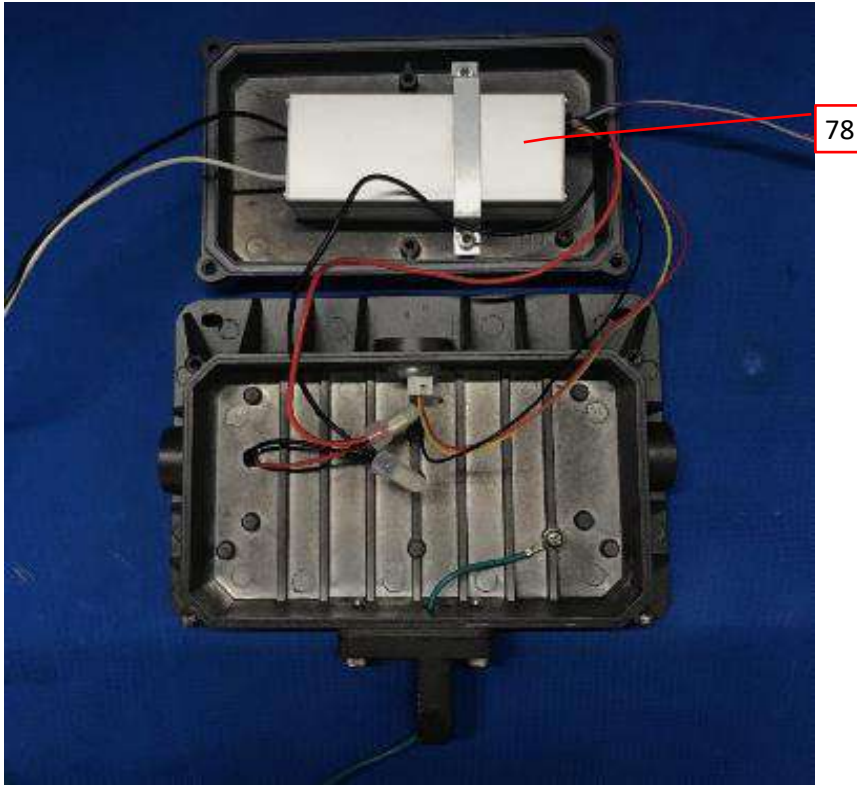


**Photo 46** - External View of model FL35-50W-XXK-X, also represents series FL35 models.

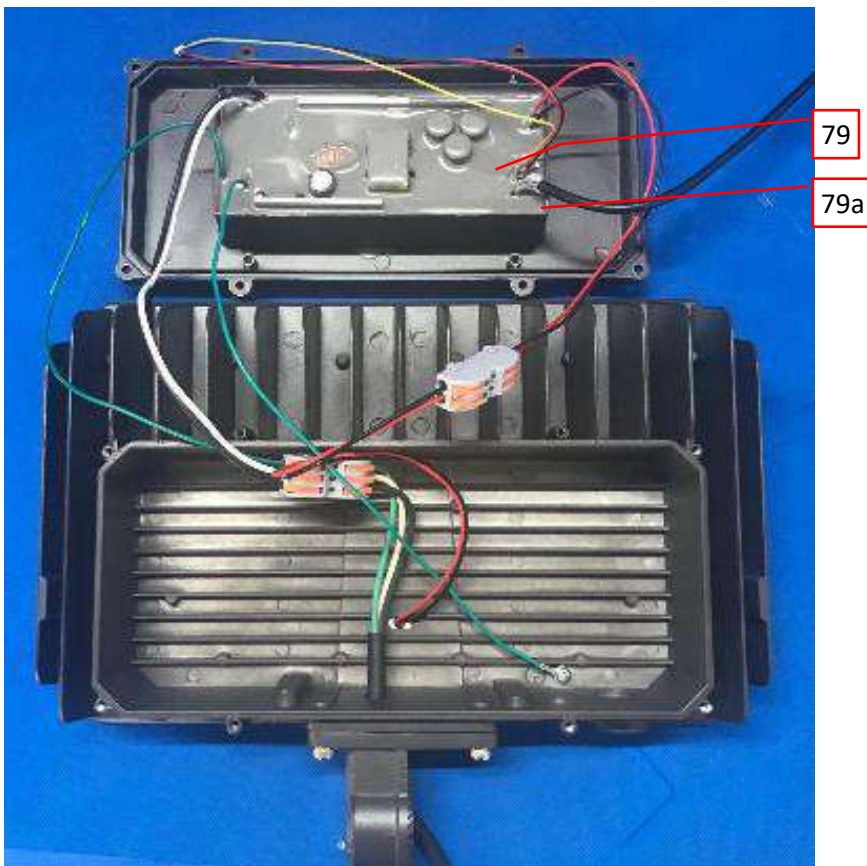


### 3.0 Product Photographs

**Photo 47** - Internal View of model FL35-50W-XXK-X, also represents series FL35 models except FL35-150W-XXK-X and FL35-200W-XXK-X.



**Photo 48** - Internal View of model FL35-150W-XXK-X, also represents model FL35-200W-XXK-X.



### 3.0 Product Photographs

**Photo 49** - External View of model FL35-150W-XXK-X, also represents series FL35 models.



**Photo 50** - External View of model PLC100WI-XXK-X, also represents series PLC models.



### 3.0 Product Photographs

**Photo 51** - Internal View of model PLC100WI-XXK-X, also represents series PLC models except PLC150W/100W-XXK-X, PLC240W/200W-XXK-X and PLC300W-XXK-X.



**Photo 52** - Internal View of model PLC240W/200W/150W-XXK-X, also represents models PLC150W/100W/75W-XXK-X and PLC300W/240W/200W-XXK-X.



### 3.0 Product Photographs

**Photo 53** - LED PCB View of model PLC100WI-XXK-X, also represents series PLC models.



**Photo 54** - mounting accessory View of series PLC models.

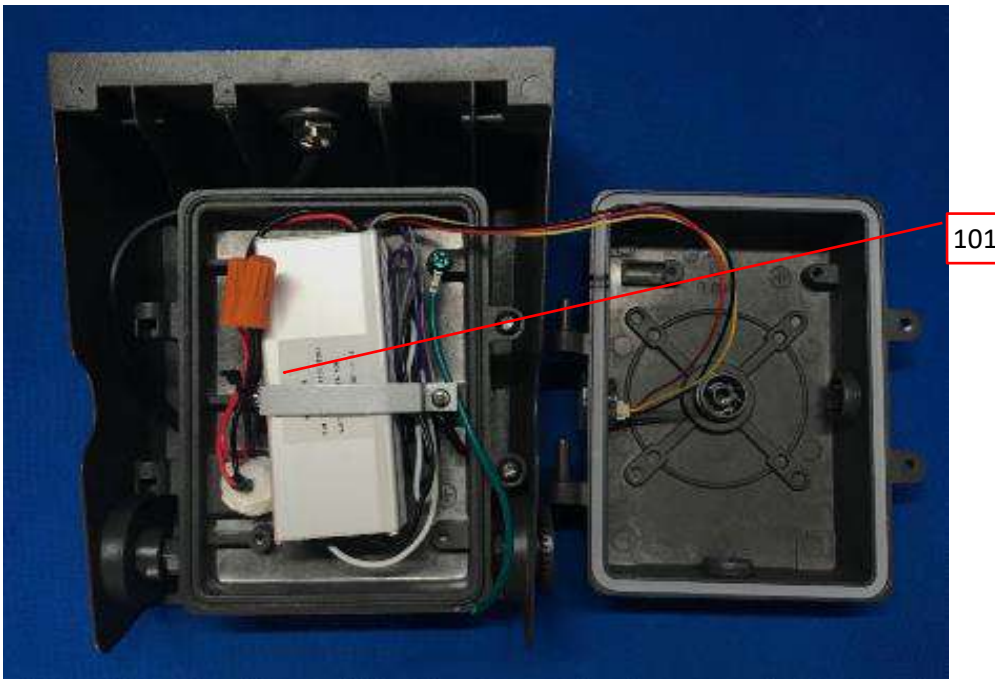


**3.0 Product Photographs**

**Photo 55** - External View of model ML-WPD2-40W-XXK-X, also represents series ML-WPD2 models.



**Photo 56** - Internal View of model ML-WPD2-40W-XXK-X, also represents series ML-WPD2 models.

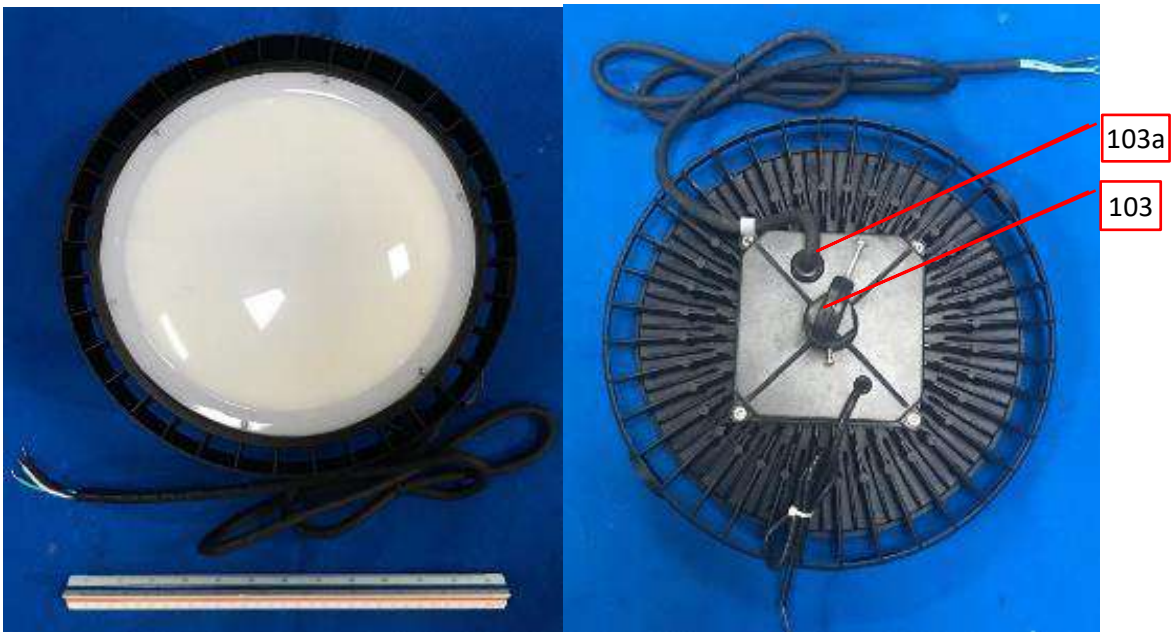


### 3.0 Product Photographs

**Photo 57** - LED PCB View of model ML-WPD2-40W-XXK-X, also represents series ML-WPD2 models.

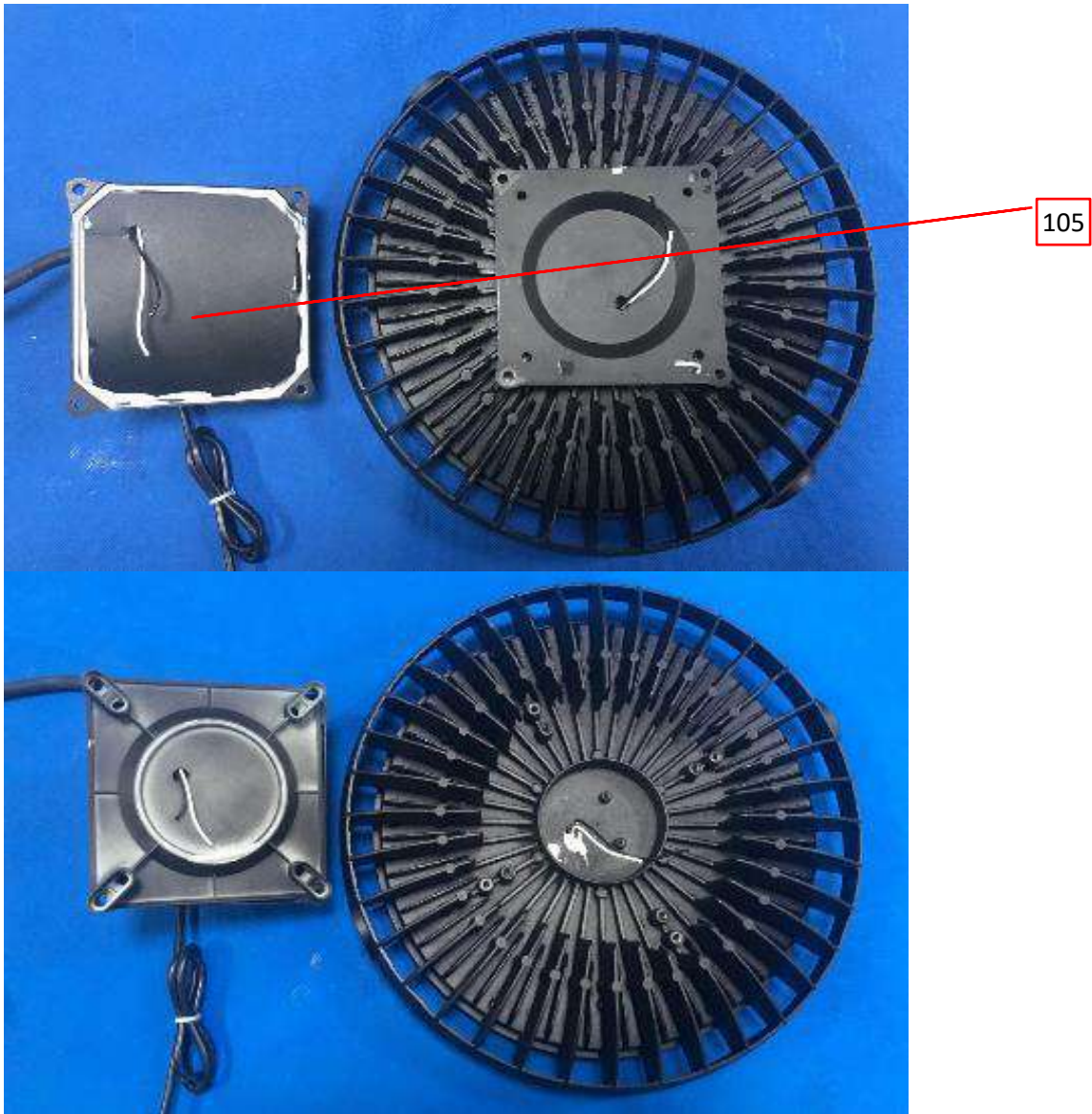


**Photo 58** - External View of model ML-HBC-240W-XXK-X, also represents series ML-HBC models.

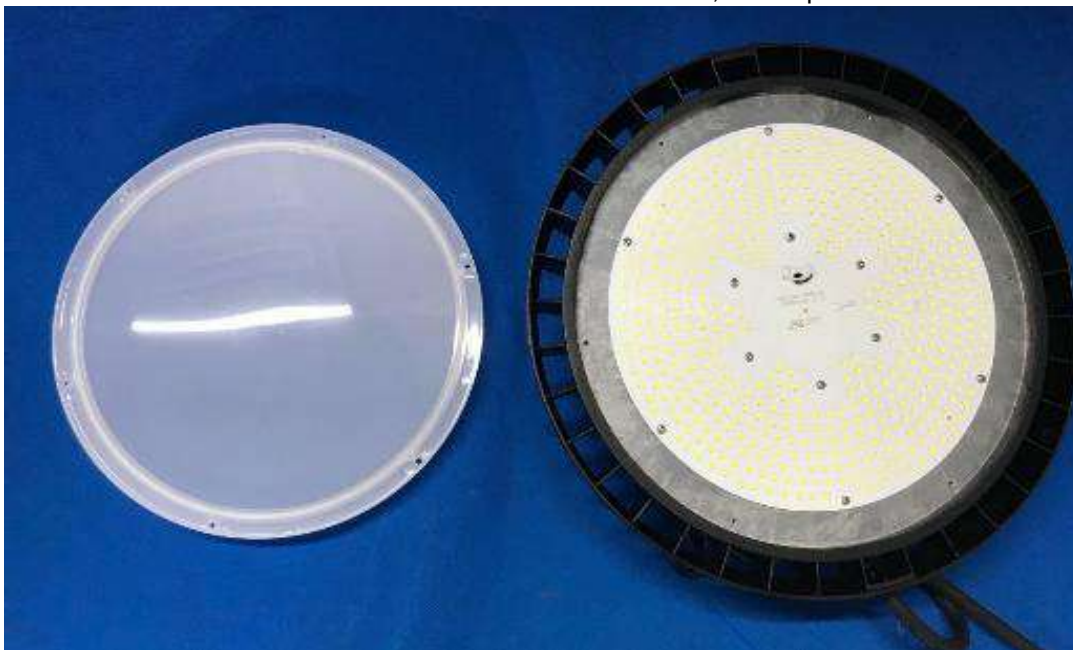


**3.0 Product Photographs**

**Photo 59** - Internal View of model ML-HBC-240W-XXK-X, also represents series ML-HBC models.

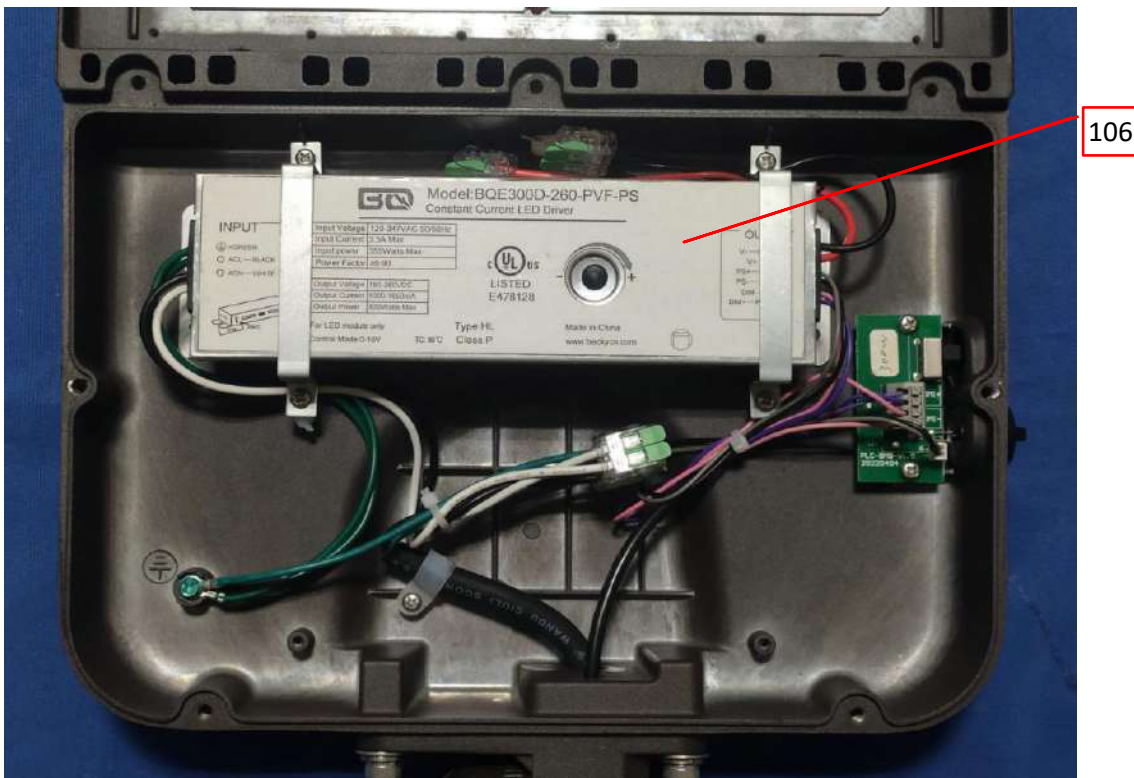


**Photo 60** - LED PCB View of model ML-HBC-240W-XXK-X, also represents series ML-HBC models.

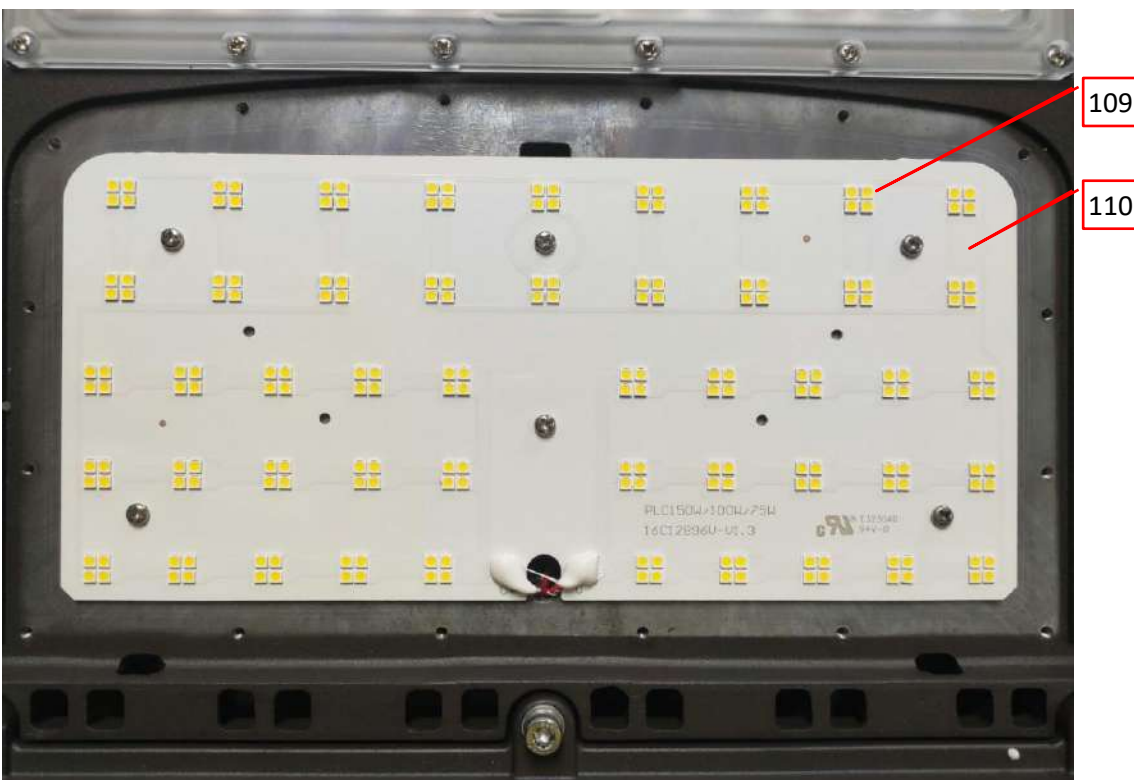


**3.0 Product Photographs**

**Photo 61** - Alternate Driver View of model PLC300W/240W/200W-XXK-X, also represents models PLC150W/100W/75W-XXK-X and PLC240W/200W/150W-XXK-X.

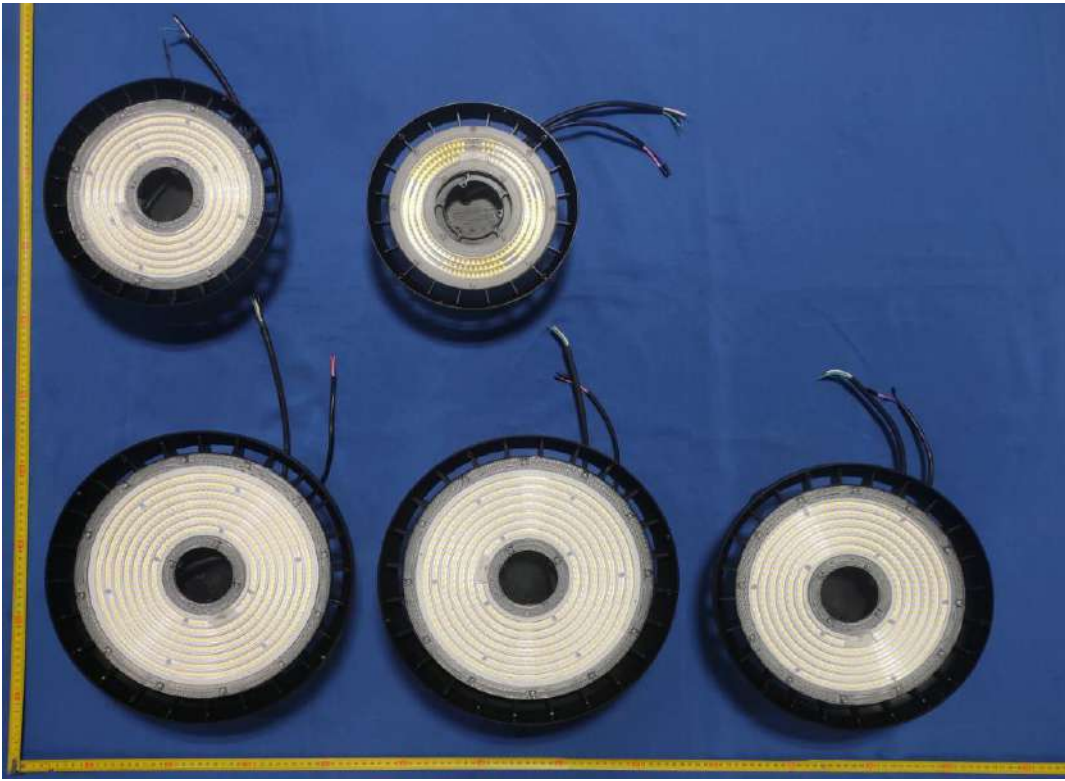


**Photo 62** - Alternate LED PCB View of model PLC300W/240W/200W-XXK-X.

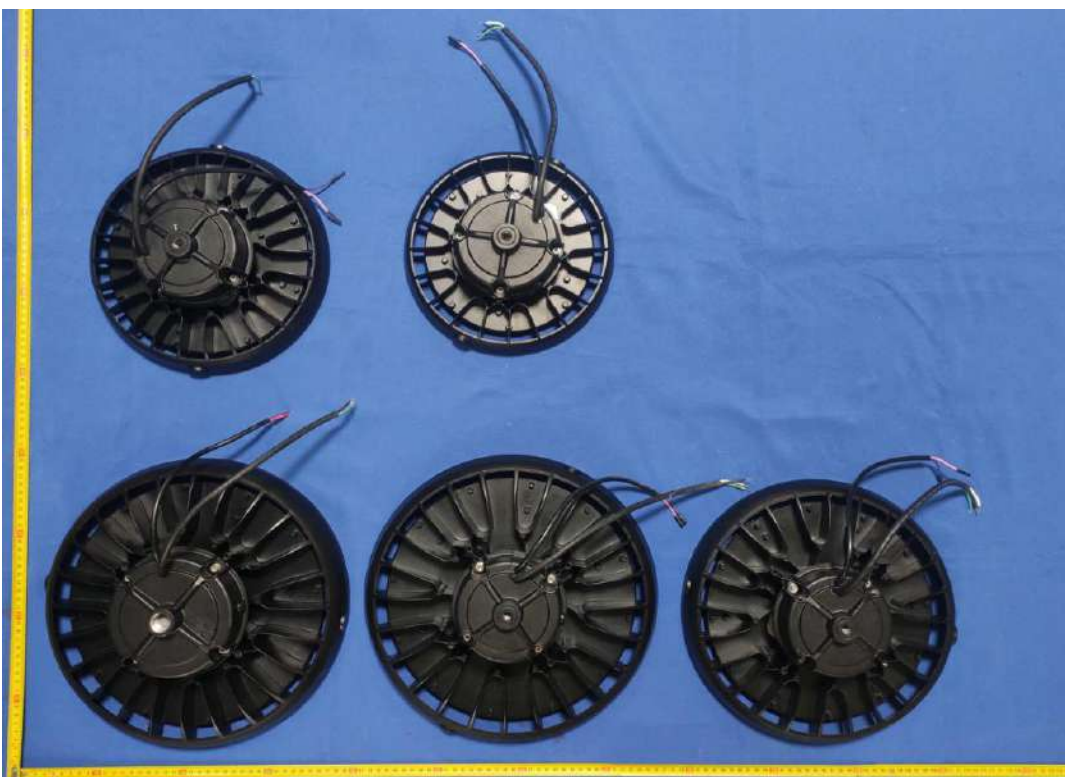


### 3.0 Product Photographs

**Photo 63** - External View of models ML-HBC-100W-XXK-X-X, ML-HBC-150W-XXK-X-X, ML-HBC-200W-XXK-X-X, ML-HBC-240W-XXK-X-X, ML-HBC-300W-XXK-X-X, also represents models ML-HBC-100W-XXK-X-HV, ML-HBC-150W-XXK-X-HV, ML-HBC-200W-XXK-X-HV, ML-HBC-240W-XXK-X-HV, ML-HBC-300W-XXK-X-HV.

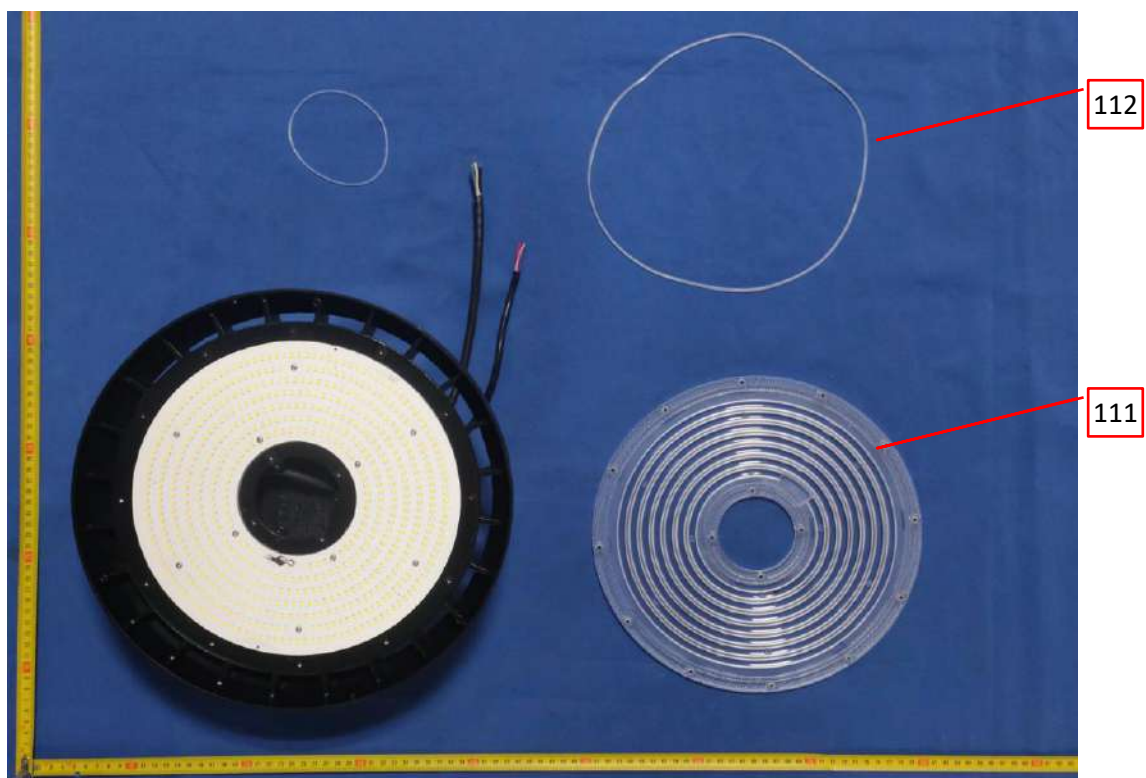


**Photo 64** - External View of models ML-HBC-100W-XXK-X-X, ML-HBC-150W-XXK-X-X, ML-HBC-200W-XXK-X-X, ML-HBC-240W-XXK-X-X, ML-HBC-300W-XXK-X-X, also represents models ML-HBC-100W-XXK-X-HV, ML-HBC-150W-XXK-X-HV, ML-HBC-200W-XXK-X-HV, ML-HBC-240W-XXK-X-HV, ML-HBC-300W-XXK-X-HV.

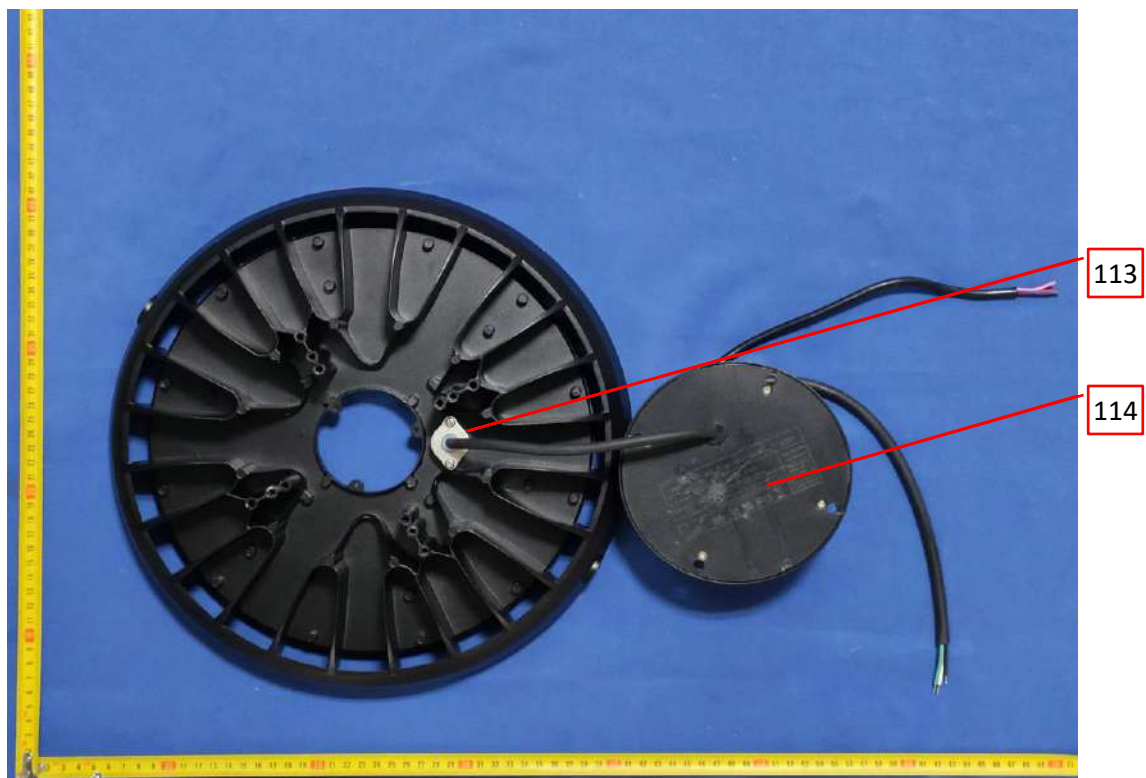


**3.0 Product Photographs**

**Photo 65** - Internal View of model ML-HBC-300W-XXK-X-X.

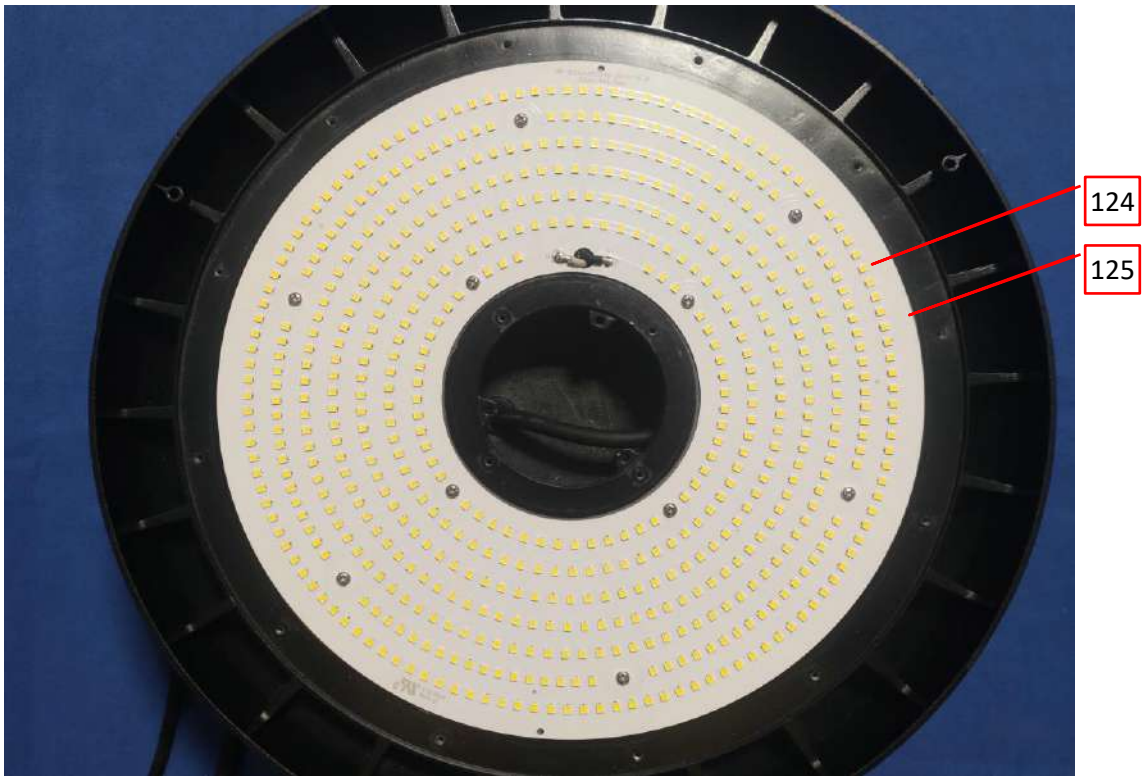


**Photo 66** - Internal View of model ML-HBC-300W-XXK-X-X.



**3.0 Product Photographs**

**Photo 67** - LED PCB View of model ML-HBC-300W-XXK-X-X.



4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
1	1	Metal Cover	Various	Various	Aluminum, min. 0.81 mm thick.	NR
1	2	Lens	TEIJIN CHEMICALS PLASTIC COMPOUNDS SHANGHAI LTD	LN-2525Z(#)(f1)	PC, min.115°C, min. 3.0 mm thick. 5VA, HWI=3, HAI=0, CTI=3.	cURus
2	3	Gasket	Various	Various	Silicone rubber, 230°C, min. 0.8 mm thick.	NR
2	4	Connector	Various	Various	Min. 300V, min. 90°C.	cURus
9	5	Glue	Various	Various	Epoxy, secured the input wire on LED PCB and cord entrance of Metal Frame. Rated 105°C.	cURus
9	6	LED PCB	Various	Various	Metal base, rated min.V-0, Min.105°C. Measured min.1.1mm thick. Secured to Base Enclosure by screws.	cURus
9	7	LED	Various	Various	Each rated 5.8-6.6 Vdc, 120 mA.	NR
1, 14	8	Motion Sensor (optional)	Various	Various	120-277V, 50/60Hz, 800W/1200W. Only use for 120-277V models.	cULus
2, 15	9	Light Sensor (optional)	Various	Various	120-277V, 50/60Hz, 850VA. Only use for 120-277V models.	cULus
16	10	Sensor	Shenzhen Long Xin Da Technology Co., Ltd.	LXD/GB5-A1EL	Rated min.300V, 80°C, rated max.120W.	cURus
9	11	Input wire of LED PCB	Various	Various	Min.24AWG, min.300V, min.105°C, AWM, VW-1.	cURus
2	12	Grounding wire	Various	Various	Min. 18AWG, min.300V, min.90°C, AWM, VW-1.	cURus
17	13	Diffuser Cover	Trinseo (Hong Kong) LTD	EMERGE PC 8830-(m) LT(f1)	Rated 5VA, HWI=2, HAI=1, 130°C, measured min.2.0mm thick. Secured to Base Enclosure by screws.	cURus
17	14	Diffuser	Trinseo (Hong Kong) LTD	EMERGE PC 8830-(m) LT(f1)	Rated 5VA, HWI=2, HAI=1, 130°C, measured min.2.0mm thick. Secured to Base Enclosure by screws.	cURus
17	15	Base Enclosure	Various	Various	Die-cast Aluminum. Reinforced, Min.1.6mm thick.	cURus
17	16	Gasket	Various	Various	Silicone rubber, min.2.0mm thick.	cURus
17	17	Mounting Bracket	Various	Various	Steel, min.1.35mm thick.	NR
18	18	LED Module PWB	Various	Various	Metal base, rated min.V-1, min.105°C. Measured min.1.5mm thick. Secured to Base Enclosure by screws.	cURus
18	19	LED	Various	Various	Rated 8.8-9.6Vdc, 100mA.	NR
18	20	Glue	Various	Various	Silicone or epoxy, rated min.105°C.	cURus
18	21	Sensor	Shenzhen Long Xin Da Technology Co., Ltd.	LXD/GB5-A1EL	Rated min.300V, 80°C.	cURus
19	22	Base Enclosure	Various	Various	Die-Cast Aluminum, min.2.0mm thick.	NR

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
19	23	Enclosure Cover	Various	Various	Die-Cast Aluminum, min.2.0mm thick. Secured to Base Enclosure by screws.	NR
19	24	Gasket for Enclosure Cover	Various	Various	Silicone Rubber. Fully secured to the slot of Enclosure Cover.	cURus
19	25	Diffuser	Various	Various	PC, Rated f1, min.90°C. Minimum 3.0mm thick. Secured to Base Enclosure by screws.	cURus
19	26	Gasket for diffuser	Various	Various	Silicone Rubber. Fully secured to the slot of Enclosure Cover.	cURus
19	27	Reflector	Various	Various	Aluminum, min.0.5mm thick. Secured to Base Enclosure by screws.	NR
19	28	Internal Wire	Various	Various	Rated 300V, min.90°C, min.18AWG.	cURus
19	29	Grounding	Various	Various	Rated 18AWG, 300V, min.105°C.	cURus
19	30	LED board	Various	Various	Metal base, minimum 94V-1, 105°C. Measured 1.5mm thick.	cURus
19	31	LED	Various	Various	5.8-6.6Vdc, 240mA.	NR
19	32	Glue	Various	Various	Silicone (SI) or epoxy, 105°C, Used to secure the wire connections.	cURus
20	33	Sensor	SHANGHAI LONG-JOIN INTELLIGENT TECHNOLOGY INC	JL-207C	Rated 120-277Vac, 50/60Hz. Only use for 120-277V models.	cURus
21	34	Power Supply Lead	Various	Various	Min.18AWG. Rated Min.300V, 105°C, VW-1.	cURus
21	35	Internal Wire	Various	Various	Min.24AWG, Rated Min.300V, 90°C, VW-1, AWM.	cURus
21	36	Diffuser	Various	Various	PC. Rated f1, Min.90°C, Min.1.0mm thick.	cURus
21	37	LED Module PWB	Various	Various	Metal base, 130°C, 0.8mm thick.	cURus
21	38	LED	Various	Various	Rated Vf=Max.9V, If=Max.500mA.	NR
21	39	Enclosure Housing	Various	Various	Die-Cast Aluminum. Min.2.4mm thick.	NR
21	40	Grounding wire	Various	Various	Min.18AWG. Rated Min.300V, 105°C, VW-1.	cURus
21	41	Gasket	Various	Various	Silicone Rubber. Measured Min.2.0mm thick.	cURus
21	42	Back Cover	Various	Various	Die-Cast Aluminum. Min.2.4mm thick.	NR
22	43	Driver Support Bracket	Various	Various	Steel. Measured Min.2.0mm thick.	NR
22	44	Connector	Various	Various	Rated Min.300V, 105°C. Suitable for 10-24 AWG wire.	cULus
23	45	Enclosure	Various	Various	Die-Cast Aluminum, Min.2.4mm thick.	NR
23	46	LED	Various	Various	Rated IF=Max.500mA, VF=Max.9V.	NR
23	47	LED Module PWB	Various	Various	Metal base, 130°C, 0.8mm thick.	cURus
24	48	Reflector	Various	Various	Steel. Min.1.0mm thickness.	NR
24	49	Diffuser	Various	Various	Glass, Min.2.5mm thick, Secured to diffuser frame by screws.	NR

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
24	50	Diffuser frame	Various	Various	Die-Cast Aluminum, Min.2.4mm thick.	NR
25	51	Back Cover	Various	Various	Die-Cast Aluminum, Min.2.4mm thick.	NR
25	52	Gasket	Various	Various	Silicone Rubber. Measured Min.2.0mm thick.	cURus
25	53	Grounding wire	Various	Various	Min.18AWG. Rated Min.300V, 105°C, VW-1.	cURus
25	54	Power Supply Lead	Various	Various	Min.18AWG. Rated Min.300V, 105°C, VW-1.	cURus
25	55	Internal Lead	Various	Various	Min.24AWG. Rated Min.300V, 90°C, VW-1.	cURus
25	56	Connector	Various	Various	Rated Min.300V, 105°C. Suitable for 10-24AWG wire.	cULus
23	57	Marking Label (Not shown)	Various	Various	80°C minimum. Suitable for metal Surface. Complied with UL 969.	cURus
26	58	LED Driver	SHENZHEN DAERMAY ELECTRONICS TECHNOLOGY CO LTD	DRM-060T360120	Insolated LVLE. I/P: 100-277V, 50/60Hz, max 1A; O/P: 28-36Vdc, max 1.2A. The schematic diagram and PCB layout are same as DRM-060T360160. Housing is PC.	NR
27	59	LED Driver	SHENZHEN DAERMAY ELECTRONICS TECHNOLOGY CO LTD	DRM-060T360120-1	Insolated LVLE. I/P: 100-277V, 50/60Hz, max 1A; O/P: 28-36Vdc, max 1.2A. The schematic diagram and PCB layout are same as DRM-060T360160. Housing is aluminum.	NR
26	60	LED Driver	SHENZHEN DAERMAY ELECTRONICS TECHNOLOGY CO LTD	DRM-060T360160	Insolated LVLE. I/P: 100-277V, 50/60Hz, max 1A; O/P: 28-36Vdc, max 1.6A. Housing is PC.	NR
27	61	LED Driver	SHENZHEN DAERMAY ELECTRONICS TECHNOLOGY CO LTD	DRM-060T360160-1	Insolated LVLE. I/P: 100-277V, 50/60Hz, max 1A; O/P: 28-36Vdc, max 1.6A. The schematic diagram and PCB layout are same as DRM-060T360160. Housing is aluminum.	NR
26	61a	Driver Housing	CHI MEI CORPORATION	PC-122N	PC, V-0, min.110°C, min. 1.2mm thick. HWI=3, HAI=1, CTI=2. Only for DRM-060T360120 & DRM-060T360160.	cURus
27	61b	Driver Housing	Various	Various	Aluminum, Min.1.2mm thick. Only for Only for DRM-060T360120-1 & DRM-060T360160-1.	NR
28	61c	Insulation sheet	SABIC JAPAN L L C	FR25A	PC, V-0, 125°C, CTI:3, HWI:1, HAI:0, thickness>0.23mm. Only for DRM-060T360120-1 & DRM-060T360160-1.	cURus
29	61d	Fuse	Various	Various	3.15A, min. 300V.	cURus
29	61e	Varistor	Various	10D561K	300VAC, 85°C.	cURus
29	61f	X capacitor (CX1)	Various	Various	X2 cap, 0.22uF, 300VAC, min.100 °C.	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
29	61g	Y capacitor (CY1, CY2)	Various	Various	Y1 cap, 102M, 400VAC, min.125°C.	cURus
29	61h	Transformer T1	SHENZHEN KAIZHONG HEDONG NEW MATERIAL CO LTD (UL/E497824)	KZHD-130	Class B Insulation System. I/P: 100-277V, 50/60Hz, max 1A; O/P: 28-36Vdc, max 1.6A.	cURus
29	61i	Input wire of LED Driver	Various	Various	Min. 18AWG, min.300V, min.90°C, AWM, VW-1.	cURus
29	61j	Output wire of LED Driver	Various	Various	Min. 24AWG, min.300V, min.90°C, AWM, VW-1.	cURus
29	61k	PCB of LED Driver	Various	Various	Single layer printed wiring boards. Rated 94V-0, min.105°C, min. 1.1 mm thick.	cURus
30	62	LED Driver	ShenZhen Minglight Co., Ltd	ML-080T40200	Insolated. I/P: 100-277V, 50/60Hz, max 1A; O/P: 28-40Vdc, max 2A, 83W. The schematic diagram and PCB layout are same as ML-100T402300.	NR
30	63	LED Driver	ShenZhen Minglight Co., Ltd	ML-100T402300	Insolated. I/P: 100-277V, 50/60Hz, max 1.2A; O/P: 28-40Vdc, max 2.3A, 95W.	NR
30	64	LED Driver	ShenZhen Minglight Co., Ltd	ML-120T402750	Insolated. I/P: 100-277V, 50/60Hz, max 1.4A. O/P: 28-40Vdc, max 2.75A. The schematic diagram and PCB layout are same as ML-100T402300.	NR
30	64a	Insulating trip	Chengdu Kanglongxin Plastics Co Ltd	KLX PP BK-10, KLX PP BK-10-1, KLX PP BK-10-2, KLX PP BK-10-3	PP, VTM-0, 0.25mm thick min., 110°C.	cURus
			ITW ELECTRONICS COMPONENTS/ PRODUCTS (SHANGHAI) CO LTD	FORMEX GK-(a)(d)(f1) or FORMEX GK-(a)(d)(f2)	PP, VTM-0, 0.20mm thick min., 115°C, HWI=4, HAI=0, CTI=0.	cURus
30	64b	Driver Housing	Various	Various	Aluminum, min.105°C, min. 1.0mm thick.	NR
31	64c	Fuse	Various	Various	6.3A, min. 300V.	cURus
31	64d	Varistor (RV1)	Various	14D561	Min. 300VAC, 85°C	cURus
31	64e	Varistor (RV2)	Various	10D561	Min. 300VAC, 85°C	cURus
31	64f	X capacitor (CX1)	Various	Various	X2 cap, 0.22 uF, 305VAC, min.100°C.	cURus
31	64g	Y capacitor (CY1, CY2)	Various	Various	Y1 cap, 2.2 nF, 400VAC, min.90°C.	cURus
31	64h	Y capacitor (CY3)	Various	Various	Y2 cap, 10 nF, 400VAC, min.90°C.	cURus
31	64i	Y capacitor (CY4, CY5)	Various	Various	Y1 cap, 1 nF, 400VAC, min.90°C.	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
31	64j	Transformer T1	SHENZHEN DONGXINGFEN G ELECTRONICS CO LTD (UL/E347163)	JF-01	Class B Insulation System. I/P: 100-277V, 50/60Hz, max 1.4A. O/P: 28-40Vdc, max 2.75A.	cURus
31	64k	Input wire of LED Driver	Various	Various	Min. 18AWG, min.300V, min.90°C, AWM, VW-1.	cURus
31	64l	Output wire of LED Driver	Various	Various	Min. 24AWG, min.300V, min.90°C, AWM, VW-1.	cURus
32	64m	PCB of LED Driver	Various	Various	Single layer printed wiring boards. Rated 94V-0, min.105°C, min. 1.1 mm thick.	cURus
33	65	LED Driver	ShenZhen Minglight Co., Ltd	ML-HV-050T40120	Insolated LVLE. I/P: 100-347V, 50/60Hz, max 1.5 A. O/P: 40Vdc, max 1.2A. The schematic diagram and PCB layout are same as ML-HV-060T40150.	NR
33	66	LED Driver	ShenZhen Minglight Co., Ltd	ML-HV-060T40150	Insolated LVLE. I/P: 100-347V, 50/60Hz, max 1.5 A. O/P: 40Vdc, max 1.5A.	NR
33	66a	Driver Housing (Plastic part)	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	PC, V-0, min.120°C, min. 1.5mm thick. HWI=3, HAI=3, CTI=2.	cURus
34	66b	Fuse	Various	Various	4A, min. 350V.	cURus
34	66c	Varistor	Various	14D751	Min. 300VAC, 85°C.	cURus
34	66d	X capacitor (CX1)	Various	Various	X2 cap, 100 nF, 350VAC, min.100°C.	cURus
34	66e	Y capacitor (CY1, CY2)	Various	Various	Y1 cap, 2.2 nF, 400VAC, min.125°C.	cURus
34	66f	Transformer T1	SHENZHEN DONXINGFENG ELECTRONICS CO LTD (UL/E347163)	JF-01	Class B Insulation System. I/P: 100-347V, 50/60Hz, max 1.5 A. O/P: 40Vdc, max 1.5A.	cURus
33	66g	Input wire of LED Driver	Various	Various	Min. 18AWG, min.300V, min.90°C, AWM, VW-1.	cURus
33	66h	Output wire of LED Driver	Various	Various	Min. 24AWG, min.300V, min.90°C, AWM, VW-1.	cURus
35	66i	PCB of LED Driver	Various	Various	Single layer printed wiring boards. Rated 94V-0, min.105°C, min. 1.1 mm thick.	cURus
36	67	LED Driver	ShenZhen Minglight Co., Ltd	ML-HV-080T40200	Insolated. I/P: 100-347V, 50/60Hz, max 1A; O/P: 28-40Vdc, max 2A, 83W. The schematic diagram and PCB layout are same as ML-HV-120T402750.	NR

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
36	68	LED Driver	ShenZhen Minglight Co., Ltd	ML-HV-100T402300	Insolated. I/P: 100-347V, 50/60Hz, max 1.2A; O/P: 28-40Vdc, max 2.3A, 95W. The schematic diagram and PCB layout are same as ML-HV-120T402750.	NR
36	69	LED Driver	ShenZhen Minglight Co., Ltd	ML-HV-120T402750	Insolated. I/P: 100-347V, 50/60Hz, max 1.4A; O/P: 28-40Vdc, max 2.75A.	NR
36	69a	Driver Housing	Various	Various	Aluminum, min.105°C, min. 1.0mm thick.	NR
36	69b	Insulating trip	Chengdu Kanglongxin Plastics Co Ltd	KLX PP BK-10, KLX PP BK-10-1, KLX PP BK-10-2, KLX PP BK-10-3	PP, VTM-0, 0.25mm thick min., 110°C.	cURus
			ITW ELECTRONICS COMPONENTS/ PRODUCTS (SHANGHAI) CO LTD	FORMEX GK-(a)(d)(f1) or FORMEX GK-(a)(d)(f2)	PP, VTM-0, 0.20mm thick min., 115°C, HWI=4, HAI=0, CTI=0.	cURus
37	69c	Fuse	Various	Various	6.3A, min. 350V.	cURus
37	69d	Varistor (RV1, RV2)	Various	14D751	Min. 350VAC, 85°C	cURus
37	69e	X capacitor (CX1)	Various	Various	X2 cap, 0.1 uF, 350VAC, min.100°C.	cURus
37	69f	Y capacitor (CY1, CY2)	Various	Various	Y1 cap, 2.2 nF, 400VAC, min.90°C.	cURus
37	69g	Y capacitor (CY3)	Various	Various	Y2 cap, 10 nF, 400VAC, min.90°C.	cURus
37	69h	Y capacitor (CY4, CY5)	Various	Various	Y1 cap, 1 nF, 400VAC, min.90°C.	cURus
37	69i	Transformer T1	SHENZHEN DONGXINGFEN G ELECTRONICS CO LTD (UL/E347163)	JF-01	Class B Insulation System. I/P: 100-347V, 50/60Hz, max 1.4A; O/P: 28-40Vdc, max 2.75A.	cURus
37	69j	Input wire of LED Driver	Various	Various	Min. 18AWG, min.300V, min.90°C, AWM, VW-1.	cURus
37	69k	Output wire of LED Driver	Various	Various	Min. 24AWG, min.300V, min.90°C, AWM, VW-1.	cURus
37	69l	PCB of LED Driver	Various	Various	Single layer printed wiring boards. Rated 94V-0, min.105°C, min. 1.1 mm thick.	cURus
37	69m	Optocoupler	EVERLIGHT ELECTRONICS CO LTD	EL357	Double protection optical isolators, providing 3750 vac isolation	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
18	70	LED Driver	ShenZhen Minglight Co., Ltd	DRM-010T800015	Non-isolated. Rated 100-277Vac, 50/60Hz, 0.2A input; 68-80Vdc, 0.15A output. The schematic diagram and PCB layout are same as DRM-010T800017	NR
				DRM-010T800017	Non-isolated. Rated 100-277Vac, 50/60Hz, 0.2A input; 68-80Vdc, 0.17A output.	NR
18	70a	Insulation Sheet	ZHEJIANG HUAQING NEW MATERIALS CO LTD	6021	Rated 105°C, measure 0.7mm thick.	cURus
18	70b	Potting compound (Not shown)	Shenzhen Anpin Silicone Material Co Ltd.	905	Silicone Molding, rated V-0, 150°C.	cURus
			Dongguan Zhaoshun Silicone New Material Technology Co Ltd.	ZS-GF5299E	Silicone Molding, rated V-0, 150°C.	cURus
			Shenzhen City Jiadi Silicone Co Ltd	JD-505	Silicone Molding, rated V-0, 150°C.	cURus
38	70c	Fuse (F1)	Lanson Electronics Co Ltd.	SMT	Rated 300V, 1A.	cURus
			Dongguan Better Electronict Technology Co Ltd.	932	Rated 300V, 1A.	cURus
			Conquer Electronics Co Ltd	MST	Rated 300V, 1A.	cURus
38	70d	Varistor (VR1)	Various	Various	Rated min.300V, 85°C.	cURus
38	70e	Y1 Capacitor (CY2)	Various	Various	Rated min.400V, max.2000pF.	cURus
38	70f	Input Lead	Various	Various	Min.18AWG, rated min.300V, 90°C.	cURus
38	70g	Output Lead	Various	Various	Min.22AWG, rated min.300V, 90°C.	cURus
38	70h	Internal lead	Various	Various	Rated min.24AWG, min.300V, min.90°C.	cURus
38	70i	Connector	ZHE JIANG DELI CONNECTORS CO LTD	TJC3-02	Rated 300Vac, 1A, min.90°C.	cURus
38	70j	PCB	Various	Various	Rated V-0, 105°C, measured 1.0mm thick, overall 90 mm by 38 mm. Suitable for directly support live parts, completely encased in potting compound.	cURus
39	71	LED Driver	ShenZhen Minglight Co., Ltd	DRM-030T360090	LVLE type. Input: 100-277Vac, 50/60Hz, 0.5A; Output: 28-36V, 900mA.	NR

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
39	72	LED Driver	ShenZhen Minglight Co., Ltd	DRM-020T360060	LVLE type. Input: 100-277Vac, 50/60Hz, 0.5A; Output: 28-36V, 530mA.	NR
39	72a	Driver Housing	Chi Mei Corporation	PC-122N	Rated V-0, 110°C, CTI:2, HWI:3, HAI:1, thickness>1.5mm.	cURus
39	73b	Potting Compound (Not shown)	Shenzhen Anpin Silicone Material Co Ltd.	905	In Driver Housing. V-0, 150°C, CTI:0, HWI:2, HAI:0, thickness>1mm.	cURus
			Dongguan Zhaoshun Silicone New Material Technology Co Ltd.	ZS-GF5299E	In Driver Housing. V-0, 150°C, CTI:0, HWI:2, HAI:0, thickness>1mm.	cURus
40, 41	73c	Fuse	Lanson Electronics Co Ltd.	SMT	1A/300V.	cURus
			Dongguan Better Electronct Technology Co Ltd.	932	1A/300V.	cURus
			Conquer Electronics Co Ltd.	MST	1A/300V.	cURus
40, 41	73d	Y-capacitor (CY1)	Various	Various	Class Y1. Rated 2200pF/400V, Min.110°C. Only for DRM-020T360060.	cURus
40, 41	73e	X-capacitor (CX1)	Various	Various	Class X1 or X2. Rated 0.22uF/310V, Min.110°C.	cURus
40, 41	73f	MOV(VR1 C2)	LIEN SHUN ELECTRONICS CO LTD	10D561K	Type 5. Rated 350V, 105°C.	cURus
40, 41	73g	LED driver PCB	Various	Various	Multilayer printed wiring boards. 94V-0, 130°C, Min.1.5mm thick.	cURus
41	73h	Transformer	Shenzhen Daermay Electronics Technology Co., Ltd.	DRM-030T-36	Class A Insulation System. Only for LED Driver DRM-030T360090. Input: 100-277Vac, 50/60Hz, 0.5A; Output: 28-36V, 900mA.	See 5.0
40	73i	Transformer	Shenzhen Daermay Electronics Technology Co., Ltd.	DRM-020T-36	Class A Insulation System. Only for LED Driver DRM-020T360060. Input: 100-277Vac, 50/60Hz, 0.5A; Output: 28-36V, 530mA.	See 5.0
42	74	LED Driver (Non-isolated)	ShenZhen Minglight Co., Ltd	ML-018T60270	Non-isolated. I/P: 100-277V, 50/60Hz, 0.3A; O/P: 55-74V, 270mA. The schematic diagram and PCB layout are same as ML-026T60390.	NR
43	75	LED Driver (Non-isolated)	ShenZhen Minglight Co., Ltd	ML-026T60390	Non-isolated. I/P: 100-277V, 50/60Hz, 0.3A; O/P: 55-74V, 390mA.	NR

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
43	75a	Driver Housing (Plastic part)	SABIC INNOVATIVE PLASTICS US LLC	940(f1)	PC, V-0, min.120°C, min. 1.5mm thick. HWI=3, HAI=3, CTI=2	cURus
44	75b	Potting compound (Not shown)	Shenzhen Anpin Silicone Material Co Ltd.	905	Silicone Molding, rated V-0, 150°C.	cURus
			Dongguan Zhaoshun Silicone New Material Technology Co Ltd.	ZS-GF5299E	Silicone Molding, rated V-0, 150°C.	cURus
			Shenzhen City Jiadi Silicone Co Ltd	JD-505	Silicone Molding, rated V-0, 150°C.	cURus
44	75c	Fusing Resistor	Various	Various	1.3Ohm, 1W, min. 350V.	cURus
44	75d	Varistor	Various	7D561	Min. 300VAC, 125°C	cURus
44	75e	Inductor T1	Various	Various	Class A Insulation System I/P: 100-277V, 50/60Hz, 0.3A; O/P: 55-74V, 390mA.	NR
44	75f	Input wire of LED Driver	Various	Various	Min. 18AWG, min.300V, min.90°C, AWM, VW-1.	cURus
44	75g	Output wire of LED Driver	Various	Various	Min. 24AWG, min.300V, min.90°C, AWM, VW-1.	cURus
44	75h	PCB of LED Driver	Various	Various	Single layer printed wiring boards. Rated 94V-0, min.105°C, min. 1.1 mm thick.	cURus
45	76	Emergency Driver	Shenzhen Long Xin Da Technology Co., Ltd.	BLD-CM08E- 480220	Input:100-277V~, 50/60Hz, 0.1 A Max; Output:48Vdc, 0.32 A Max, 8W; Min.0°C	cURus
49	77	LED	Various	Various	Vf: 5.9~6.3V, If: 150mA, size: 3.0 x 3.0 x 0.65mm. For series FL35, PLC, ML-WPD2, ML-HBC models.	NR
47	78	LED Driver-2	ShenZhen Minglight Co., Ltd	HG40-A19-50	Input: 120-347Vac, 50/60Hz, 0.5A, 50W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 0.78A, 46.8W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, CV type.	cETLus
48	79	LED Driver-3	ShenZhen Minglight Co., Ltd	HG150-A15	Input: 120-347Vac, 50/60Hz, 1.48A, 148W; Output: Max.120Vdc, 1.15A, 138W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
48	79a	Insulating trip	ITW ELECTRONICS COMPONENTS/ PRODUCTS (SHANGHAI) CO LTD	FORMEX GK- (a)(d)(f1)	PP, VTM-0, 0.20mm thick min., 115°C, HWI=0, HAI=0, CTI=0. For models FL35-150W-XXK-X, FL35- 200W-XXK-X, PLC240W/200W/150W-XXK-X, PLC150W/100W/75W-XXK-X and PLC300W/240W/200W-XXK-X and series ML-HBC.	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
47	80	LED Driver-4(Not shown)	ShenZhen Minglight Co., Ltd	HG26-A19-18	Input: 120-347Vac, 50/60Hz, 0.18A, 18W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 0.28A, 16.8W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
47	81	LED Driver-5(Not shown)	ShenZhen Minglight Co., Ltd	HG26-A19-26	Input: 120-347Vac, 50/60Hz, 0.26A, 26W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 0.4A, 24.2W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
47	82	LED Driver-6(Not shown)	ShenZhen Minglight Co., Ltd	HG26-A19-30	Input: 120-347Vac, 50/60Hz, 0.3A, 30W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 0.47A, 27.9W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
47	83	LED Driver-7(Not shown)	ShenZhen Minglight Co., Ltd	HG60-A19-78	Input: 120-347Vac, 50/60Hz, 0.77A, 78W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 1.2A, 72W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
47	84	LED Driver-8(Not shown)	ShenZhen Minglight Co., Ltd	HG100-A17-100	Input: 120-347Vac, 50/60Hz, 1.05A, 103W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 1.6A, 96W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
48	85	LED Driver-9(Not shown)	ShenZhen Minglight Co., Ltd	HG240-A07	Input: 120-347Vac, 50/60Hz, 2.3A, 230W; Output: Max.120Vdc, 1.75A, 210W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
51	86	LED Driver-10	Shenzhen Sosen Electronics Co Ltd	SS-100VA-56	Class P Driver, CC, Output Class 2. Input: 120-277V, 50/60Hz, 1.2A, Max.115W; Output: 22-56VDC, Max.2.3A, 96W. For model PLC100WI-XXK-X.	cULus
			Various	Various		
51	87	LED Driver-11(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-50VA-56	Class P Driver, CC, Output Class 2. Input: 120-277V, 50/60Hz, 0.6A, Max.57W; Output: 22-56VDC, 0.75-1.55A, Max.50W. For model PLC50WI-XXK-X.	cULus
			Various	Various		

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
51	88	LED Driver-12(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-75VA-56	Class P Driver, CC, Output Class 2. Input: 120-277V, 50/60Hz, 1A, Max.88W; Output: 22-56VDC, Max.2.4A, 75W. For model PLC75WI-XXK-X.	cULus
			Various	Various		
51	89	LED Driver-13(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-150VA-56	Class P Driver, CC, Output Isolated. Input: 120-277V, 50/60Hz, 1.8A, Max.170W; Output: 22-56VDC, 2.1-4.2A, Max.150W. For models PLC150WI-XXK-X and PLC300WI-XXK-X.	cULus
			Various	Various		
51	90	LED Driver-14(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-200VA-56	Class P Driver, CC, Output Isolated. Input: 120-277V, 50/60Hz, 2.3A, Max.240W; Output: 22-56VDC, 2.8-5.6A, Max.200W. For model PLC200WI-XXK-X.	cULus
			Various	Various		
51	91	LED Driver-15(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-240VA-56	Class P Driver, CC, Output Isolated. Input: 120-277V, 50/60Hz, 2.8A, Max.275W; Output: 22-56VDC, 3.3-6.7A, Max.240W. For model PLC240WI-XXK-X.	cULus
			Various	Various		
51	92	LED Driver-16(Not shown)	Inventronics (Hangzhou) Inc	EUM-050S150DG-xxxx	CC, Output Class 2, Tc: 90°C. Input: 100-277V, 50/60Hz, 0.56A, Max.61W; Output: 17-54VDC, 1.5A, Max.50W. For model PLC50WI-XXK-X.	cURus
51	93	LED Driver-17(Not shown)	Inventronics (Hangzhou) Inc	EUM-075S210DG-xxxx	CC, Output Class 2, Tc: 90°C. Input: 100-277V, 50/60Hz, 0.9A, Max.96W; Output: 18-54VDC, 2.1A, Max.75W. For model PLC75WI-XXK-X.	cURus
51	94	LED Driver-18(Not shown)	Inventronics (Hangzhou) Inc	EUM-100S280DG-xxxx	CC, Output Class 2, Tc: 90°C. Input: 100-277V, 50/60Hz, 1.2A, Max.120W; Output: 17-54VDC, 2.8A, Max.96W. For model PLC100WI-XXK-X.	cURus
51	95	LED Driver-19(Not shown)	Inventronics (Hangzhou) Inc	EUM-150S420DG-xxxx	CC, Output Isolated, Tc: 90°C. Input: 100-277V, 50/60Hz, 1.54A, Max.170W; Output: 18-54VDC, 4.2A, Max.150W. For models PLC150WI-XXK-X and PLC300WI-XXK-X.	cURus

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Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
51	96	LED Driver-20(Not shown)	Inventronics (Hangzhou) Inc	EUM-200S560DG-xxxx	CC, Output Isolated, Tc: 90°C. Input: 100-277V, 50/60Hz, 2.2A, Max.240W; Output: 18-57VDC, 5.6A, Max.200W. For model PLC200WI-XXK-X.	cURus
51	97	LED Driver-21(Not shown)	Inventronics (Hangzhou) Inc	EUM-240S670DG-xxxx	CC, Output Isolated, Tc: 90°C. Input: 100-277V, 50/60Hz, 2.7A, Max.280W; Output: 18-57VDC, 6.7A, Max.240W. For model PLC240WI-XXK-X.	cURus
51	98	LED Driver-22(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-100M-56	Class P Driver, CC, Output LVLE. Input: 277-480V, 50/60Hz, 0.8A, Max.120W; Output: 22-56VDC, Max.3A, 96W. For model PLC100WHVI-XXK-X.	cULus
			Various	Various		
51	99	LED Driver-23(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-150M-56	Class P Driver, CC, Output Isolated. Input: 277-480V, 50/60Hz, 1.6A, Max.170W; Output: 22-56VDC, 0.35-0.42A, 150W. For model PLC150WHVI-XXK-X.	cULus
			Various	Various		

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
51	100	LED Driver-24(Not shown)	Shenzhen Sosen Electronics Co Ltd	SS-240M-56	Class P Driver, CC, Output Isolated. Input: 277-480V, 50/60Hz, 1.8A, Max.270W; Output: 22-56VDC, 0.7-6.7A, 240W. For models PLC200WHVI-XXK-X and PLC240WHVI-XXK-X.	cULus
			Various	Various		
56	101	LED Driver-25	ShenZhen Minglight Co., Ltd	HG40-A19-42	Input: 120-347Vac, 50/60Hz, 0.42A, 42W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 0.65A, 39.1W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
56	102	LED Driver-26(Not shown)	ShenZhen Minglight Co., Ltd	HG60-A19-60	Input: 120-347Vac, 50/60Hz, 0.62A, 62W, Ta: 45°C, Tc: 90°C; Output: Max.60Vdc, 0.95A, 57W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
58	103	Hook	Various	Various	Aluminum, min. 1.0 mm thick. For series ML-HBC models.	NR
58	103 a	Cable ties	Various	Various	Measured with min. 5.0mm(width) and 2.0mm(thickness). Provided with 1 pcs as strain relief device.	NR
59	104	LED Driver-27(Not shown)	ShenZhen Minglight Co., Ltd	HG150-A12	Input: 120-347Vac, 50/60Hz, 1.5A, 154W, Tc: 96.4°C; Output: Max.96Vdc, 1.5A, 144W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
59	105	LED Driver-28	ShenZhen Minglight Co., Ltd	HG240-A05	Input: 120-347Vac, 50/60Hz, 2.37A, 237W, Tc: 83.4°C; Output: Max.120Vdc, 1.84A, 220.8W, Non-isolated, CC type; AUX output: 12Vdc, Max.0.2A, isolated, LVLE.	cETLus
61	106	LED Driver-29	DONGGUAN BECKY ELECTRONICS TECH CO LTD	BQE300D-260-PVF-Z	Class P Driver, CC, Output Non-Isolated. Input: 120-347V, 50/60Hz, 3.5A, Max.355W; Output: 180-260VDC, 1.0-1.65A, 300W. For model PLC300W/240W/200W-XXK-X.	cULus
			Various	Various		
61	107	LED Driver-30 (Not shown)	DONGGUAN BECKY ELECTRONICS TECH CO LTD	BQE240D-260-PVF-Z	Class P Driver, CC, Output Non-Isolated. Input: 120-347V, 50/60Hz, 2.3A, Max.266W; Output: 180-260VDC, 0.85-1.3A, 240W. For model PLC240W/200W/150W-XXK-X.	cULus
			Various	Various		

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
61	108	LED Driver-31 (Not shown)	DONGGUAN BECKY ELECTRONICS TECH CO LTD	BQE160D-260- PVF-Z	Class P Driver, CC, Output Non-Isolated. Input: 120-347V, 50/60Hz, 1.6A, Max.178W; Output: 180-260VDC, 0.5-0.8A, 160W. For model PLC150W/100W/75W-XXK-X.	cULus
			Various	Various		
62	109	LED-1	Various	Various	Vf: 5.8~6.2V, If: 180mA, size: 3.0 x 3.0 x 0.65mm. For models PLC150W/100W/75W-XXK-X, PLC240W/200W/150W-XXK-X, PLC300W/240W/200W-XXK-X.	NR
62	110	LED PCB-1	Various	Various	Metal base, rated min.V-0, min.105°C. Measured min.1.0mm thick. For models PLC150W/100W/75W-XXK-X, PLC240W/200W/150W-XXK-X, PLC300W/240W/200W-XXK-X.	cURus
65	111	Diffuser-1	TEIJIN CHEMICALS PLASTIC COMPOUNDS SHANGHAI LTD	LN-2525Z(#)(f1)	PC, min.115°C, min. 3.0 mm thick. 5VA, HWI=3, HAI=0, CTI=3. For models ML-HBC series.	cURus
65	112	Gasket-1	Various	Various	Silicone rubber, min.1.5mm thick, Min.105°C. For models ML-HBC series.	cURus
66	113	Strain relief bushing	Various	Various	Consist of metal and silicon rubber, min 1.0 mm thick. For models ML-HBC series.	NR
66	114	LED Driver-32	Shenzhen Zhihe Xingye Electronics Co Ltd	ZH-HBG- 300NLII-260B	CC, Output Non-Isolated, Tc: 90°C. Input: 100-277V, 50/60Hz, 3.6A, Max.324W; Output: 180-260VDC, 0.7-1.6A, Max.300W. For model ML-HBC-300W-XXK-X-X.	cURus

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Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
66	115	LED Driver-33 (Not shown)	Shenzhen Zhihe Xingye Electronics Co Ltd	ZH-HBG-240ELII-130B	CC, Output Non-Isolated, Tc: 85°C. Input: 100-277V, 50/60Hz, 2.88A, Max.259.2W; Output: 90-130VDC, 1.0-2.2A, Max.240W. For model ML-HBC-240W-XXK-X-X.	cURus
			Shenzhen Sosen Electronics Co Ltd	SS-240CNL-E260B	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 2.4A, Max.288W; Output: 180-260VDC, 0.84-1.2A, Max.240W. This LED driver is used for 25C19P LED PWB. For model ML-HBC-240W-XXK-X-X.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-240K-130C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 2.7A, Max.280W; Output: 90-130VDC, 2.2A, Max.240W. For model ML-HBC-240W-XXK-X-X.	cURus
66	116	LED Driver-34 (Not shown)	Shenzhen Zhihe Xingye Electronics Co Ltd	ZH-HBG-200ELII-130B	CC, Output Non-Isolated, Tc: 85°C. Input: 100-277V, 50/60Hz, 2.4A, Max.216W; Output: 90-130VDC, 1.0-2.2A, Max.200W. For model ML-HBC-200W-XXK-X-X.	cURus
			Shenzhen Sosen Electronics Co Ltd	SS-200CNL-E260B	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 2.0A, Max.240W; Output: 180-260VDC, 0.7-1.0A, Max.200W. This LED driver is used for 25C16P LED PWB. For model ML-HBC-200W-XXK-X-X.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-200K-130C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 2.3A, Max.230W; Output: 90-130VDC, 1.8A, Max.200W. For model ML-HBC-200W-XXK-X-X.	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
66	117	LED Driver-35 (Not shown)	Shenzhen Zhihe Xingye Electronics Co Ltd	ZH-HBG-160ELII-150B	CC, Output Non-Isolated, Tc: 85°C. Input: 100-277V, 50/60Hz, 1.92A, Max.172.8W; Output: 90-150VDC, 0.9-1.5A, Max.160W. For model ML-HBC-150W-XXK-X-X.	cURus
			Shenzhen Sosen Electronics Co Ltd	SS-150CNL-E260B	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 1.5A, Max.180W; Output: 180-260VDC, 0.52-0.75A, Max.150W. This LED driver is used for 25C12P LED PWB. For model ML-HBC-150W-XXK-X-X.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-150K-130C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 1.7A, Max.170W; Output: 90-130VDC, 1.4A, Max.150W. For model ML-HBC-150W-XXK-X-X.	cURus
66	118	LED Driver-36 (Not shown)	Shenzhen Zhihe Xingye Electronics Co Ltd	ZH-HBG-120ELII-150B	CC, Output Non-Isolated, Tc: 85°C. Input: 100-277V, 50/60Hz, 1.44A, Max.129.6W; Output: 90-150VDC, 0.7-1.2A, Max.120W. For model ML-HBC-100W-XXK-X-X.	cURus
			Shenzhen Sosen Electronics Co Ltd	SS-120CNL-E260B	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 1.2A, Max.144W; Output: 180-260VDC, 0.4-0.6A, Max.120W. This LED driver is used for 25C8P LED PWB. For model ML-HBC-100W-XXK-X-X.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-100K-130C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-277V, 50/60Hz, 1.2A, Max.120W; Output: 90-130VDC, 1.0A, Max.100W. For model ML-HBC-100W-XXK-X-X.	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
66	119	LED Driver-37 (Not shown)	Shenzhen Zhihe Xingye Electronics Co Ltd	ZH-HBG-300NLG-260B	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 3.0A, Max.324W; Output: 180-260VDC, 0.7-1.6A, Max.300W. For model ML-HBC-300W-XXK-X-HV.	cURus
66	120	LED Driver-38 (Not shown)	SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO LTD	G6C-240M260A12F	Class P Driver, CC, Output Non-Isolated. Input: 120-347V, 50/60Hz, 2.6A, Max.280W; Output: 180-260VDC, 0.1-1.1A, Max.240W. For model ML-HBC-240W-XXK-X-HV.	cULus
			Various	Various		
			Shenzhen Sosen Electronics Co Ltd	SS-240SN-260BH	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 3.0A, Max.275W; Output: 180-260VDC, 0.84-1.2A, Max.240W. For model ML-HBC-240W-XXK-X-HV.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-240L-260C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 2.7A, Max.280W; Output: 180-250VDC, 1.2A, Max.240W. For model ML-HBC-240W-XXK-X-HV.	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
66	121	LED Driver-39 (Not shown)	SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO LTD	G6C-200M260A12	Class P Driver, CC, Output Non-Isolated. Input: 120-347V, 50/60Hz, 2.2A, Max.240W; Output: 180-260VDC, 0.093-0.93A, Max.200W. For model ML-HBC-200W-XXK-X-HV.	cULus
			Various	Various		
			Shenzhen Sosen Electronics Co Ltd	SS-200SN-260BH	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 2.0A, Max.230W; Output: 180-260VDC, 0.7-1.0A, Max.200W. For model ML-HBC-200W-XXK-X-HV.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-200L-260C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 2.3A, Max.230W; Output: 180-250VDC, 1.0A, Max.200W. For model ML-HBC-200W-XXK-X-HV.	cURus
66	122	LED Driver-40 (Not shown)	SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO LTD	G6C-160M260A12	Class P Driver, CC, Output Non-Isolated. Input: 120-347V, 50/60Hz, 1.8A, Max.190W; Output: 180-260VDC, 0.074-0.74A, Max.160W. For model ML-HBC-150W-XXK-X-HV.	cULus
			Various	Various		
			Shenzhen Sosen Electronics Co Ltd	SS-150SN-260BH	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 1.6A, Max.180W; Output: 180-260VDC, 0.52-0.75A, Max.150W. For model ML-HBC-150W-XXK-X-HV.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-150L-260C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 1.7A, Max.170W; Output: 180-250VDC, 0.75A, Max.150W. For model ML-HBC-150W-XXK-X-HV.	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
66	123	LED Driver-41 (Not shown)	SHENZHEN MOSO ELECTRONICS TECHNOLOGY CO LTD	G6C-096M260A12	Class P Driver, CC, Output Non-Isolated. Input: 120-347V, 50/60Hz, 1.1A, Max.120W; Output: 180-260VDC, 0.045-0.45A, Max.96W. For model ML-HBC-100W-XXK-X-HV.	cULus
			Various	Various		
			Shenzhen Sosen Electronics Co Ltd	SS-120SN-130BH	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 1.4A, Max.150W; Output: 90-130VDC, 0.7-1.0A, Max.120W. This LED driver is used for 14C14P LED PWB. For model ML-HBC-100W-XXK-X-HV.	cURus
			Shenzhen Fahold Electronics Co Ltd	FD-100L-260C	CC, Output Non-Isolated, Tc: 90°C. Input: 120-347V, 50/60Hz, 1.2A, Max.120W; Output: 180-250VDC, 0.58A, Max.100W. For model ML-HBC-100W-XXK-X-HV.	cURus
67	124	LED-2	Various	Various	Vf: 8.7~9.3V, If: 120mA, size: 3.5 x 2.8 x 0.7mm. For models ML-HBC series.	NR
67	125	LED PCB-2	Various	Various	Metal base, rated min.V-0, min.105°C. Measured min.1.0mm thick. For models ML-HBC series.	cURus
NOTES: 1) Not all item numbers are indicated (called out) in the photos, as their location is obvious. 2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used. 3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.						

**5.0 Critical Unlisted CEC Components**

**INSULATED COIL**

Photo #	Item no.	Name	Manufacturer/Trademark	Type / model
41	73h	Transformer	Shenzhen Daermay Electronics Technology Co., Ltd.	DRM-030T-36
Electrical Rating: Class A.				Insulation class A
Component Standard used: UL 8750, CSA C22.2#250.13				

**MATERIALS LIST**

Component	Manufacturer	Type/model	Dimensions/thickness/assembly information
Bobbin	CHANG CHUN PLASTICS CO LTD (E59481)	4130	Phenolic. 94V-0. 150°C. Minimum 0.8mm thick.
Insulating Tape	GREAT HOLDING INDUSTRIAL CO LTD (E156256)	TFL	Thermoplastic PVC insulating tapes.130°C.
Primary winding	Various	Various	Magnet Wire, Rated Min.155°C.
Secondary winding	FURUKAWA ELECTRIC CO LTD (E206440)	TEX-E	Triple insulation Wire, Rated Min.130°C.
Tubing	JOHN C DOLPH CO (E317427)	BB-353	Rated 150V, 200°C.

**WINDING(S) RESISTANCE**

Winding Designation	Wire Size (AWG or mm <sup>2</sup> )	Wire Type	Turns	Volts	Amps	DC resistance (Ω) +/- 10%:
N1 (pin 2-5)	0.45mm <sup>2</sup>	2UEW	38	-	-	-
N2 (pin 3-1)	0.30mm <sup>2</sup>	2UEW	8	-	-	-
N3 (pin 7-9)	0.30mm <sup>2</sup>	QA-1	15	-	-	-
N4 (pin 3-end)	0.05mm <sup>2</sup>	QA-1	0.95	-	-	-
N5 (pin 5-4)	0.45mm <sup>2</sup>	2UEW	20	-	-	-
N6 (pin 3-end)	0.05mm <sup>2</sup>	QA-1	0.95	-	-	-

**VERIFICATION PROCESS**

Frequency: <b>Annual</b>	Test Site: <b>CEC</b>	Number of samples to test: <b>1</b>	
Test Name	Test Parameters		
Winding resistance	See resistance per winding above.		
Dielectric Strength	Apply voltage Between	Test Voltage	Test Time
	Primary to secondary	1554V	60s
	Secondary to core	1554V	60s

<b>5.0 Critical Unlisted CEC Components</b>						
<b>INSULATED COIL</b>						
Photo #	Item no.	Name	Manufacturer/Trademark	Type / model		
40	73i	Transformer	Shenzhen Daermay Electronics Technology Co., Ltd.	DRM-020T-36		
Electrical Rating: Class A.				Insulation class A		
Component Standard used: UL 8750, CSA C22.2#250.13						
<b>MATERIALS LIST</b>						
Component	Manufacturer	Type/model	Dimensions/thickness/assembly information			
Bobbin	CHANG CHUN PLASTICS CO LTD (E59481)	4130	Phenolic. 94V-0. 150°C. Minimum 0.8mm thick.			
Insulating Tape	GREAT HOLDING INDUSTRIAL CO LTD (E156256)	TFL	Thermoplastic PVC insulating tapes.130°C.			
Primary winding	Various	Various	Magnet Wire, Rated Min.155°C.			
Secondary winding	FURUKAWA ELECTRIC CO LTD (E206440)	TEX-E	Triple insulation Wire, Rated Min.130°C.			
Tubing	JOHN C DOLPH CO (E317427)	BB-353	Rated 150V, 200°C.			
<b>WINDING(S) RESISTANCE</b>						
Winding Designation	Wire Size (AWG or mm <sup>2</sup> )	Wire Type	Turns	Volts	Amps	DC resistance (Ω) +/- 10%:
N1 (pin 2-3)	0.28mm <sup>2</sup>	2UEW	52	-	-	-
N2 (pin 5-end)	0.05mm <sup>2</sup>	TKI-B	0.95	-	-	-
N3 (pin B-A)	0.40mm <sup>2</sup>	QA-1	24	-	-	-
N4 (pin 3-end)	0.20mm <sup>2</sup>	2UEW	13	-	-	-
N5 (pin 4-5)	0.28mm <sup>2</sup>	2UEW	23	-	-	-
<b>VERIFICATION PROCESS</b>						
Frequency: <b>Annual</b>	Test Site: <b>CEC</b>			Number of samples to test: <b>1</b>		
Test Name	Test Parameters					
Winding resistance	See resistance per winding above.					
Dielectric Strength	Apply voltage Between		Test Voltage		Test Time	
	Primary to secondary		1554V		60s	
	Secondary to core		1554V		60s	

## 6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.

1. Spacing - In primary circuits, 6.4mm(Max.Input 277Vac) or 9.5mm(Max.Input 347V or 480Vac) minimum spacing are maintained through air, 9.5mm(Max.Input 277Vac) or 12.7mm(Max.Input 347V or 480Vac) minimum spacing are maintained over surfaces of insulating material between current-carrying parts of opposite polarity and between such current-carrying parts and dead-metal parts.
2. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a non-metallic enclosure constructed with no openings other than those specifically described in Sections 4 and 5.
5. Grounding - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed are connected to the grounding lead.
6. Polarized Connection - This product is provided with a polarized power supply connection. All single pole switches and fuses are connected only to the ungrounded supply circuit conductor.
7. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. All wiring is refer to Sec 4.0.
8. Schematics - Refer to Illustration No(s).3-9 for schematics requiring verification during Field Representative Inspection Audits.
9. Markings - The product is marked as follows: applicant's name, brand name, model number, date of manufacturer, electrical ratings.  
The product is marked on a labeling system as described in item no. 57 of Section 4.0.
10. Cautionary Markings - The following are required: refer to Illustration 1a,1b.
11. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer. Refer to Illustration 2 for details.
12. Transformer - Supplier records must be provided that indicate the received shipment of transformers (section 4.0, item 73h) was constructed as indicated in Illustrations 8d, (section 4.0, item 73i) was constructed as indicated in Illustrations 8a. These records must be available at the factory for inspection on every received shipment.

## 7.0 Illustrations

### Illustration 1 - Label

#### Label A

Model: MLWPB-42W-277-57K-N  
100-277Vac, 50/60Hz, 0.42A, 42W  
Date:

### Illustration 1a - Label

#### Label B

##### For series of models MLWPB-, MLWPB2- & MLWPC2-.

SUITABLE FOR WET LOCATIONS  
CONVIENT AUX EMPLACEMENTS MOUILLÉS  
SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING 50°C  
PEUT ÊTRE UTILISÉ À UNE TEMPÉRATURE AMBIANTE N'EXCÉDANT PAS 50°C

##### For series of models ML-WPA-, ML-WPD-, FL35, PLC, ML-WPD2, ML-HBC models.

SUITABLE FOR WET LOCATIONS  
CONVIENT AUX EMPLACEMENTS MOUILLÉS  
SUITABLE FOR OPERATION IN AMBIENT NOT EXCEEDING 40°C  
PEUT ÊTRE UTILISÉ À UNE TEMPÉRATURE AMBIANTE N'EXCÉDANT PAS 40°C

##### For models which was with Emergency Driver BLD-CM08E-480220.

SUITABLE FOR WET LOCATIONS  
CONVIENT AUX EMPLACEMENTS MOUILLÉS  
SUITABLE FOR OPERATION IN AMBIENT 0-40°C/ 0-50°C  
PEUT ÊTRE UTILISÉ À UNE TEMPÉRATURE AMBIANTE 0-40°C/ 0-50°C

### Illustration 1b - Label

#### Label D

CONSULT A QUALIFIED ELECTRICIAN TO ENSURE CORRECT BRANCH CIRCUIT CONDUCTOR  
CONSULTER UN ÉLECTRICIEN QUALIFIÉ POUR VOUS ASSURER QUE LES CONDUCTEURS DE LA  
DÉRIVATION SONT ADÉQUATS  
THIS PRODUCT MUST BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE INSTALLATION CODE  
BY A PERSON FAMILIAR WITH THE CONSTRUCTION AND OPERATION OF THE PRODUCT AND  
THE HAZARDS INVOLVED  
CE PRODUIT DOIT ÊTRE INSTALLÉ SELON LE CODE D'INSTALLATION PERTINENT, PAR UNE  
PERSONNE QUI CONNAÎT BIEN LE PRODUIT ET SON FONCTIONNEMENT AINSI QUE LES  
RISQUES INHÉRENTS

#### Remarks:

- 1, Label A was attached on outer surface of the product.
- 2, Label B was attached on the product visible during/after installation, all letters shall be at least 2.4mm high.
- 3, Label D was attached on the smallest unit package or carton, all letters shall be at least 2.4mm high.
- 4, Other models (ref. Sec 2.0) have similar labels except model name, electrical specification.

## 7.0 Illustrations

### Illustration 2 - Instruction

The instruction shall include the following information:

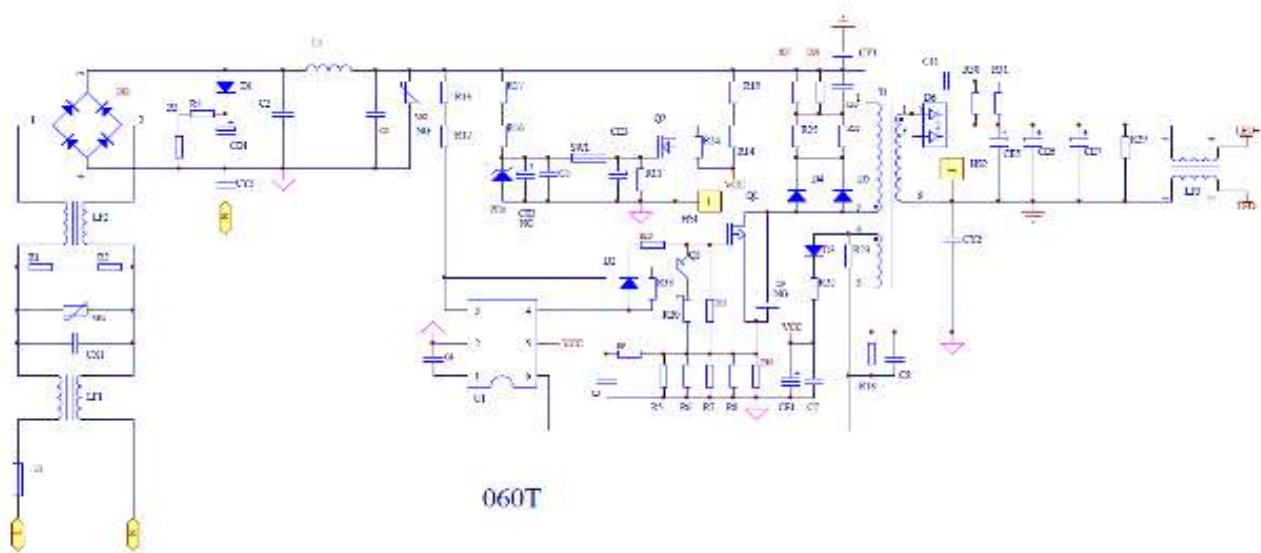
Proper installation method.

Wiring instructions that specify the proper method of connecting the grounding means and maintaining polarity shall be included with the luminaire in a manner that will require the installer to handle the instructions during installation.

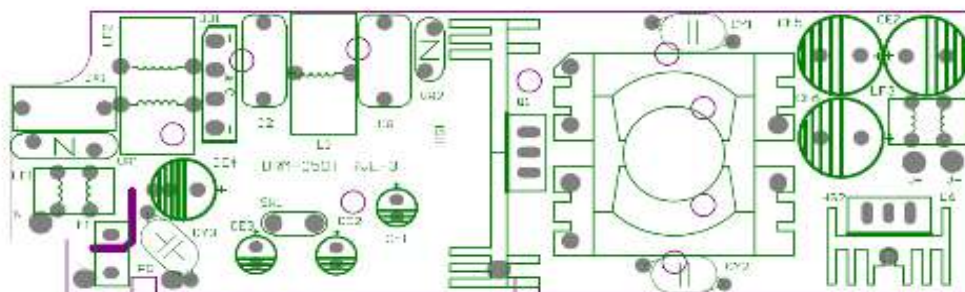
Proper normal maintenance and use method.

Proper mounting environment.

### Illustration 3 - Circuit Diagram of LED Driver models DRM-060T360120, DRM-060T360160, DRM-060T360120-1, DRM-060T360160-1

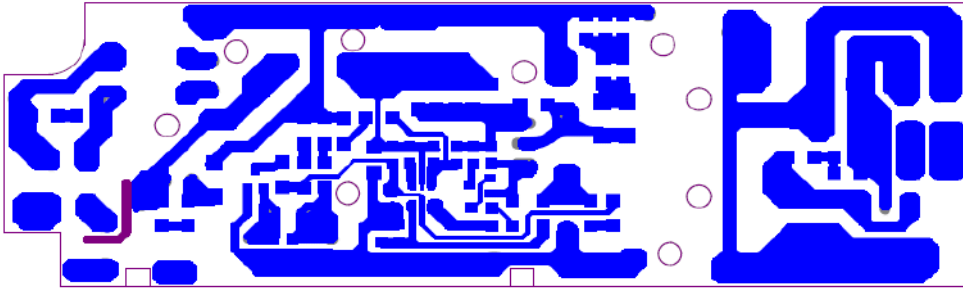


### Illustration 3a - PCB Trace layout of LED Driver models DRM-060T360120, DRM-060T360160, DRM-060T360120-1, DRM-060T360160-1



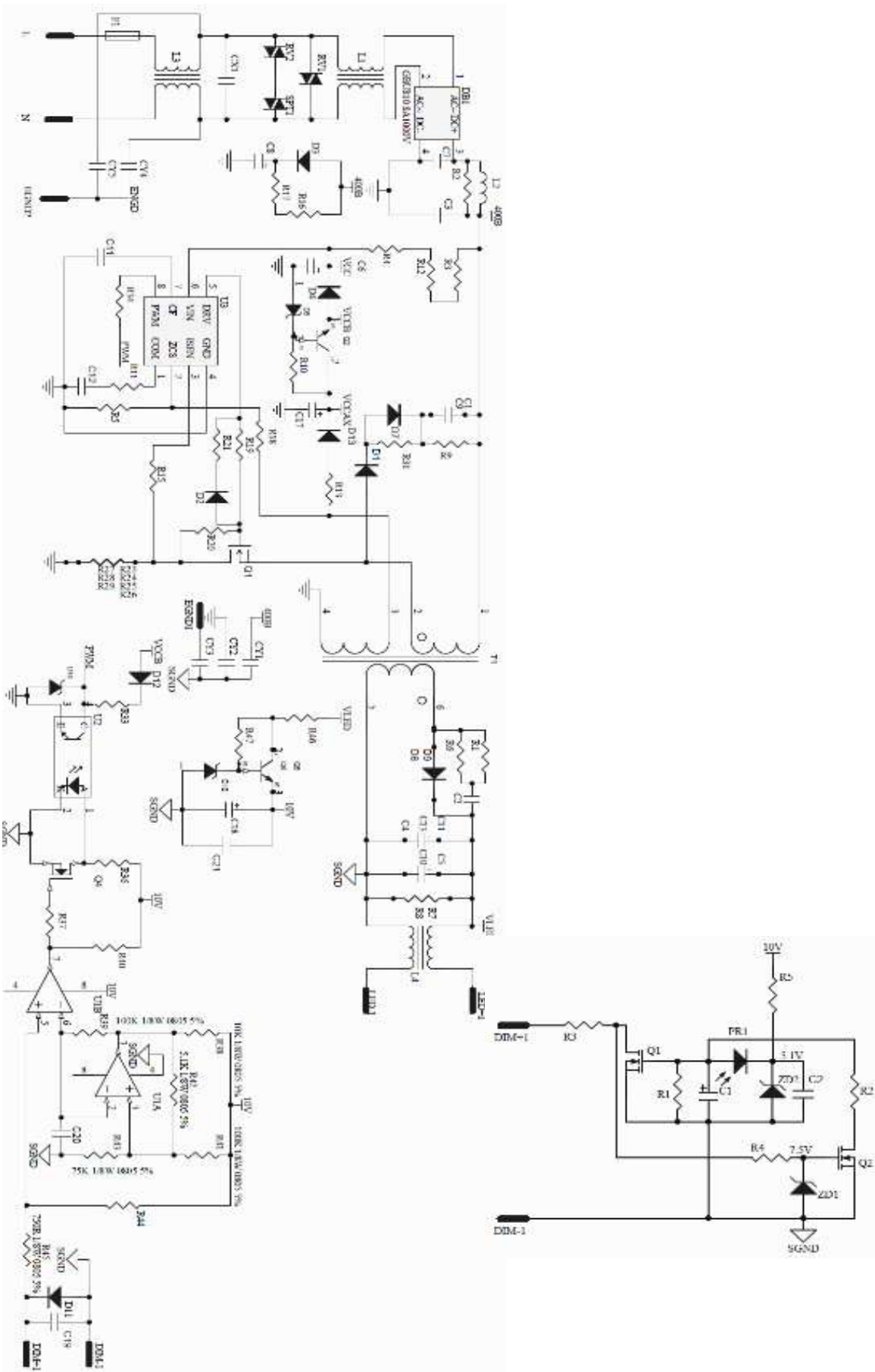
## 7.0 Illustrations

**Illustration 3b** - Component layout of LED Driver models DRM-060T360120, DRM-060T360160, DRM-060T360120-1, DRM-060T360160-1



**7.0 Illustrations**

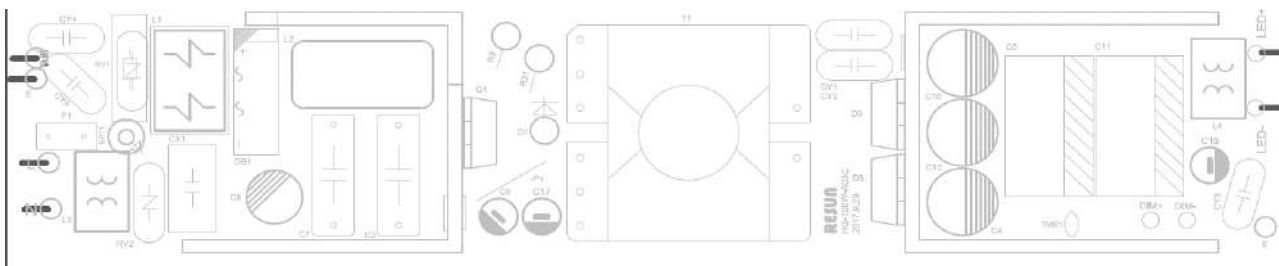
**Illustration 4 - Circuit Diagram of LED Driver models ML-080T402000, ML-100T402300 and ML-120T402750**



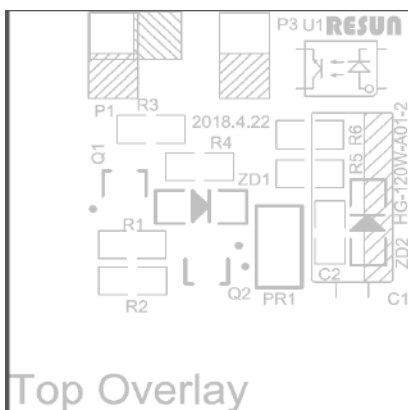
### 7.0 Illustrations

**Illustration 4a** - Component Layout of LED Driver models ML-080T402000, ML-100T402300 and ML-120T402750

Driver part:

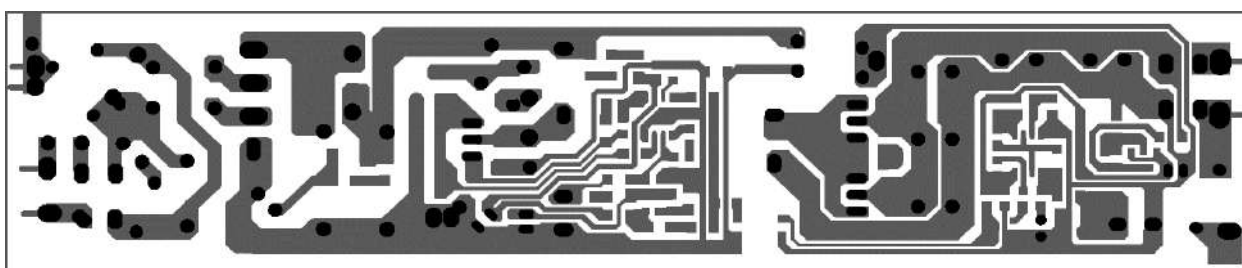


Dimming part:

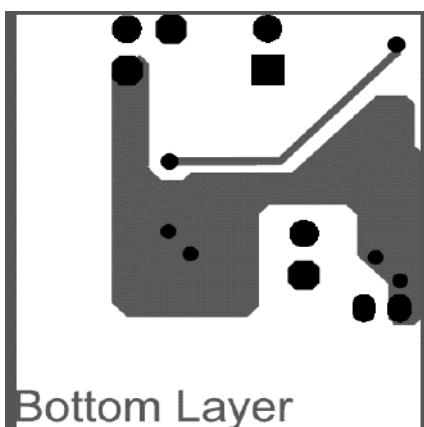


**Illustration 4b** - PCB Trace Layout of LED Driver models ML-080T402000, ML-100T402300 and ML-120T402750

Driver part:

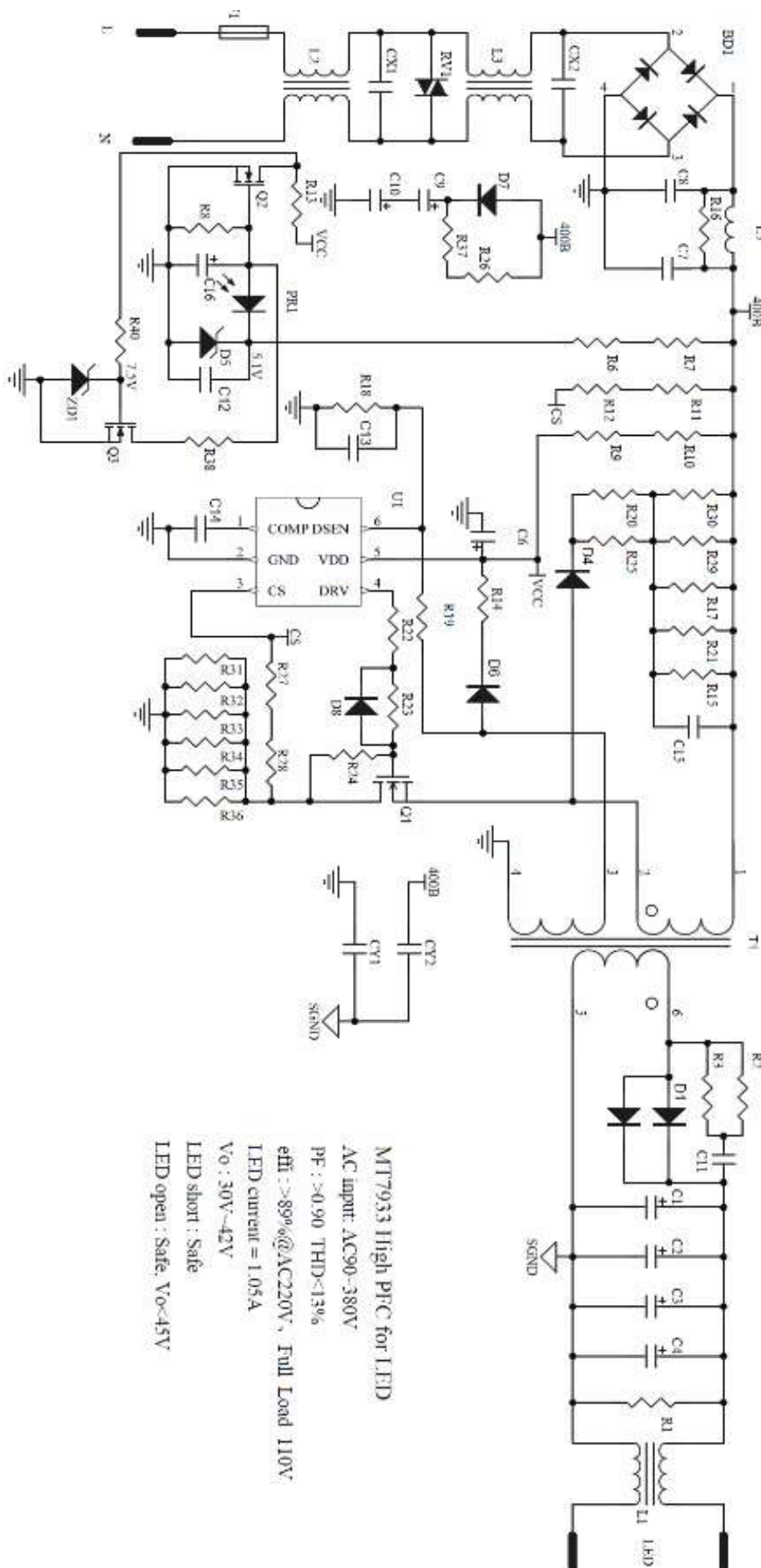


Dimming part:



**7.0 Illustrations**

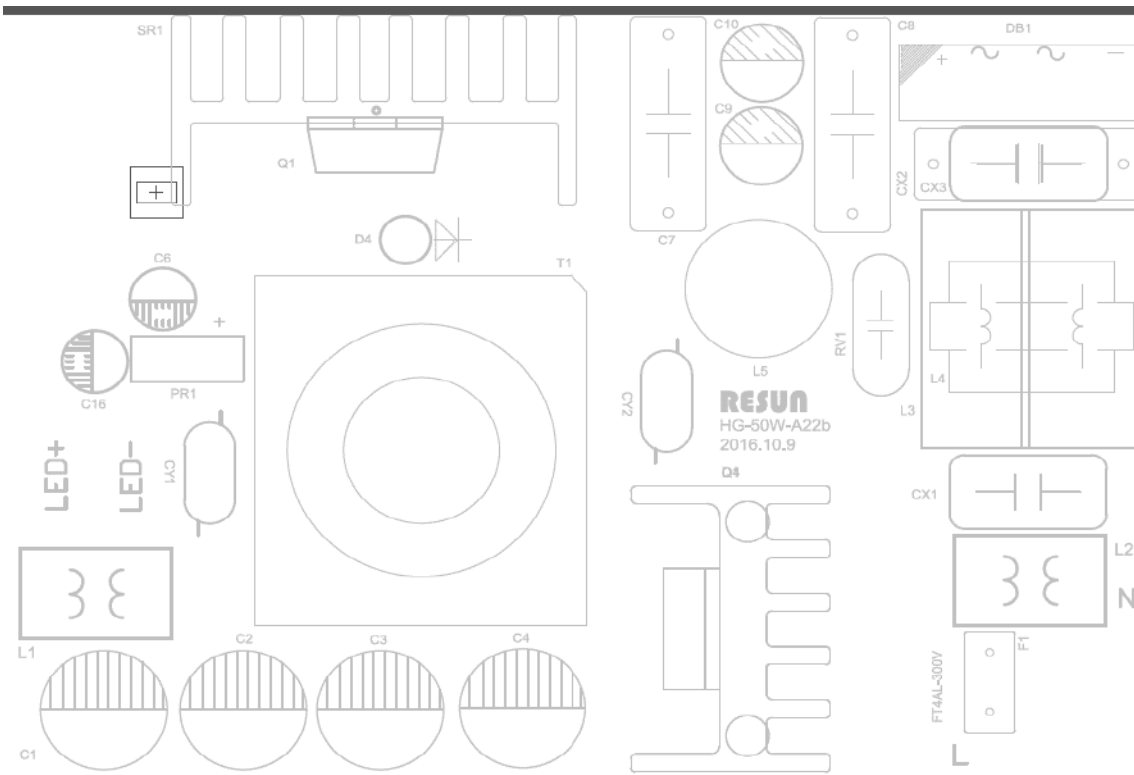
**Illustration 5 - Circuit Diagram of LED Driver models ML-HV-050T40120, ML-HV-060T40150**



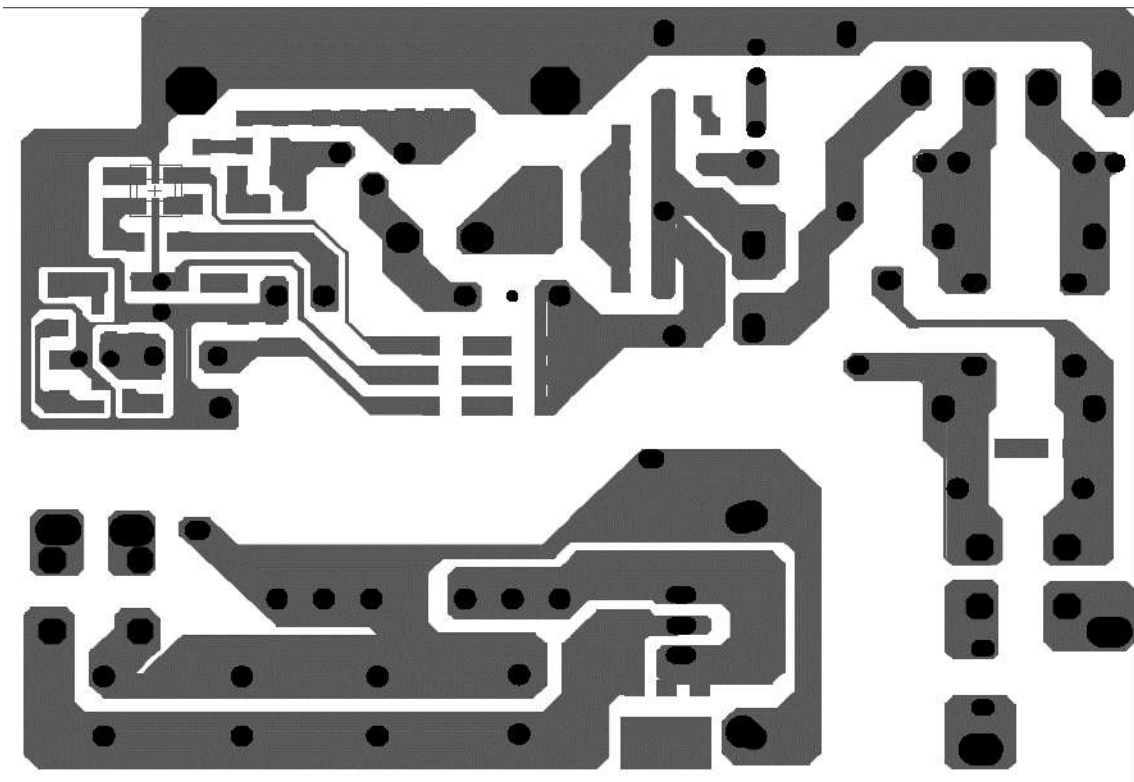
MTT7933 High PFC for LED  
 AC input: AC90~380V  
 PF : >0.90 THD<13%  
 e<sub>eff</sub> : >89% @ AC220V , Full Load 110V  
 LED current = 1.05A  
 V<sub>o</sub> : 30V~42V  
 LED short : Safe  
 LED open : Safe, V<sub>o</sub><45V

**7.0 Illustrations**

**Illustration 5a - PCB Trace layout of LED Driver models ML-HV-050T40120, ML-HV-060T40150**

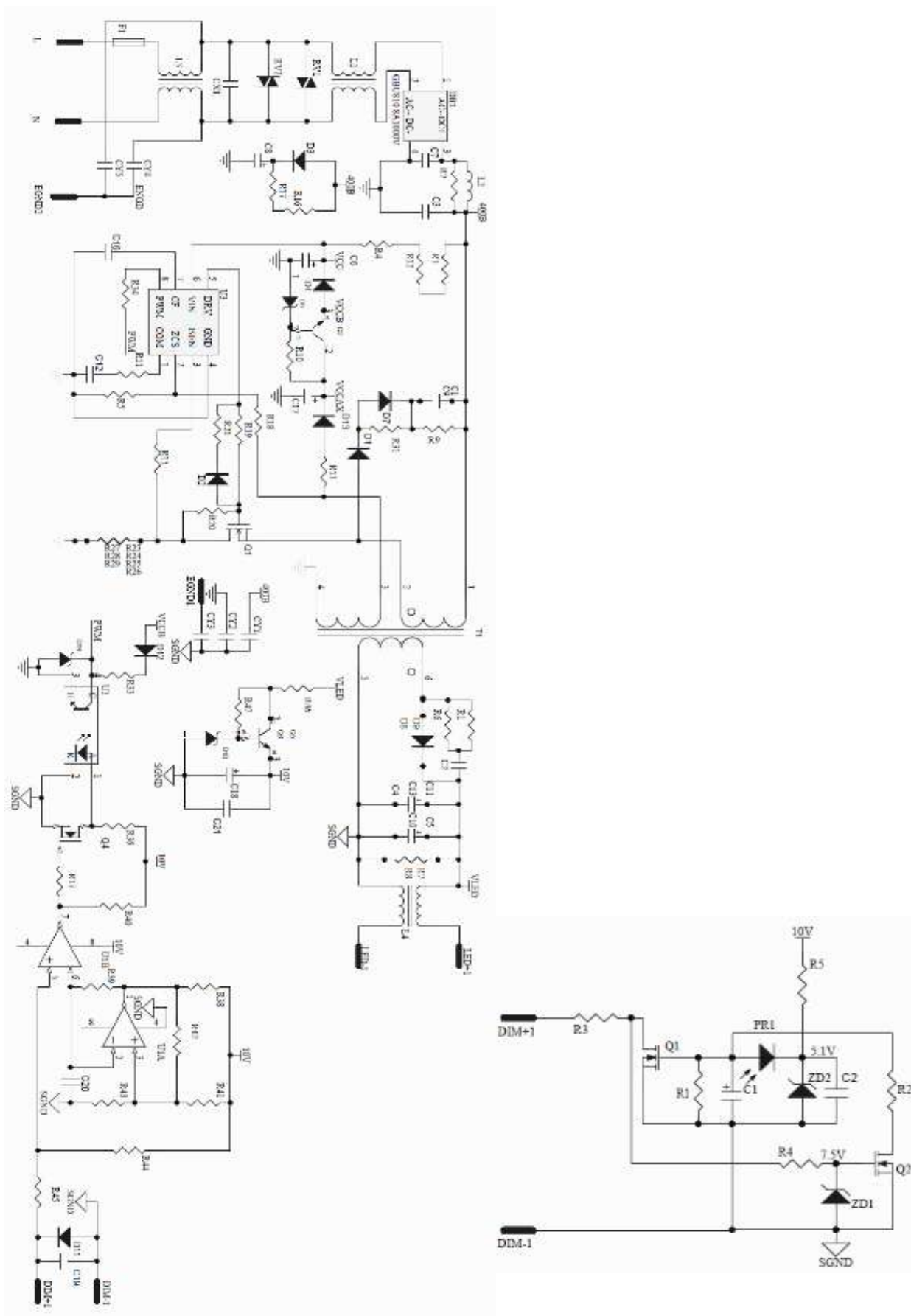


**Illustration 5b - Component layout of LED Driver models ML-HV-050T40120, ML-HV-060T40150**



**7.0 Illustrations**

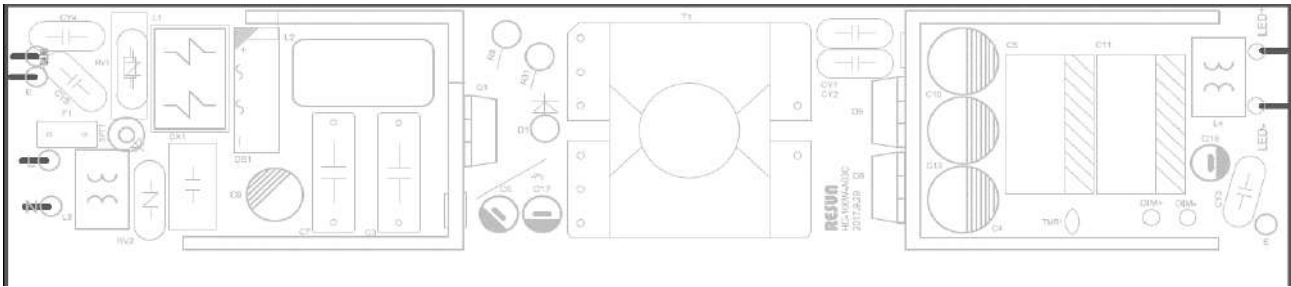
**Illustration 6 - Circuit Diagram of LED Driver models ML-HV-080T40200, ML-HV-100T402300 and ML-HV-120T402750**



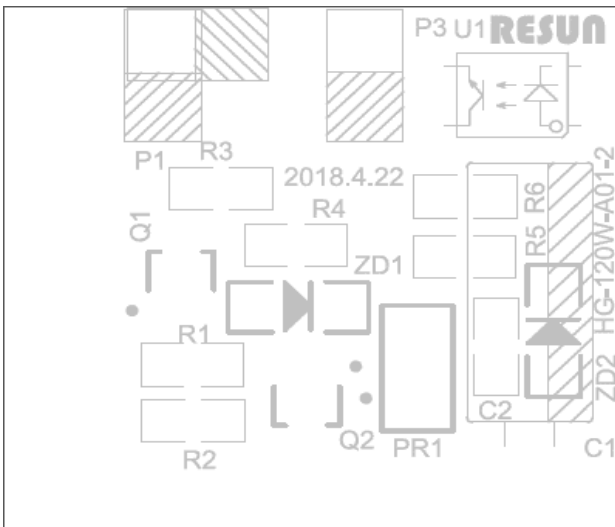
**7.0 Illustrations**

**Illustration 6a** - Component Layout of LED Driver models ML-HV-080T40200, ML-HV-100T402300 and ML-HV-120T402750

Driver part:

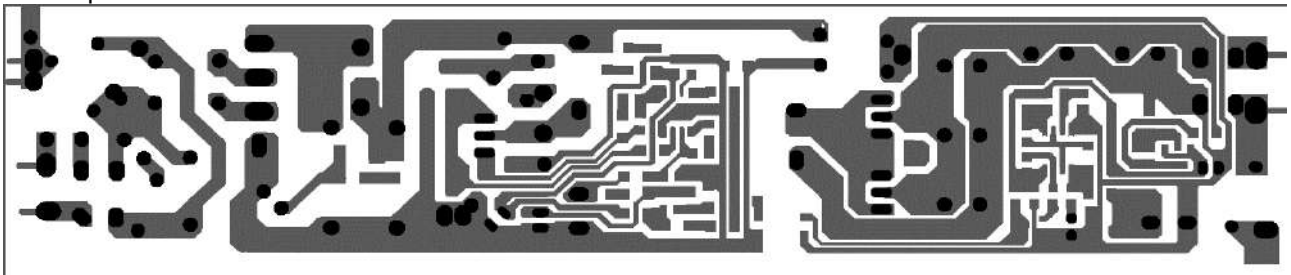


Dimming part:

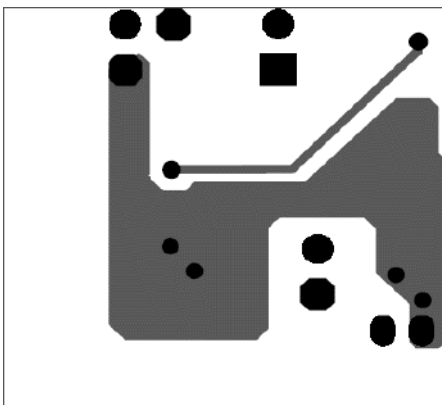


**Illustration 6b** - PCB trace Layout of LED Driver models ML-HV-080T40200, ML-HV-100T402300 and ML-HV-120T402750

Driver part:



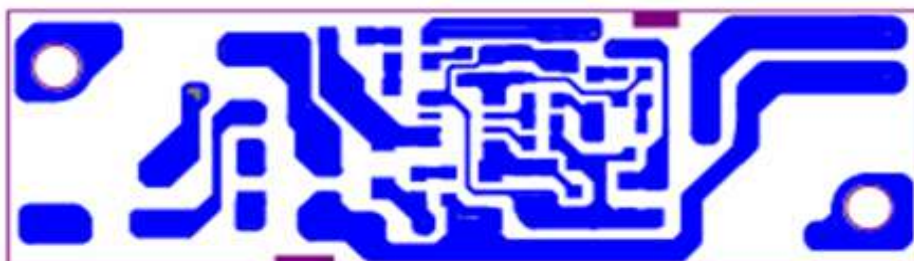
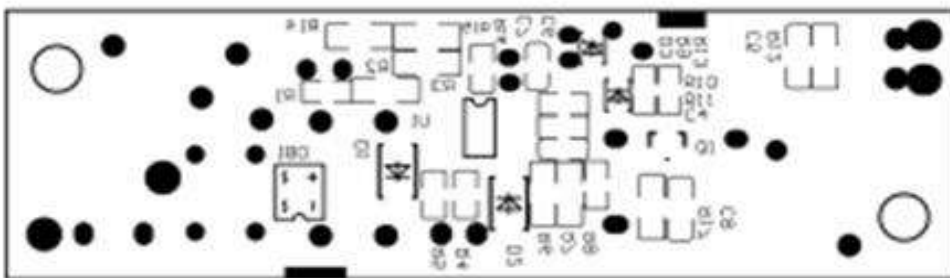
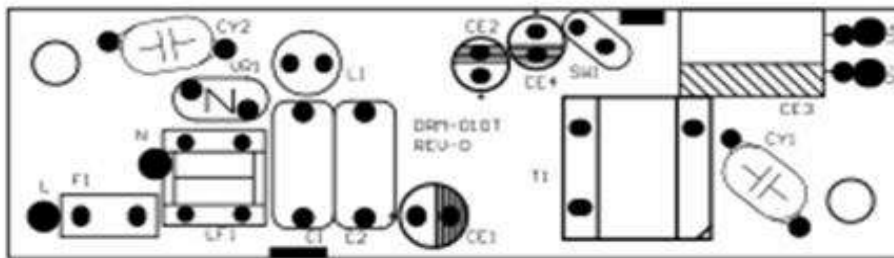
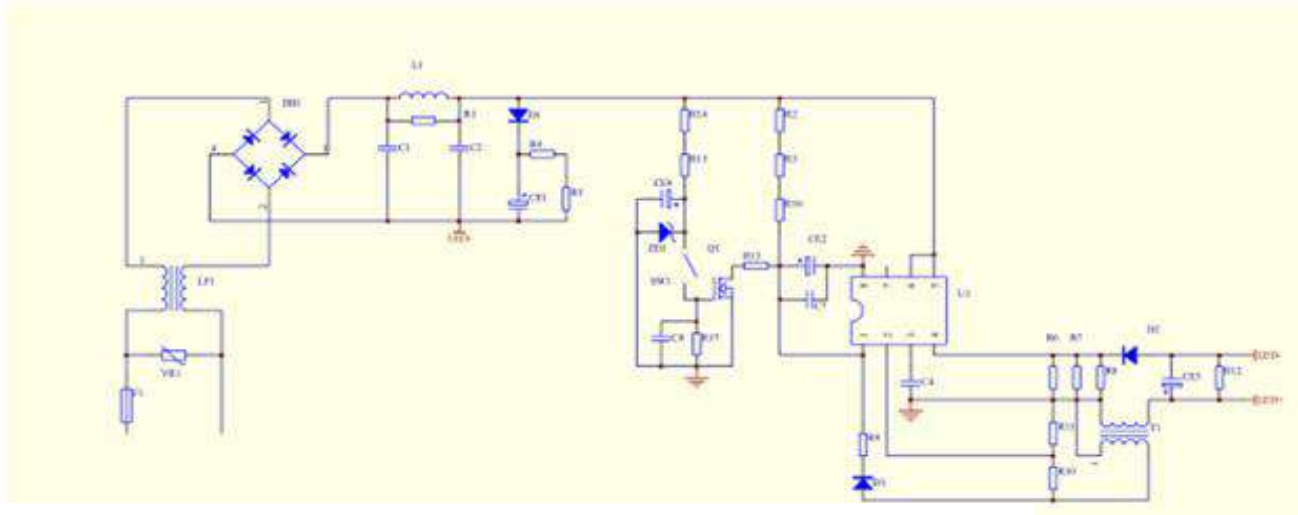
Dimming part:



**7.0 Illustrations**

**Illustration 7 - Circuit diagram and PCB Layout**

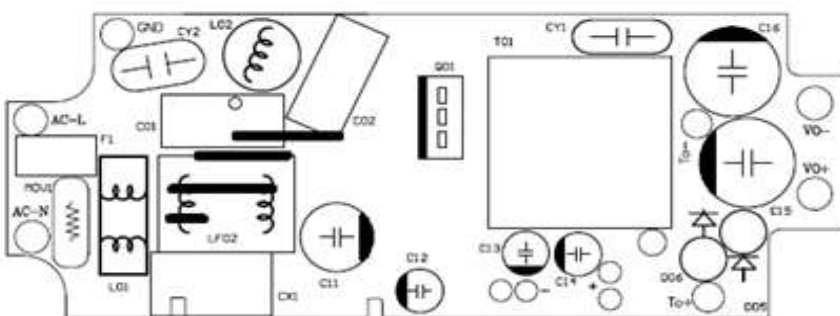
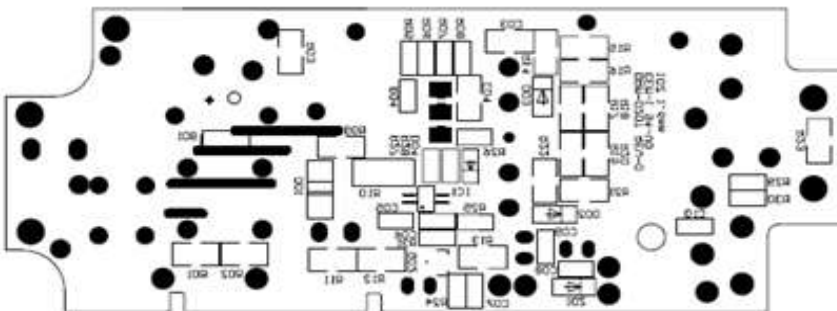
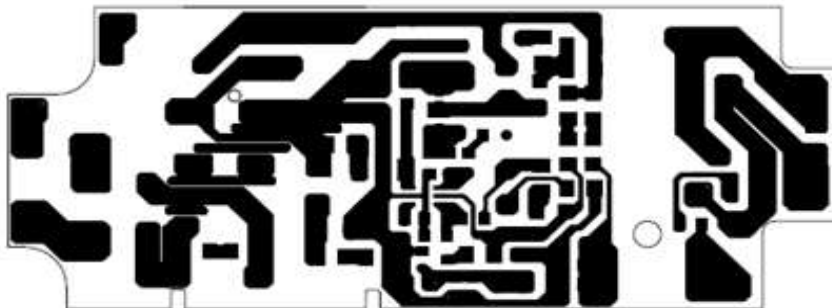
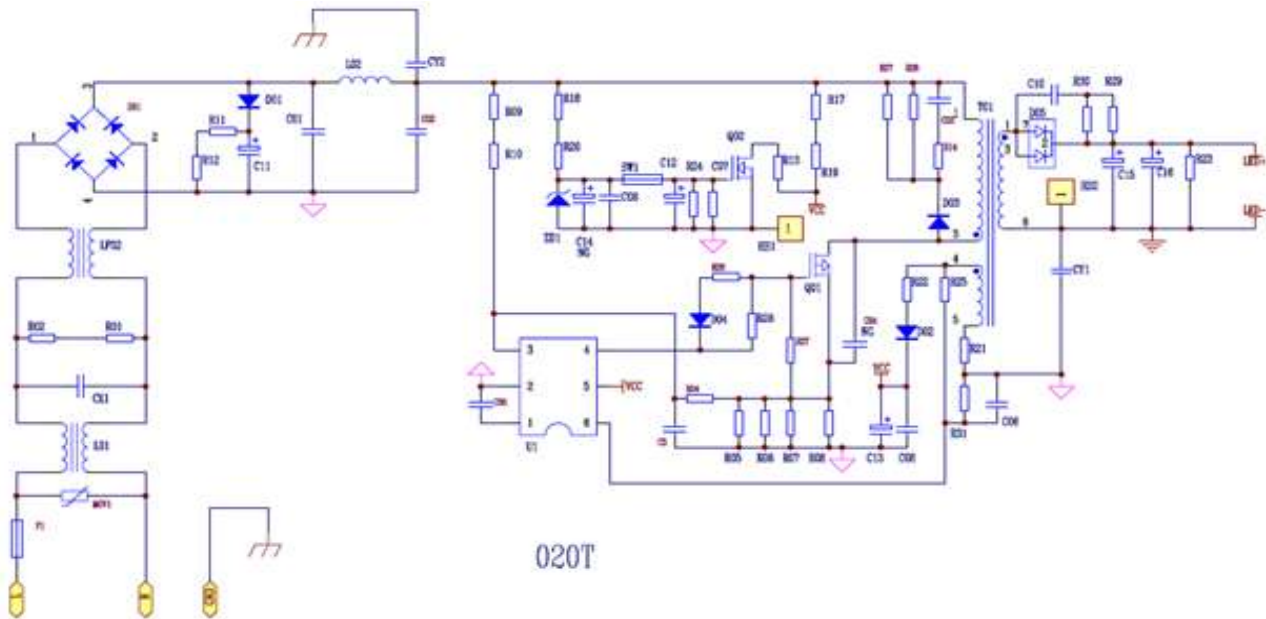
LED driver DRM-010T800015, DRM-010T800017



**7.0 Illustrations**

**Illustration 8 - Circuit diagram and PCB layout**

LED Driver DRM-020T360060



**7.0 Illustrations**

**Illustration 8a - LED Driver DRM-020T360060**

020T-36 for LED Driver DRM-020T360060

**一、电气原理图**

1. 圈心端为绕线起始端  
2. 表示反铁磁龙套管

**二、骨架图**

**三、绕制图**

层	始端	终端	绕线规格	圈数	绕线方式	绝缘层	针脚方向
N1	2	3	2UWΦ0.28mm*1p	52Ts	半整密绕	TAPE 2TS	针脚朝右
N2	5	—	Copper0.05*7mm	0.96Ts	平整居中	TAPE 2TS	针脚朝右
N3	B	A	TEX-EΦ0.40mm*1p	24Ts	半整密绕	TAPE 2TS	针脚朝右
N4	4	5	2UWΦ0.20mm*1p	13Ts	平整居中	TAPE 2TS	针脚朝右
N5	3	1	2UWΦ0.28mm*1p	23Ts	半整密绕	TAPE 2TS	针脚朝右

**四、外形图**

**五、电气性能参数及要求**

- Bobbin: EE19磁芯加厚型(立式S+SP) 电木
- 磁芯要求: EE19H TDK PC40或同等材质
- 主磁量:  $L_{pin1} \rightarrow 2700\mu H \pm 5\%$ , 漏感  $\leq 20\mu H$  (扣除其余PTK)
- 测试条件: (1) 测试频率10KHz, (2) 测试电压0.25V
- 耐压:
  - P-S 3750VAC 1Min 5mA (Max) ARC 3.5mA
  - S-C 1500VAC 1Min 5mA (Max)
  - P-C 1000VAC 1Min 5mA (Max)
  - A-B 3000VAC 1Min 5mA (Max)
- 参考测试仪器: 1. LCR: 1062 Zentech  
2. 高压仪: CS9912B1 长盛

**六、注意事项**

- 空PIN6, 7, 8, 9, 10脚, PIN3脚2/3;
- A, B为飞线, A线从7脚顶部槽内出线, B线从9脚顶部槽内出线, 长度25mm(请注意套管颜色要求)
- 绝缘成品后需17mm宽胶纸带沿绕线包方向包2TS外层胶布;
- 注意针脚排列顺序, 外观针脚无倾斜及引脚不可有绝缘油, 焊点光亮无漏焊;
- 成品组件真空、浸漆、烘干;
- 工艺要求:
  - ①密绕要求: 不能散线、重叠、交叉;
  - ②疏绕要求: 绕线均匀, 无重叠、交叉;
  - ③进出线要求: 进出线应成直角, 出线与绕线交叉时不能直接压在绕线上, 应该先用麦拉胶串隔后再做绕线;
- 所有材料要求符合RoHS要求;
- 其它未尽事项请参考相关行业标准要求;

**七、标签要求**

用—LABEL注明朝于1-5脚侧位

说明:

- 材质为透明特多龙, 文字颜色透明;
- 加背胶总厚度为0.1mm;
- RoHS环保;

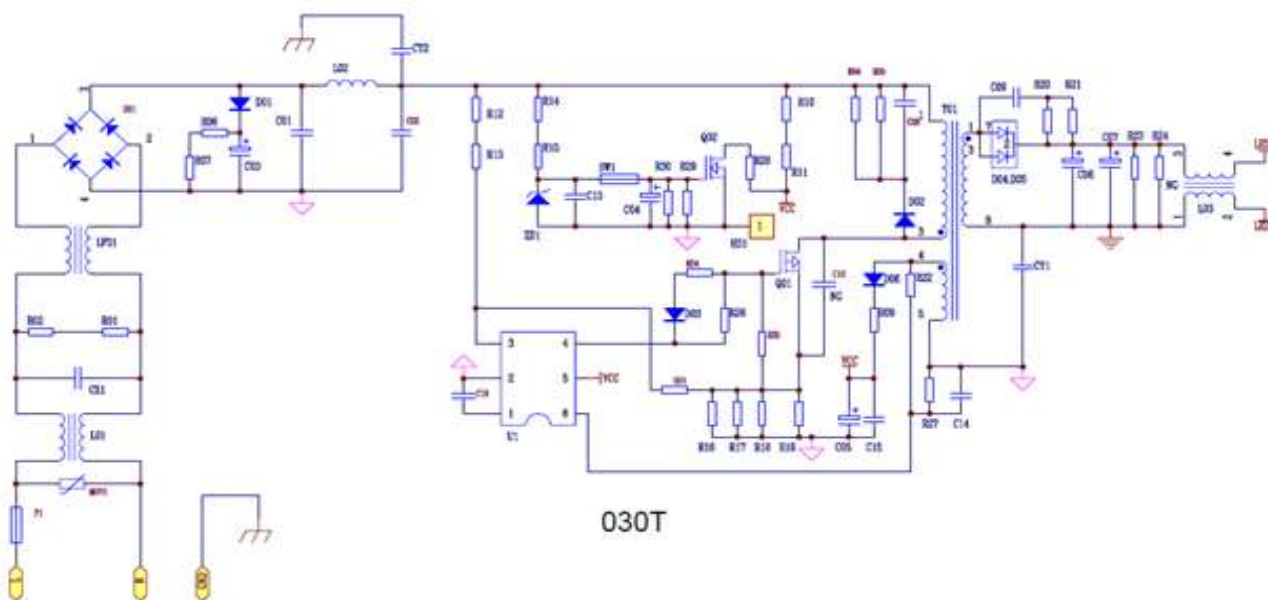
使用机型: 030T	5		
单位: mm	材料规格:	制定日期:	2018.09.12
比例: 参考	物料名称: 变压器	制图:	
序号: T0194	物料型号: 020T-36	审核:	
数量: 1000	物料规格:	审核:	
版本: A1		核准:	

深圳市达尔美电子科技有限公司  
Shenzhen Dalmia Electronics Technology Co., Ltd.

序号	修改人	修改日期	修改内容

**Illustration 8b - Circuit diagram and PCB layout**

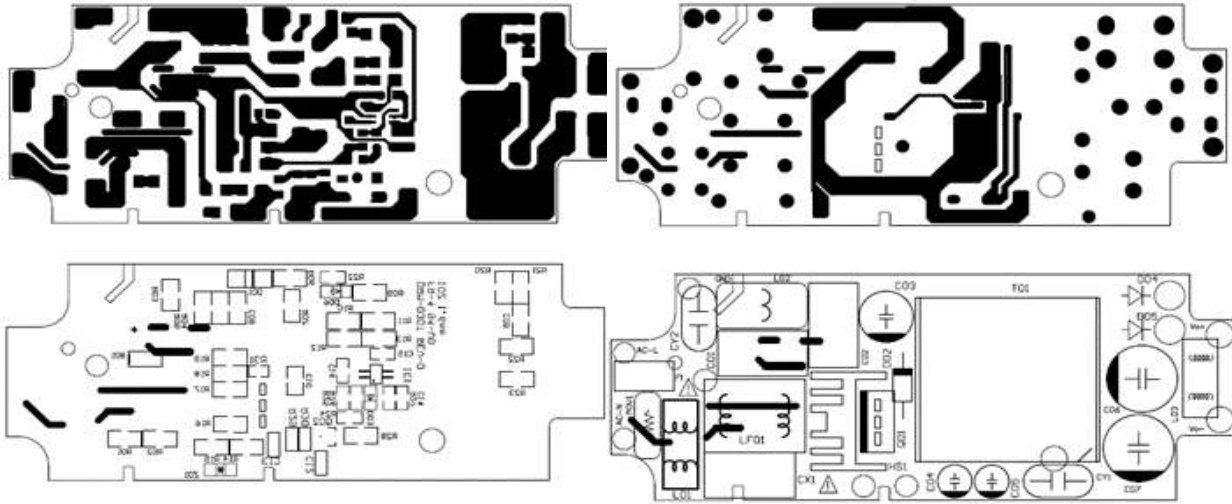
LED Driver DRM-030T360090



**7.0 Illustrations**

**Illustration 8c - Circuit diagram and PCB layout**

LED Driver DRM-030T360090



**Illustration 8d - Spec. of transformer**

030T-36 for LED Driver DRM-030T360090

**一. 电气原理图**

1. 圆点端为线圈起始端。  
2. “-”表示接铁氟龙套管

**二. 骨架图**

**三. 绕制图面**

**五. 电气性能参数及要求**

- Bobbin: EP105 (5\*5) 电木;
- 磁芯要求: TD6 PG40 或同等材质
- 主静量: Lpin2=4\*550±10%, 偏差<0.7, 5μH(短路其余PIN)
- 测试条件: (1) 测试频率10KHz, (2) 测试电压0.25V.
- 耐压:
 

<input checked="" type="checkbox"/>	I-E	3750VAC	1WIn	5mA (Max)	ARC 5. 5mA
<input checked="" type="checkbox"/>	I-C	1600VAC	1WIn	5mA (Max)	
<input checked="" type="checkbox"/>	I-B	1000VAC	1WIn	5mA (Max)	
<input checked="" type="checkbox"/>	A-B	3000VAC	1WIn	5mA (Max)	
- 参考测试仪器: 1. LCR:1063 Zentech  
2. 高压仪: CS991201 长盛

**六. 注意事项**

- 线N1、N2、N5针脚在PIN6-10树脂包4mm内端, 所有进出线加铁氟龙套管;
- 组装完成后需外包5mm宽拉胶带3TS, 固定磁芯, 所有工艺必须符合安规标准;
- PIN6, 8, 10接线, PINS胶移后剪去2/3, 成品须挂真空, 浸漆, 烘干;
- 成品包18.5mm的外围胶套3TS;
- 注意针脚排列顺序, 外观针脚无歪斜, 焊点光亮无漏焊;
- 工艺要求:
  - ① 常规要求: 不能散线、重叠、交叉;
  - ② 绕线要求: 绕线均匀、无重叠、交叉;
  - ③ 进出线要求: 进出线成直角, 出线与绕线交叉时不能直接压在绕线上;
- 所有材料要求符合RoHS要求;
- 其它未尽事项请参考同行业标准要求;

**七. 标签要求**

030T-36

用—LABEL注明贴于初级线中间。  
说明:  
1. 材质为透明特多龙, 文字黄色透明。  
2. 加背胶总厚度为0.1mm。  
3. RoHS环保。

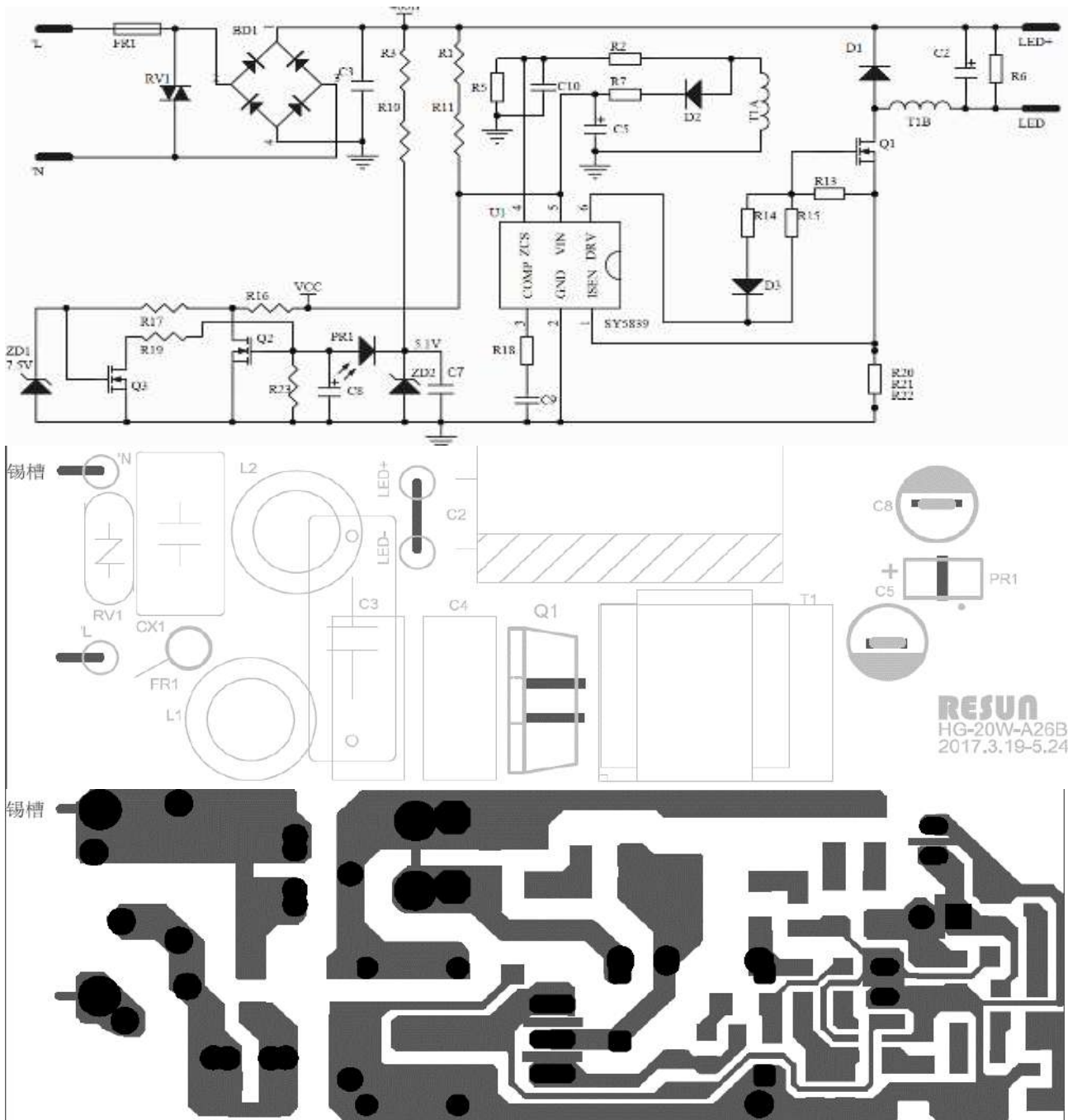
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图号: 030T-36	物料名称: 030T-36	承认	4		
图号: 030T-36	物料名称:	审核	3		
图号: 030T-36	物料名称:	核准	2		
图号: 030T-36	物料名称:	核准	1		
图号: 030T-36	物料名称:	核准	0		

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**7.0 Illustrations**

**Illustration 9 - Circuit diagram and PCB layout of LED Driver ML-026T60390**

Also represent LED Driver Model ML-018T60270



**7.0 Illustrations**

**Illustration 10a - Ratings**

50/60Hz				
Model No.	Voltage / V	Current / A (Max)	Wattage / W (Max)	LED Driver Model
MLWPB-42W-277-XXK-X	120-277V	0.42	42	DRM-060T360120 or DRM-060T360120-1 or BLD-CM08E-480220
MLWPB-60W-277-XXK-X	120-277V	0.6	60	DRM-060T360160 or DRM-060T360160-1 or BLD-CM08E-480220
MLWPB-80W-277-XXK-X	120-277V	0.8	80	ML-080T402000 or BLD-CM08E-480220
MLWPB-100W-277-XXK-X	120-277V	1	100	ML-100T402300 or BLD-CM08E-480220
MLWPB-120W-277-XXK-X	120-277V	1.2	120	ML-120T402750 or BLD-CM08E-480220
MLWPB-42W-347-XXK-X	100-347V	0.42	42	ML-HV-050T40120
MLWPB-60W-347-XXK-X	100-347V	0.6	60	ML-HV-060T40150
MLWPB-80W-347-XXK-X	100-347V	0.8	80	ML-HV-080T40200
MLWPB-100W-347-XXK-X	100-347V	1	100	ML-HV-100T402300
MLWPB-120W-347-XXK-X	100-347V	1.2	120	ML-HV-120T402750
MLWPB-42W-277-XXK-X-G	120-277V	0.42	42	DRM-060T360120 or DRM-060T360120-1 or BLD-CM08E-480220
MLWPB-60W-277-XXK-X-G	120-277V	0.6	60	DRM-060T360160 or DRM-060T360160-1 or BLD-CM08E-480220
MLWPB-80W-277-XXK-X-G	120-277V	0.8	80	ML-080T402000 or BLD-CM08E-480220
MLWPB-100W-277-XXK-X-G	120-277V	1	100	ML-100T402300 or BLD-CM08E-480220
MLWPB-120W-277-XXK-X-G	120-277V	1.2	120	ML-120T402750 or BLD-CM08E-480220
MLWPB-42W-347-XXK-X-G	100-347V	0.42	42	ML-HV-050T40120
MLWPB-60W-347-XXK-X-G	100-347V	0.6	60	ML-HV-060T40150
MLWPB-80W-347-XXK-X-G	100-347V	0.8	80	ML-HV-080T40200
MLWPB-100W-347-XXK-X-G	100-347V	1	100	ML-HV-100T402300
MLWPB-120W-347-XXK-X-G	100-347V	1.2	120	ML-HV-120T402750
MLWPB2-42W-277-XXK-X	120-277V	0.42	42	DRM-060T360120 or DRM-060T360120-1 or BLD-CM08E-480220
MLWPB2-60W-277-XXK-X	120-277V	0.6	60	DRM-060T360160 or DRM-060T360160-1 or BLD-CM08E-480220
MLWPB2-80W-277-XXK-X	120-277V	0.8	80	ML-080T402000 or BLD-CM08E-480220
MLWPB2-100W-277-XXK-X	120-277V	1	100	ML-100T402300 or BLD-CM08E-480220
MLWPB2-120W-277-XXK-X	120-277V	1.2	120	ML-120T402750 or BLD-CM08E-480220
MLWPB2-42W-347-XXK-X	100-347V	0.42	42	ML-HV-050T40120
MLWPB2-60W-347-XXK-X	100-347V	0.6	60	ML-HV-060T40150
MLWPB2-80W-347-XXK-X	100-347V	0.8	80	ML-HV-080T40200
MLWPB2-100W-347-XXK-X	100-347V	1	100	ML-HV-100T402300
MLWPB2-120W-347-XXK-X	100-347V	1.2	120	ML-HV-120T402750

**7.0 Illustrations**

**Illustration 10b - Ratings**

50/60Hz				
Model No.	Voltage / V	Current / A (Max)	Wattage / W (Max)	LED Driver Model
MLWPC2-42W-277-XXK-X	120-277V	0.42	42	DRM-060T360120 or DRM-060T360120-1 or BLD-CM08E-480220
MLWPC2-60W-277-XXK-X	120-277V	0.6	60	DRM-060T360160 or DRM-060T360160-1 or BLD-CM08E-480220
MLWPC2-80W-277-XXK-X	120-277V	0.8	80	ML-080T402000 or BLD-CM08E-480220
MLWPC2-100W-277-XXK-X	120-277V	1	100	ML-100T402300 or BLD-CM08E-480220
MLWPC2-42W-347-XXK-X	100-347V	0.42	42	ML-HV-050T40120
MLWPC2-60W-347-XXK-X	100-347V	0.6	60	ML-HV-060T40150
MLWPC2-80W-347-XXK-X	100-347V	0.8	80	ML-HV-080T40200
MLWPC2-100W-347-XXK-X	100-347V	1	100	ML-HV-100T402300
ML-WPA-13W-277V-XXK-X	100-277V	0.17	13	DRM-010T800017
ML-WPA-12W-277V-XXK-X	100-277V	0.15	12	DRM-010T800015
ML-WPD-20W-XX	120-277V	0.2	20	DRM-020T360060
ML-WPA-18W-XX	100-277V	0.19	18	DRM-020T360060 or ML-018T60270
ML-WPA-26W-XX	100-277V	0.27	26	DRM-030T360090 or ML-026T60390
ML-WPD-30W-XX	100-277V	0.32	30	DRM-030T360090
ML-WPD-60W-XX	100-277V	0.6	60	DRM-060T360160 or DRM-060T360160-1
ML-WPD-80W-XX	100-277V	0.8	80	2*DRM-060T360160 or 2*DRM-060T360160-1
FL35-15W-XXK-X	120-347V	0.125	15	HG26-A19-18
FL35-26W-XXK-X		0.217	26	HG26-A19-26
FL35-30W-XXK-X		0.25	30	HG26-A19-30
FL35-50W-XXK-X		0.417	50	HG40-A19-50
FL35-80W-XXK-X		0.667	80	HG60-A19-78
FL35-100W-XXK-X		0.834	100	HG100-A17-100
FL35-150W-XXK-X		1.25	150	HG150-A15
FL35-200W-XXK-X		1.667	200	HG240-A07
PLC150W/100W/75W-XXK-X		120-347V	1.25	150
PLC240W/200W/150W-XXK-X	2		240	HG240-A07 or BQE240D-260-PVF-Z
PLC300W/240W/200W-XXK-X	2.5		300	2*HG150-A15 or BQE300D-260-PVF-Z
PLC50WI-XXK-X	120-277V	0.417	50	SS-50VA-56 or EUM-050S150D
PLC75WI-XXK-X		0.625	75	SS-75VA-56 or EUM-075S210DG
PLC100WI-XXK-X		0.834	100	SS-100VA-56 or EUM-100S280DG
PLC150WI-XXK-X		1.25	150	SS-150VA-56 or EUM-150S420DG
PLC200WI-XXK-X		1.667	200	SS-200VA-56 or EUM-200S560DG
PLC240WI-XXK-X		2	240	SS-240VA-56 or EUM-240S670DG
PLC300WI-XXK-X		2.5	300	2*SS-150VA-56 or 2*EUM-150S420DG

**7.0 Illustrations**

**Illustration 10c - Ratings**

50/60Hz				
PLC100WHVI-XXK-X	277-480V	0.361	100	SS-100M-56
PLC150WHVI-XXK-X		0.542	150	SS-150M-56
PLC200WHVI-XXK-X		0.722	200	SS-240M-56
PLC240WHVI-XXK-X		0.867	240	SS-240M-56
PLC300WHVI-XXK-X		1.083	300	2*SS-150M-56
ML-WPD2-20W-XXK-X	120-347V	0.167	20	HG26-A19-18
ML-WPD2-30W-XXK-X		0.25	30	HG26-A19-30
ML-WPD2-40W-XXK-X		0.334	40	HG40-A19-42
ML-WPD2-60W-XXK-X		0.5	60	HG60-A19-60
ML-WPD2-80W-XXK-X		0.667	80	HG60-A19-78
ML-WPD2-100W-XXK-X		0.834	100	HG100-A17-100
ML-WPD2-120W-XXK-X		1	120	HG100-A17-120
ML-HBC-100W-XXK-X	120-347V	0.834	100	HG150-A12
ML-HBC-150W-XXK-X		1.25	150	
ML-HBC-200W-XXK-X		1.667	200	HG240-A05
ML-HBC-240W-XXK-X		2	240	
ML-HBC-100W-XXK-X-X	120-277V	1.2	100	ZH-HBG-120ELII-150B or SS-120CNL-E260B or FD-100K-130C
ML-HBC-150W-XXK-X-X		1.8	150	ZH-HBG-160ELII-150B or SS-150CNL-E260B or FD-150K-130C
ML-HBC-200W-XXK-X-X		2	200	ZH-HBG-200ELII-130B or SS-200CNL-E260B or FD-200K-130C
ML-HBC-240W-XXK-X-X		2.5	240	ZH-HBG-240ELII-130B or SS-240CNL-E260B or FD-240K-130C
ML-HBC-300W-XXK-X-X	100-277V	2.8	300	ZH-HBG-300NLII-260B
ML-HBC-100W-XXK-X-HV	120-347V	1.2	100	G6C-096M260A12 or SS-120SN-130BH or FD-100L-260C
ML-HBC-150W-XXK-X-HV		1.8	150	G6C-160M260A12 or SS-150SN-260BH or FD-150L-260C
ML-HBC-200W-XXK-X-HV		2.0	200	G6C-200M260A12 or SS-200SN-260BH or FD-200L-260C
ML-HBC-240W-XXK-X-HV		2.5	240	G6C-240M260A12F or SS-240SN-260BH or FD-240L-260C
ML-HBC-300W-XXK-X-HV		2.8	300	ZH-HBG-300NLG-260B

**7.0 Illustrations**

**Illustration 10d - Ratings**

Model No.	LED quantity of each LED PWB	LED PWB quantity	Max.Weight of product / kg	Overall dimension / mm (L x W x H)
MLWPB-42W-XXX-XXK-X	6S10P	1	4.3	360 x 189 x 235
MLWPB-60W-XXX-XXK-X	6S12P	1	4.3	360 x 189 x 235
MLWPB-80W-XXX-XXK-X	6S16P	1	4.5	360 x 189 x 235
MLWPB-100W-XXX-XXK-X	6S20P	1	4.5	360 x 189 x 235
MLWPB-120W-XXX-XXK-X	6S24P	1	4.5	360 x 189 x 235
MLWPB-42W-XXX-XXK-X-G	6S10P	1	4.3	362 x 224 x 235
MLWPB-60W-XXX-XXK-X-G	6S12P	1	4.3	362 x 224 x 235
MLWPB-80W-XXX-XXK-X-G	6S16P	1	4.5	362 x 224 x 235
MLWPB-100W-XXX-XXK-X-G	6S20P	1	4.5	362 x 224 x 235
MLWPB-120W-XXX-XXK-X-G	6S24P	1	4.5	362 x 224 x 235
MLWPB2-42W-XXX-XXK-X	6S10P	1	4.3	361 x 188 x 235
MLWPB2-60W-XXX-XXK-X	6S12P	1	4.3	361 x 188 x 235
MLWPB2-80W-XXX-XXK-X	6S16P	1	4.5	361 x 188 x 235
MLWPB2-100W-XXX-XXK-X	6S20P	1	4.5	361 x 188 x 235
MLWPB2-120W-XXX-XXK-X	6S24P	1	4.5	361 x 188 x 235
MLWPC2-42W-XXX-XXK-X	6S10P	1	4.3	320 x 130 x 173
MLWPC2-60W-XXX-XXK-X	6S12P	1	4.3	320 x 130 x 173
MLWPC2-80W-XXX-XXK-X	6S16P	1	4.5	320 x 130 x 173
MLWPC2-100W-XXX-XXK-X	6S20P	1	4.5	320 x 130 x 173
ML-WPA-13W-277V-XXK-X	8S2P	1	0.3	210 x 138 x 65
ML-WPA-12W-277V-XXK-X	8S2P	1	0.3	210 x 138 x 65
ML-WPD-20W-XX	9S4P	1	2	198 x 168 x 110
ML-WPA-18W-XX	30	1	0.9	153 x 233 x 91
ML-WPA-26W-XX	30	1	0.9	153 x 233 x 91
ML-WPD-30W-XX	50	1	1.1	198 x 168 x 110
ML-WPD-60W-XX	120	1	1.6	288 x 242 x 160
ML-WPD-80W-XX	120	1	1.8	288 x 242 x 160
FL35-15W-XXK-X	9C2P	1	0.56	125 x 150 x 55
FL35-26W-XXK-X	10C3P	1		
FL35-30W-XXK-X		1		
FL35-50W-XXK-X	10C6P	1	1.03	185 x 184 x 60
FL35-80W-XXK-X	10C8P	1	1.52	221 x 211 x 71
FL35-100W-XXK-X	12C10P	1	1.66	
FL35-150W-XXK-X	20C9P	1	3.15	315 x 343 x 90
FL35-200W-XXK-X	20C11P	1	3.21	
PLC150W/100W/75W-XXK-X	16C12P	1	3.54	300 x 472 x 65.5
	32C6P	1	3.67	
PLC240W/200W/150W-XXK-X	21C16P	1	4.15	300 x 532 x 65.5
	40C8P	1	4.39	
PLC300W/240W/200W-XXK-X	16C24P	2	5.5	300 x 656 x 65.5
	16C12P	2	5.59	
PLC50WI-XXK-X	7C10P	1	3.4	300 x 472 x 65.5
PLC75WI-XXK-X	7C14P	1	3.65	
PLC100WI-XXK-X	7C20P	1	3.62	
PLC150WI-XXK-X	7C28P	1	3.69	
PLC200WI-XXK-X	7C40P	1	4.15	300 x 532 x 65.5
PLC240WI-XXK-X	7C48P	1	4.21	
PLC300WI-XXK-X	7C56P	2	5.5	300 x 656 x 65.5
PLC100WHVI-XXK-X	7C20P	1	3.7	300 x 532 x 65.5
PLC150WHVI-XXK-X	7C28P	1	3.8	
PLC200WHVI-XXK-X	7C40P	1	4.31	
PLC240WHVI-XXK-X	7C48P	1	4.35	
PLC300WHVI-XXK-X	7C56P	2	5.61	

**7.0 Illustrations**

**Illustration 10e - Ratings**

ML-WPD2-20W-XXK-X	12C2P	1	1.33	205 x 169 x 97.5
ML-WPD2-30W-XXK-X		1		
ML-WPD2-40W-XXK-X	12C4P	1	1.42	280 x 216 x 110
ML-WPD2-60W-XXK-X	12C6P	1	2.05	
ML-WPD2-80W-XXK-X	12C8P	1		
ML-WPD2-100W-XXK-X	12C10P	1		
ML-WPD2-120W-XXK-X	12C12P	1	3.08	300 x 267 x 124
ML-HBC-100W-XXK-X	14C14P	1	2.19	280 x 280 x 85
ML-HBC-150W-XXK-X	14C22P	1		
ML-HBC-200W-XXK-X	14C28P	1	3.16	320 x 320 x 85
ML-HBC-240W-XXK-X	14C36P	1		
ML-HBC-100W-XXK-X-X	14C14P	1	1.58	254 x 254 x 108
	25C8P	1	1.92	
ML-HBC-150W-XXK-X-X	14C21P	1	1.95	280 x 280 x 113
	25C12P	1	2.27	
ML-HBC-200W-XXK-X-X	14C28P	1	2.45	320 x 320 x 119
	25C16P	1	2.67	
ML-HBC-240W-XXK-X-X	14C34P	1	2.84	350 x 350 x 123
	25C19P	1	3.78	
ML-HBC-300W-XXK-X-X	25C24P	1	3.01	
ML-HBC-100W-XXK-X-HV	25C8P	1	1.72	254 x 254 x 108
	14C14P	1	1.85	
ML-HBC-150W-XXK-X-HV	25C12P	1	2.11	280 x 280 x 113
ML-HBC-200W-XXK-X-HV	25C16P	1	2.55	320 x 320 x 119
ML-HBC-240W-XXK-X-HV	25C19P	1	3.16	350 x 350 x 123
ML-HBC-300W-XXK-X-HV	25C24P	1	2.93	

<b>8.0 Test Summary</b>			
Evaluation Period	18-Feb-2019 ~ 21-Feb-2019		Project No. 190200085HZH
Sample Rec. Date	18-Feb-2019	Condition Prototype	Sample ID. 1190218-11-***
Test Location	Intertek Testing Services Hangzhou		
Test Procedure	Testing Lab		
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.			
The following tests were performed:			
Test Description	UL 1598:2018 Ed.4	CSA C22.2#250.0:2018 Ed.4	
Electrical spacings	6.11	6.11	
Normal temperature test	14	14	
Mold stress relief	16.4	16.4	
Wet locations	16.5	16.5	
Loading	16.15	16.15	
Strain relief	16.21	16.21	
Polymeric impact	16.41	16.41	
Dielectric voltage-withstand	17.1	17.1	
Bonding circuit impedance	17.2	17.2	
Test Description	UL 8750:2015 Ed.2+R:22Aug2018	CSA C22.2#250.13:2017 Ed.3	
Input test	8.2	9.2	
Temperature test	8.3	9.3	
Dielectric voltage withstand test	8.6	9.4	
Abnormal test	8.7	9.5	
Leakage current measurement test	8.9	9.7	
Environmental tests	8.14	9.12	
Determination of low-voltage, limited-energy circuit status	8.16	Annex A	

Evaluation Period	9-Jul-2021 ~ 16-Sep-2021		Project No. 210709042GZU
Sample Rec. Date	9-Sep-2021	Condition Prototype	Sample ID. S210709042-001~041
Test Location	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room 02, &101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2, Caipin Road, Science City, GETDD Guangzhou, Guangdong, China		
Test Procedure	Testing Lab		
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.			
The following tests were performed:			
Test Description	UL 1598:2018 Ed.4/ Clause	CSA C22.2#250.0:2018 Ed.4/ Clause	
Normal Temperature Test	15	15	
Mold Stress Relief Test	17.4	17.4	
Rain Test	17.5.2	17.5.2	
Loading Test	17.15	17.15	
Strain Relief Test	17.21	17.21	
Impact Test	17.41	17.41	
Dielectric Voltage-Withstand Test	18.1	18.1	
Bonding Impedance Test	18.2	18.2	
Test Description	[UL 8750:2015 Ed.2+R:5Jan2021] / Clause	[CSA C22.2#250.13:2020 Ed.4]/ Clause	
Input Test	8.2	9.2	
Temperature Test	8.3	9.3	
Dielectric Voltage-Withstand Test	8.6	9.4	
Environmental Test - Humidity	8.14.1	9.12.1	

<b>8.0 Test Summary</b>			
Evaluation Period	1-Nov-2021	Project No.	HK21110058
Due to the previous testing performed and listed above, no additional testing was necessary for adding new model and standard updated from "UL 1598:2018 Ed.4" to "UL 1598:2021 Ed.5" & "CSA C22.2#250.0:2018 Ed.4" to "CSA C22.2#250.0:2021 Ed.5".			

<b>8.1 Signatures</b>			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	Andy Tse	Reviewed by:	Terry Lau
Title:	Engineer	Title:	Supervisor
Signature:	<i>Signature on file</i>	Signature:	<i>Signature on file</i>

<b>9.0 Correlation Page For Multiple Listings</b>	
The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.	
BASIC LISTEE	ShenZhen Minglight Co., Ltd
Address	No. 37, Yuanhu Road, Zhangbei Community, Longgang District, SHENZHEN Guangdong 518116
Country	China
Product	LED Fixed Light

MULTIPLE LISTEE 1	IKIO LED LIGHTING(DONGGUAN)CO., LTD
Address	2F, Building D, XinHe Industrial Zone, NO 12, Shengfeng Road, Wangliang District, Dongguan City, GD
Country	China
Brand Name	IKIO LED LIGHTING(DONGGUAN)CO., LTD

ASSOCIATED MANUFACTURER	ShenZhen Minglight Co., Ltd
Address	No. 37, Yuanhu Road, Zhangbei Community, Longgang District, SHENZHEN Guangdong 518116
Country	China

MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS
IK-WPBO-L110-0020-DN- followed by two characters; followed by -ML.	ML-WPD-20W- followed by two characters.
IK-WPBO-L110-0018-DN- followed by two characters; followed by -ML.	ML-WPA-18W- followed by two characters.
IK-WPBO-L110-0026-DN- followed by two characters; followed by -ML.	ML-WPA-26W- followed by two characters.
IK-WPBO-L110-0030-DN- followed by two characters; followed by -ML.	ML-WPD-30W- followed by two characters.
IK-WPBO-L110-0060-DN- followed by two characters; followed by -ML.	ML-WPD-60W- followed by two characters.
IK-WPBO-L110-0080-DN- followed by two characters; followed by -ML.	ML-WPD-80W- followed by two characters.
IK-WPBOA-0013- followed by two characters; followed by -ML.	ML-WPA-13W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOA-0012- followed by two characters; followed by -ML.	ML-WPA-12W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBO-L110-0042-DN- followed by two characters; followed by -ML.	MLWPB-42W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOA-L110-0060-DN- followed by two characters; followed by -ML.	MLWPB-60W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOA-L110-0080-DN- followed by two characters; followed by -ML.	MLWPB-80W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOA-L110-0100-DN- followed by two characters; followed by -ML.	MLWPB-100W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOA-L110-0120-DN- followed by two characters; followed by -ML.	MLWPB-120W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOG-0042- followed by two characters; followed by -ML.	MLWPB-42W-277- followed by two characters; followed by K-; followed by one character; followed by -G.
IK-WPBOG-0060- followed by two characters; followed by -ML.	MLWPB-60W-277- followed by two characters; followed by K-; followed by one character; followed by -G.
IK-WPBOG-0080- followed by two characters; followed by -ML.	MLWPB-80W-277- followed by two characters; followed by K-; followed by one character; followed by -G.
IK-WPBOG-0100- followed by two characters; followed by -ML.	MLWPB-100W-277- followed by two characters; followed by K-; followed by one character; followed by -G.
IK-WPBOG-0120- followed by two characters; followed by -ML.	MLWPC2-42W-277- followed by two characters; followed by K-; followed by one character.
	MLWPC2-60W-277- followed by two characters; followed by K-; followed by one character.

**9.0 Correlation Page For Multiple Listings**

IK-WPBOF-TX-0042- followed by two characters; followed by -ML.	MLWPC2-80W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOF-TX-0060- followed by two characters; followed by -ML.	MLWPC2-100W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOF-TX-0080- followed by two characters; followed by -ML.	MLWPB2-42W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOF-TX-0100- followed by two characters; followed by -ML.	MLWPB2-60W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOB2-0042- followed by two characters; followed by -ML.	MLWPB2-80W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOB2-0060- followed by two characters; followed by -ML.	MLWPB2-100W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOB2-0080- followed by two characters; followed by -ML.	MLWPB2-120W-277- followed by two characters; followed by K-; followed by one character.
IK-WPBOB2-0100- followed by two characters; followed by -ML.	
IK-WPBOB2-0120- followed by two characters; followed by -ML.	

<b>9.0 Correlation Page For Multiple Listings</b>	
<b>MULTIPLE LISTEE 2</b>	Factory Direct Lighting (2020) Ltd
Address	100 Shields Court, Unit B, Markham, Ontario, L3R 9T5
Country	Canada
Brand Name	FDL
<b>ASSOCIATED MANUFACTURER</b>	ShenZhen Minglight Co., Ltd
Address	No. 37, Yuanhu Road, Zhangbei Community, Longgang District, SHENZHEN Guangdong 518116
Country	China
MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS
FDWPS-13-LED-5K-120-277V, FDWPS-26-LED-5K-120-277V, FDWPD2-20-LED-120-347V, FDWPD2-40-LED-120-347V, FDWPD2-60-LED-120-347V, FDWPD2-80-LED-120-347V, FDFL-75/100/150-LED5K-120-347V FDFL-150/200/240-LED5K-120-347V FDFL-200/240/300-LED5K-120-347V FDWP-42-LED-5K-120-347V-D FDWP-60-LED-5K-120-347V-D FDWP-80-LED-5K-120-347V-D FDWP-100-LED-5K-120-347V-D	ML-WPA-13W-277V- followed by two characters; followed by K-; followed by one character. ML-WPA-26W- followed by two characters. ML-WPD2-20W followed by four characters. ML-WPD2-40W followed by four characters. ML-WPD2-60W followed by four characters. ML-WPD2-80W followed by four characters. PLC150W/100W/75W-50K-S PLC240W/200W/150W-50K-S PLC300W/240W/200W-50K-S MLWPB-42W-347-50K-M MLWPB-60W-347-50K-M MLWPB-80W-347-50K-M MLWPB-100W-347-50K-M

<b>9.0 Correlation Page For Multiple Listings</b>	
<b>MULTIPLE LISTEE 3</b>	Disruptive Solid State Lighting, LLC
Address	1000 N Green Valley Pkwy #440, Henderson, NV 89074
Country	USA
Brand Name	DSSL
<b>ASSOCIATED MANUFACTURER</b>	ShenZhen Minglight Co., Ltd
Address	No. 37, Yuanhu Road, Zhangbei Community, Longgang District, SHENZHEN Guangdong 518116
Country	China
MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS
<p>DWP12-277V- or DWP13-277V-; followed by two characters; followed by K-; followed by one character.</p> <p>DWP26- or DWP18-; followed by two characters.</p> <p>DWP42-, DWP60-, DWP80-, DWP100- or DWP120-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>DCW-S42-, DCW-S60-, DCW-S80-, DCW-S100- or DCW-S120-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>DCW-A42-, DCW-A60-, DCW-A80- or DCW-A100-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>DCW followed by 20W, 30W, 40W, 60W, 80W, 100W or 120W; followed by four characters; may be followed by -D, -P or -S.</p>	<p>ML-WPA-12W-277V- or ML-WPA-13W-277V-; followed by two characters; followed by K-; followed by one character.</p> <p>ML-WPA-26W- or ML-WPA-18W-; followed by two characters.</p> <p>MLWPB-42W-, MLWPB-60W-, MLWPB-80W-, MLWPB-100W- or MLWPB-120W-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>MLWPB2-42W-, MLWPB2-60W-, MLWPB2-80W-, MLWPB2-100W- or MLWPB2-120W-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>MLWPC2-42W-, MLWPC2-60W-, MLWPC2-80W- or MLWPC2-100W-; followed by three characters; followed by -; followed by two characters; followed by K-; followed by one character.</p> <p>ML-WPD2- followed by 20W, 30W, 40W, 60W, 80W, 100W or 120W; followed by four characters; may be followed by -D, -P or -S.</p>

## 10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

### COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments

### LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

**For US standards**, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

**For Canadian standards**, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

**If all standards on the ATM have the same standard title**, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

**Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.**

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

### MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

### FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

### **10.1 Evaluation of Unlisted Components**

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

**The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.**

**Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.**

Managing CEC Location:

Intertek Testing Services Shenzhen Limited Guangzhou Branch

ETL Component Evaluation Center

Room 02, &101/E201/E301/E401/E501/E601/E701/E801 of Room 01 1-8/F., No. 7-2,  
Caipin Road, Science City

GETDD Guangzhou, Guangdong, China

Attn: Ms. Joey Kuang

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

**11.0 Manufacturing and Production Tests**

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

**Required Tests**

Dielectric voltage-withstand,  
 Grounding continuity,  
 Polarity,  
 Strain relief,  
 Accessible edges

**11.1 Dielectric voltage-withstand**

Method

Each device shall withstand without electrical breakdown, as a routine production-line test. The device may be in a heated or unheated condition for the test. The test shall be conducted when the device is fully assembled. It is not intended that the product be unwired, modified, or disassembled for the test. The test may be performed before final assembly if the test represents the completed product. A device employing a solid-state component that is not relied upon to reduce a risk of electric shock and that can be damaged by the dielectric potential may be tested before the component is electrically connected provided that a random sampling of each day's production is tested at the potential. The circuitry may be rearranged for the purpose of the test to reduce the likelihood of solid-state component damage while retaining representative dielectric stress of the circuit.

Test Equipment

The test equipment shall include a transformer having an essentially sinusoidal output, a means of indicating the test potential, an audible or visual indicator of electrical breakdown, and either a manually reset device to restore the equipment after electrical breakdown or an automatic reject feature for any unacceptable unit. If the output of the test equipment transformer is less than 500 VA, the equipment shall include a voltmeter in the output circuit to directly indicate the test potential. If the output of the test equipment transformer is 500 VA or larger, the test potential may be indicated:  
 a) By a voltmeter in the primary circuit or in a tertiary-winding circuit,  
 b) By a selector switch marked to indicate the test potential, or  
 c) For equipment having a single test-potential output, by a marking in a readily visible location to indicate the test potential. When marking is used without an indicating voltmeter, the equipment shall include a positive means, such as an indicator lamp, to indicate that the manually reset switch has been reset following a dielectric breakdown.

**Products Requiring Dielectric Voltage Withstand Test:**

<u>Product</u>	<u>Test Voltage</u>	<u>Test Time</u>
All products covered by this Report.	1200V	1s
<u>Product</u> - One sample from each shipment of Section 4.0 item 73h: Between primary circuit and secondary output	<u>Test Voltage</u> 1554Vac	<u>Test Time</u> 1 minute
Between secondary circuit and core	1554Vac	1 minute
<u>Product</u> - One sample from each shipment of Section 4.0 item 73i: Between primary circuit and secondary output	<u>Test Voltage</u> 1554Vac	<u>Test Time</u> 1 minute
Between secondary circuit and core	1554Vac	1 minute

### 11.2 Grounding continuity

#### Method

A grounding continuity test shall be performed on luminaires with:

- (a) non-current-carrying metal parts that can become energized and are accessible during user maintenance; or
- (b) snap-in lampholders with integral grounding means.

The testing shall be performed as follows: at least once per quarter.

The measured or calculated resistance between the point of connection of the grounding means and any non-current-carrying metal parts shall not exceed 0.10Ω.

#### Products Requiring Grounding continuity Test:

All products covered by this Report.

### 11.3 Polarity

#### Method

One sample of each luminaire design required to comply with the identification and polarity requirements shall be tested at least once per quarter to determine compliance with the polarity test, unless the polarity can be verified visually.

Continuity shall be verified between the point where the identified (neutral) branch circuit conductor is intended to be connected to the luminaire and the lampholder screwshell, using an indicating device such as an ohmmeter or other continuity testing device.

#### Test Equipment

An indicating device such as an ohmmeter or other continuity testing device.

#### Products Requiring Polarity Test:

All products covered by this Report.

### 11.4 Strain relief

#### Method

One sample of each luminaire design with a power supply cord shall be tested at least once per quarter to determine compliance with the strain-relief test.

A pull force of 156 N (35 lb) shall be applied for 1 min to the flexible cord in a direction perpendicular to the plane of the entrance into the luminaire.

Test results shall be acceptable if there is no:

- (a) movement of the flexible cord of more than 1.6 mm (0.063 in); and
- (b) breaking of the conductor or loosening of the wiring connections inside the enclosure of the luminaire.

#### Products Requiring Strain relief Test:

All products covered by this Report.

### **11.5 Accessible edges**

#### Method

An enclosure, frame, or similar device shall not have accessible edges that are sharp or pointed such that they constitute a risk of injury to persons during normal installation, maintenance, and use, unless:

- a) accessible edges are protected by guards or the use of handles to minimize access to sharp edges during installation or maintenance;
- b) an accessible edge or portion of an accessible edge shall be required to be sharp in order to perform a working function; or
- c) it is possible to avoid the hazard through proper procedures; then signs, labels, or the manufacturer's instructions shall describe the procedure to avoid the hazard during installation, maintenance, and use.

Whenever referee measurements are necessary to determine that a part as mentioned above is not sufficiently sharp to constitute a risk of injury to persons, the method described in UL 1439, Tests for Sharpness of Edges on Equipment, shall apply.

One sample of each luminaire style that contains an accessible edge that does not comply with (a), (b), or (c), shall be tested twice annually.

#### Test Record

Test records shall be retained for a period of at least six months, and include test quantity, test dates, catalogue or model numbers, test results, and disposition of any non-complying products.

#### **Products Requiring Accessible edges:**

All products covered by this Report.

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
2-Mar-2021  210201046G ZU	Simon Zhang  William Chen	1.0	-	Changed the Address of applicant and manufacturer from "F-3-4, No. 11, Yuanhu Road, Zhangbei Community, Longgang District, SHENZHEN Guangdong 518116" to "No. 37, Yuanhu Road, Zhangbei Community, Longgang District, SHENZHEN Guangdong 518116".
		6.0	12	Added requirements of transformers.
		7.0	1	Removed ETL Mark. Deleted the description in remarks 1 "ETL logo shall be at least 8mm high. "C" and "US" should be at least 2mm high. "Intertek" shall be at least 3mm high, The control No. shall be at least 2mm high. other letters shall be 2.4mm high."
			2	Deleted the description "Other warning that will not lead to misuse.Both English and French instruction should be provided."
		9.0	1	Merge the multiple models in one cell. Merge the basic listee models in one cell.
		11.0	11.1	Added "Product - One sample from each shipment of Section 4.0 item 73h." Added "Product - One sample from each shipment of Section 4.0 item 73i."
19-Oct-2021  210709042G ZU	Leon Li  William Chen	1.0	-	Changed UL standard from "Luminaires [UL 1598:2018 Ed.4]" to "Luminaires>Valid without technical revision: 30Oct2021< [UL 1598:2018 Ed.4]".
				Changed CSA standard from "Luminaires [CSA C22.2#250.0:2018 Ed.4]" to "Luminaires>Valid without technical revision: 30Oct2021< [CSA C22.2#250.0:2018 Ed.4]".
				Changed the Phone of applicant and manufacturer from "+86 755 28343760" to "+86 755 28289473".
		2.0	-	Added new models as below: FL35- followed by 15W, 26W, 30W, 50W, 80W, 100W, 150W or 200W; followed by four character; may be followed by -D, -P or -S. PLC followed by 150W/100W/75W, 240W/200W/150W or 300W/240W/200W; followed by four character; may be followed by -D, -P or -S. PLC followed by 50W, 75W, 100W, 150W, 200W, 240W or 300W; followed by I; followed by four character; may be followed by -D, -P or -S. PLC followed by 100W, 150W, 200W, 240W or 300W; followed by HVI; followed by four character; may be followed by -D, -P or -S. ML-WPD2- followed by 20W, 30W, 40W, 60W, 80W, 100W or 120W; followed by four character; may be followed by -D, -P or -S. ML-HBC- followed by 100W, 150W, 200W or 240W; followed by four character; may be followed by -D, -P or -S. Adde models similarity for new models. Adde Other Ratings for new models. Removed the ratings to sec. 7.0 III. 10a~c, and added "Refer to Sec.7.0 III.10a, 10b, 10c for details."
3.0	46~60	Added new photos. (46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60)		

12.0 Revision Summary				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change
	Cont'd	4.0	61h, 64j, 66f, 69i, 73h, 73i, 75e	Added input and output ratings.
			77~10 5	Added new components. (77, 78, 79, 79a, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 103a, 104, 105)
		6.0	1	Added spacing require for Max. Input 347V or 480V.
			9	Deleted "The following markings in French are required: refer to Illustration 1 - Label for details."
			10	Changed illustration No. from "1" to "1a,1b".
		7.0	1	Deleted Standard for Label A Added Label for new models.
			1a, 1b, 1c	Added illustration title.
			1a	Changed "For series of models ML-WPA-, ML-WPD-" to "For series of models ML-WPA-, ML-WPD-, FL35, PLC, ML-WPD2, ML-HBC models".
			1b	Corrected "Label C" to "Lable D". Removed statement "Label C" in remark 2.
			10a, 10b, 10c	Added Model Ratings.
		8.0	-	Re-signed.
		10.0	10.1	Changed CEC location from "Hangzhou" to "Guangzhou".
8-Nov-2021	Andy Tse	1.0	-	Updated standards from "Luminaires>Valid without technical revision: 30Oct2021< [UL 1598:2018 Ed.4] Luminaires>Valid without technical revision: 30Oct2021< [CSA C22.2#250.0:2018 Ed.4]" to "Luminaires [UL 1598:2021 Ed.5] Luminaires [CSA C22.2#250.0:2021 Ed.5]".
HK21110058 HKG	Terry Lau		2.0	-

12.0 Revision Summary					
The following changes are in compliance with the declaration of Section 8.1:					
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change	
HK21101023 HKG HK21101025 HKG	Cont'd	2.0	-	"FL35- followed by 15W, 26W, 30W, 50W, 80W, 100W, 150W or 200W; followed by four characters; may be followed by -D, -P or -S. PLC followed by 150W/100W/75W, 240W/200W/150W or 300W/240W/200W; followed by four characters; may be followed by -D, -P or -S. PLC followed by 50W, 75W, 100W, 150W, 200W, 240W or 300W; followed by I; followed by four characters; may be followed by -D, -P or -S. PLC followed by 100W, 150W, 200W, 240W or 300W; followed by HVI; followed by four characters; may be followed by -D, -P or -S. ML-WPD2- followed by 20W, 30W, 40W, 60W, 80W, 100W or 120W; followed by four characters; may be followed by -D, -P or -S. ML-HBC- followed by 100W, 150W, 200W or 240W; followed by four characters; may be followed by -D, -P or -S." due to typo.	
			4.0	75e	Revised name from "Transformer T1" to "Inductor T1".
			8.0	-	Added Test summary.
			9.0	ML2	Added ML2 - "Factory Direct Lighting (2020) Ltd".
				ML3	Added ML3 - "Disruptive Solid State Lighting, LLC".
11.0, 11.5	-	Added Accessible edges Test.			
11-Nov-2022	Orion Fan/ Zhilei Geng	2.0	Model s	Added new models ML-HBC- followed by 100W, 150W, 200W, 240W or 300W; followed by four characters; may be followed by -D, -P or -S; followed by -X. ML-HBC- followed by 100W, 150W, 200W, 240W or 300W; followed by four characters; may be followed by -D, -P or -S; followed by -HV.	
221000759S HA			Rating s	Removed ratings to sec.7.	
		3.0	61~67	Added new photos for new models.	
		4.0	106~1 25	Added new components.	
		7.0	10b- 10e	Added new models. Added ratings in this sec.	
		9.0	ML2	Added Multiple Listee 2 - "Factory Direct Lighting (2020) Ltd" with models: "FDFL-75/100/150-LED5K-120-347V, FDFL-150/200/240-LED5K-120-347V, FDFL-200/240/300-LED5K-120-347V, FDWP-42-LED-5K-120-347V-D, FDWP-60-LED-5K-120-347V-D, FDWP-80-LED-5K-120-347V-D, FDWP-100-LED-5K-120-347V-D"	
				Added corresponding Basic Listee models "PLC150W/100W/75W-50K-S, PLC240W/200W/150W-50K-S, PLC300W/240W/200W-50K-S, MLWPB-42W-347-50K-M, MLWPB-60W-347-50K-M, MLWPB-80W-347-50K-M, MLWPB-100W-347-50K-M".	