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REPORT

On

COMPONENT - DRIVERS FOR LIGHT-EMITTING-DIODE ARRAYS, MODULES AND CONTROLLERS

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***REPUBLIC OF KOREA**

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - Component, LED Driver, Isolated output, constant current, Model Nos. PSDV850101U, PSDV850102U, PSDV850104U, PSDV850106U, PSDV850107U.

ELECTRICAL RATINGS:

Model No.	Input Voltage (V)	Input Frequency (Hz)	Input Current (A)	Power Factor	Output Voltage (Vdc)	Output Current (A)
*PSDV850101U, PSDV850102U, PSDV850104U	100-277	50/60	1.2	0.9	30~43.5	2.1
PSDV850106U, PSDV850107U	100-277	50/60	1.2	0.9	30~43.5	1.9

TECHNICAL CONSIDERATIONS (NOT FOR UL FIELD REPRESENTATIVE USE):

USR - Indicates investigation to the U.S. Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products, UL 8750, First Edition, and the Standard for Class 2 Power Unit, UL 1310, Sixth Ed.

CNR - Indicates investigation to the Canadian Standard for General Use Power Supplies CSA C22.2 107.1-01, Third Ed.

"CN" indicates that the component has been evaluated to Canadian requirements. The Field Representative shall confirm that the component has a CSA Certification Mark or an equivalent identifier or a Canadian UL Listing or Recognition Mark.

All dimensions are nominal, within engineering tolerances, except where specifically indicated as a minimum or a maximum.

The units were evaluated for a maximum 50 °C ambient Temperature with the product placed in a still-air oven during temperature test.

Conditions of Acceptability -

Use - For use only in (or with) complete equipment where the acceptability of the combination is determined by Underwriters Laboratories Inc.

1. The output of this LED Driver complies with the requirements in the NEC Class 2 limits only.
- *2. The product has **45.7** Vdc maximum output voltage during the test. Even though this output complies with the definition of Class 2 per the Canadian Electrical Code, the output cannot be accessible based on maximum voltage restrictions for Class 2 circuits in the Canadian Electrical Code.
3. The input and output connections have been invested for factory wiring only, connection to supply mains shall be determined in the end product. If the product shall be intended to use in field wiring, the suitability shall be determined in each end-use application.
- *4. The LED driver has been temperature tested in a 50 °C ambient, where the maximum temperatures on outer surface of enclosure above transformer (TM101) shall not exceed 88.8 °C for model PSDV850102U, 86.7 °C for model PSDV850101U, 86.6 °C for model PSDV850104U and Tc point on case shall not exceed **88.6 °C** for model PSDV850106U, **86.5 °C** for model PSDV850107U. The need for further evaluation of the internal components shall be considered if enclosure temperatures exceed this value when subjected to temperature testing in the end product.
5. The product is suitable for use in dry and damp locations.
6. The product is intended to be installed as a built-in component of the end product. The unit shall be installed in compliance with the enclosure, mounting, spacing, casualty, temperature, and segregation requirements of the end product application.
7. The transformer (TM101) employs a Class 130(B) insulation system.
8. Spacings have been evaluated in accordance with the requirements of the Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products, UL 8750, First Edition and Canadian Standard for General Use Power Supplies CSA C22.2 107.1-01, 3rd Ed., Revised January 2006 (Reaffirmed 2011).
9. The unit employs input surge suppression protection not suitable for use in permanently connected products. The suppressed voltage rating is SPD Type 3 applications. The suitability of use in permanently connected products must be determined in the end-product application.
10. The enclosure of this unit does not qualify as a final enclosure and the suitability shall be determined in each end-use application.
11. The unit did not provided grounding connection, an investigation of the proper grounding terminal to the end-product main grounding termination shall be required.

CONSTRUCTION DETAILS:

General - See the Section General.

Printed Wiring Board - R/C (ZPMV2), rated V-1 minimum, evaluated DSR, suitable for the solder time and temperature used by the manufacturer and having an operating temperature rating of at least 105 °C.

Corrosion Protection - Ferrous metal parts are protected against corrosion by plating or painting.

Soldered Connections - All soldered connections are mechanically secured before soldering.

Markings - In addition to the Section General, Each unit is legibly and permanently marked with the following. Marking Label (PGDQ2) shall be rated minimum 90 °C. The following markings shall be also marked on the unit.

1. Recognized Company name, File No., or trademark (If authorized).
2. Model Designation.
3. "Suitable for Class 2 Wiring Methods" or equivalent.
4. Optional - Date Code: see below table,

Mean Digit	Plant	Year	Month	Date	Model Code	Serial No
Example	C1: DSEM C2: Solytech	00~99	1..9, A, B, C	01,02,..31	1~9, A~Z	0001~9999

5. Factory identification or code, if more than one location.
6. Optional - The polarity of the Input wiring Connection.
Live-Black color, Neutral-White color
7. Optional - Electrical Ratings:
 - Input voltage, current and power factor, or input wattage;
 - Maximum Output voltage and current;
9. Optional - Suitable for dry and damp locations only;
10. Optional - Maximum Ambient Temperature: 50 °C.

Model difference - Model PSDV850101U is identical to model PSDV850102U except model designation, a few components on control circuit and PWB pattern. Model PSDV850104U is identical to model PSDV850101U except model designation, a few components, PWB pattern. Model PSDV850106U is identical to model PSDV850104U except model designation, **an output current rating**, line filters, PFC, main transformer (TM101), a few components on primary and secondary circuit and PWB pattern. Model PSDV850107U is identical to model PSDV850104U except model designation, **an output current rating**, line filters, PFC, main transformer (TM101), a few components on primary and secondary circuit and PWB pattern.

MODEL PSDV850102U - FIGS. 1 THRU 3

General - FIG. 1 and FIG. 2 show external view of the LED Driver. FIG. 3 shows internal view within potting compound of the LED Driver. The design, shape and arrangement shall be as illustrated.

1. Housing Base - Aluminum, measuring minimum 0.8 mm thick. Overall 196.0 mm by 68.0 mm by 6.8 mm, See ILL. 1 for detailed dimensions.
2. Housing Top Cover - Same material as Item 1, except overall 178.4 mm by 66.4 mm by 37.1 mm, secured to Housing Base by eight bend taps, See ILL. 1 for detailed dimensions.
- *3. Input Wire grommet - R/C (QMFZ2), rated minimum 105 °C, secured in openings of Housing Top Cover, see ILL. 2 for detailed dimensions.
4. Output Wire grommet - R/C (QMFZ2), rated minimum 80 °C, secured in openings of Housing Top Cover, see ILL. 3 for detailed dimensions.
5. Input Lead Wire - R/C (AVLV2), CN, rated minimum 600 V, 105 °C, VW-1, 18 AWG, lead wire extended a minimum 200 mm long outside the enclosure.
6. Output wire - R/C (AVLV2), CN, rated minimum 300 V, 80 °C, 24 AWG.
- 6A. Diming wire - Optional, R/C (AVLV2), CN, same as item 6.
7. Potting compound - R/C (QMFZ2), DOW CORNING CO LTD (E40195), Cat. No. SYLGARD 170#, rated 105 °C, potting silicone material, furnished as two liquid components. Completely surrounds circuit board in Housing.

MODEL - PSDV850102U - FIGS. 4 & 5

General - Fig. 4 shows the internal PWB Top view.

Fig. 5 shows the internal PWB Bottom view.

1. Printed Wiring Board (PWB) - R/C (ZPMV2), rated min. 105 °C, V-0. Overall 173 mm by 62 mm by 1.2 mm thick. For trace layout, see ILL. 4 (not to scale).
2. Fuse (FS101) - (PRI) R/C (JDYX2/8), LITTELFUSE WICKMANN WERKE (E67006), Type 369, rated 3.15 A, 300 Vac. Mechanically secured and soldered to PWB.
3. Capacitor (CX101S, CX102S) - (Hot-to-Neutral), R/C (FOWX2), CN, rated 330 nF, minimum 305 Vac, 110 °C.
4. Varistor (VX101S) - R/C (VZCA2), CN, rated minimum 460 V. SPD Type 3 applications.
5. Thermistor (NT101S) - R/C (XGPU2), CN, limiting NTC device, rated minimum 240 V, **4.8 A**.
6. Optical Isolator (PC101S, PC802S) - R/C (FPQU2), CN, double protection, minimum 3750 Vrms isolation voltage, minimum 100 °C.

MODEL - PSDV850102U - FIGS. 4 & 5 (CON'T)

- *7. Bridging Capacitor (CY105S, CY106S) - (Pri. to Sec.), R/C (FOWX2), CN, rated 220 pF for CY105S, 2.2 nF for CY106S, rated minimum 300 Vac, **125 °C, class Y1 or antenna coupling.**

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- *8. Capacitor (CY201S) - (Secondary to Metal Chassis Insolation), R/C (FOWX2), CN, rated 2.2 nF, rated minimum 250 Vac, **125 °C.**

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9. Insulation sheet - R/C (QMFZ2) - PET, TORAY INDUSTRIES LTD (E86511), Type Lumirror(#), rated 105 °C, VTM-2, double layer, minimum 0.18 mm total thickness, provided around the inside Housing. (Relied upon in lieu of spacings with live parts). See ILL. 5 for detailed dimensions.

Alternate - R/C (QMFZ2), PET, SKC LTD (E74359), Type SH71S, Skyrol SG00/SR50/SR53, rated 105 °C, VTM-2, minimum 0.18 mm total thickness.

***MODEL - PSDV850102U - FIGS. 4 & 5 (CON'T)**

10. Line Choke (LX101S, LX102S) closed type construction, Overall maximum 19.5 mm by 16.0 mm by 19 mm (L x W x H). Constructed as follows:

Core - Ferrite, Torodial type.

Coil - R/C (OBMW2), two provided, enameled copper wire, each rated 130 °C, overall 0.35 mm diameter, 62 ± 3 turns, 28 mH.

Coil Cap - R/C (QMFZ2), MOMENTIVE SPECIALTY CHEMICALS GMBH (E61040), Cat No. PF2736(a)(b), Phenolic, rated V-0, 150 °C, minimum 0.46 mm thick.

Alternate - same as above except CHANG CHUN PLASTICS CO LTD (E59481), Cat no. T375HF, Phenolic, minimum 0.43 mm thick.

Core Cover and separator - R/C (QMFZ2/8), RHODIA ENGINEERING PLASTICS (E44716), Cat no. A 50H1 (r3)(f2), rated 100 °C, V-0, minimum 0.4 mm thick.

Alternate - same as above except SAMSUNG FINE CHEMICALS CO LTD (E309188), Cat No. KB40M, KB40BM or KB40(+), rated 130 °C, minimum 0.29 mm thick.

Potting compound - R/C (QMFZ2), DOW CORNING TORAY CO LTD (E55519), type SE1816CV+, rated V-0, 105 °C, minimum 0.75 mm thick.

See ILL. 6 for detailed construction.

MODEL - PSDV850102U - FIGS. 4 & 5 (CON'T)

11. PFC (LP01) - Model No. FPL-PFC, manufactured by TMP INTERNATIONAL CORP (E119952), R/C (OBJY2), Class 130 (B) insulation system, designated by B16, Table III. Open type construction, overall 27.5 mm by 27.2 mm by 20.0 mm. Constructed as follows:

Core - Ferrite, EE Type, Overall 26.5 mm by 19.2 mm by 19.0 mm.

Bobbin - R/C (QMFZ2), SUMITOMO BAKELITE CO LTD (E41429), Phenolic, Type PM-9820, rated V-0, 150 °C, minimum 0.65 mm thick.

Magnet Wire - R/C (OBMW2), Three provided, Enameled copper wire, rated 130 °C, 0.10 mm diameter x 25, 40.5 turn for NP1 winding and R/C (OBT2), COSMOLINK CO LTD (E213764), type TIW-M, reinforced insulation, rated 130 °C, 0.30 mm diameter, 5 turns for NS1 winding and 3 turns for NS2 winding, wound on bobbin.

Insulation Tape - R/C (OANZ2), JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD (E165111), type CT or PZ, rated 130 °C.

Alternate - same as above, except BONDTEC PACIFIC CO LTD (E175868), type 370S+\$, rated 130°C.

- * Barrier Tape - R/C (**OANZ2**), JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD (E165111), type WF, rated 130 °C.

Alternate - same as above, except SYMBIO INC (E50292), type 35661\$.

Alternate - same as above, except 3M COMPANY ELECTRICAL MARKETS DIV (EMD) (E17385), type 44(a).

Varnish - R/C (OBOR2), CHEMTECH CO LTD (E258329), type ES925-43D#, rated 130 °C.

Alternate - same as above except SE KYE CHEMICAL CO LTD (E257443), type SR-337(#).

Alternate - same as above except NOROO PAINT & COATINGS CO LTD (E93947), type DVB-2085 ().

See ILL. 7 for detailed construction.

Alternate PFC - Same as above except manufactured by LI SHIN ELECTRONIC LIMITED (E140167), designated by LSE-B10, Table III.

*MODEL - **PSDV850102U** - FIGS. 4 & 5 (CON'T)

12. Transformer (TM101) - Model No. SLL75-PM, manufactured by TMP INTERNATIONAL CORP (E119952), R/C (OBJY2), Class 130 (B) insulation system, designated by B16, Table III, overall 43 mm by 34.0 mm by 21.5 mm, Open type construction, constructed as follows:

Core - Ferrite, EE Type, overall 38.0 mm by 30.9 mm by 11.4 mm. Provided with three layers of polyester tape (each 0.025 mm by 11 mm wide) around core.

Bobbin - R/C (QMFZ2), Sumitomo Bakelite Co., Ltd. (E41429), Phenolic, Type PM-9820 (rated V-0, 150 °C), minimum 0.65 mm thick.

Cap - R/C (QMFZ2), CHANG CHUN PLASTICS CO LTD (E59481), Polybutylene Terephthalate, Type 4130(a)(b), rated V-0, 120 °C, minimum 0.74 mm thick.

Primary and Secondary windings - Enameled Copper magnet wire, random wound, R/C (OBMW2), rated minimum 130 °C, Provided with one layer of polyester tape, 0.025 mm thick between crossover lead and adjacent windings.

Insulating tape - R/C (OANZ2), JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD (E1651111), type CT or PZ, rated 130 C.

Alternate - same as above except METAL LINE CO LTD (E162848), Cat No. 800(a).

Alternate - same as above except DUCK SUNG HITECH CO LTD (E105147), Cat No. DTS-204.

Alternate - same as above except BONDTEC PACIFIC CO LTD (E175868), type 370S+\$.

MODEL - PSDV850102U - FIGS. 4 & 5 (CON'T)

Barrier Tape - R/C (OANZ2), TAE HWA INDUSTRIAL CO LTD (E92677), Cat. No.H-5673 rated 130 °C.

Alternate - same as above except INGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD (E165111), type WF, rated 130 °C.

Alternate - same as above except 3M COMPANY ELECTRICAL MARKETS DIV (EMD) (E17385), type 44(a).

Alternate - same as above except SYMBIO INC (E50292), type 35661\$.

Varnish - R/C (OBOR2), CHEMTECH CO LTD (E258329), type ES925-43D#, rated 130 °C.

Alternate - same as above except SE KYE CHEMICAL CO LTD (E257443), type SR-337(#).

*Alternate - same as above except NOROO PAINT & COATINGS CO LTD (**E93947**), type DVB-2085 (*).

Insulation is as follows:

Location	Layers	Material	Total Thickness without adhesive (mm)
Outer wrap	Min. 3	Polyester Film Tape	0.075
Primary to Primary	Min. 3	Polyester Film Tape	0.075
Secondary to Secondary	Min. 1	Polyester Film Tape	0.025
Crossover	Min. 1	Polyester Film Tape	0.025
Primary to Core	-	Bobbin	Min. 0.65
Secondary to Core	-	Bobbin	Min. 0.65
Primary to Secondary	-	Bobbin/spacing	Distance cr/cl min. 2.4 mm.

See ILL. 8 for detailed construction.

Alternate Transformer - Same as above except manufactured by UNION CO LTD (E338985), designated by UIS-00 or LI SHIN INTERNATIONAL ENTERPRISE CORP (E140167), designated by LSE-B10, Table III. (These are equivalent system.)

MODEL - PSDV850102U - FIGS. 4 & 5 (CON'T)

13. Bridge Diode (BD101) - Various, rated maximum 600 V, minimum 8.0 A.
14. Bleeding Resistor (RX101S, RX102S, RX103S) - Various, rated 330 Kohm or 3.3 Mohm, 0.25 Watt.
15. Bulk Capacitor (CP171) - Various, rated 500 V, 470 nF.
16. FET (QP131) - Various, rated minimum 80 V, maximum 4 A.
17. FET (QP101) - Various, rated minimum 600 V, maximum 14 A
18. IC (UM101) - (Primary), various, type FSFR1800US, rated minimum 500 V, 7 A.
19. Secondary Rectifier Diode (DM261, DM262) - Various, rated minimum 100 V, 20 A.
20. Secondary Rectifier Diode (DM221, DM222) - Various, rated minimum 100 V, 2 A.
21. Electrolytic Capacitors in Secondary output (CM251, CM252) - Various, 100 V, 100 uF, 105 °C.
22. Electrolytic Capacitors in Secondary output (CM271) - Various, 50 V, 47 uF, 105 °C.
23. Electrolytic Capacitors in Secondary output (CM272) - Various, 50 V, 47 uF, 105 °C.
24. Heatsink (HS1) for BD101 - Metal, Overall 33.0 mm by 31.0 mm by 22.5 mm, overall 1.0 mm thick.
25. Heatsink (HS2) for QP101, QP131, DP172 and UM101 - Metal, Overall 73.0 mm by 20.0 mm by 22.0 mm, overall 1.0 mm thick.
26. Heatsink (HS3) for DM261, DM262 and QM202 - Metal, Overall 50.0 mm by 27.0 mm by 18.0 mm, overall 1.0 mm thick.
27. IC (UP101) - (Primary), various, type SEM3040.
28. IC (UM202) - (Secondary), various, type KIA393F.
29. IC (UM203) - (Secondary), various, type TSM103W.

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MODEL - PSDV850102U - FIGS. 4 & 5 (CON'T)

30. Bulk Capacitor (CP107) - Various, rated 630 V, 47 nF.
31. Bulk Capacitor (CM111) - Various, rated 1000 V, 5.6 nF.
32. Electrolytic Capacitor (CP151) - Various, rated 500 V, 100 uF, 105 °C.
33. Components - See ILL. 9 for complete list and electrical listing of all components.

MODEL PSDV850101U - FIGS. 6 & 7

General - FIG. 6 and FIG. 7 show internal view of the LED Driver without potting compound. The design, shape and arrangement shall be as illustrated. Model PSDV850101U is identical to model PSDV850102U except model designation, a few components and PWB pattern, detailed difference described below;

1. Printed Wiring Board (PWB) - Same as Model PSDV850102U, only difference is trace layout, see ILL. 10 (not to scale).
2. Difference components - See ILL. 11 for all different components list compared to model PSDV850102U.

MODEL PSDV850104U - FIGS. 8 & 9

General - FIG. 8 and FIG. 9 show internal view of the LED Driver without potting compound. The design, shape and arrangement shall be as illustrated. Model PSDV850104U is identical to model PSDV850101U except model designation, a few components and PWB pattern, detailed difference described below;

1. Printed Wiring Board (PWB) - Same as Model PSDV850101U, only difference is trace layout, see ILL. 12 (not to scale).
- *2. Components - See ILL. 13 for all components. Critical components were described on basic model PSDV850102U except below items #3 to #10.
3. IC (UM101) - (Primary), type UCC25600D.
4. Heatsink (HS2) for QP101, DP172, QM111 and QM112 - Metal, Overall 85.0 mm by 10.0 mm by 22.0 mm, overall 2.0 mm thick.
5. Transformer (PT101) - Constructed as follow;

*Core - Ferrite, EE type, measured overall 10.3 mm **by** 11.0 **mm** by 4.75 mm (L x W x H). Secured together via 3 layers of tape.

Bobbin - R/C (QMFZ2), Phenolic, rated minimum 150 °C.

Windings - Layer wound. Enameled Copper wire, R/C (OBMW2), rated minimum 130 °C.

Winding information as follow,

Location	Wire Size (Diameter, mm) x Conductor	No, of Turns
*SEC (W1, 5-6)	0.2 x 1	26
PRI (W2, 8-1)	0.2 x 1	26
PRI (W3, 3-4)	0.2 x 1	26

*Tube - R/C (YDPU2), Rated **Min. 300 V**, **Min. 130 °C**, VW-1, located at #3 pin.

*Varnish - R/C (OBOR2), Rated 130 °C.

See ILL. 14 for detailed information of Transformer (PT101).

6. Optical Isolator (PC101S) - R/C (FPQU2), CN, double protection, 5000 Vrms isolation voltage, minimum 100 °C.
7. Bulk Capacitor (CP107) - Various, rated 630 V, 10 nF.
8. Bulk Capacitor (CM111) - Various, rated 1250 V, 5.6 nF.
9. Electrolytic Capacitor (CP151) - Various, rated 500 V, 47 uF, 105 °C.

10. Choke Coil (LP181) - Constructed as follow;

Core - Ferrite, measured overall 8.0 mm by 11.0 mm (diameter by height).

Coil - R/C (OBMW2), Various, Enameled copper wire, rated minimum 130 °C, wire ends secured to PWB by soldering.

Tube - R/C (YDPU2), CN, Various, Rated VW-1, Min. 125 °C, Min 600 V, intended to wrap round a body.

Base - R/C (QMFZ2), CHANG CHUN PLASTICS CO LTD (E59481), T375HF, Phenolic Molding Compound (PMC), min. 0.43 mm thick, rated V-0, 150 °C.

See ILL. 15 for detailed information of Choke Coil (LP181).

MODEL PSDV850106U - FIGS. 10 & 11

General - FIG. 10 and FIG. 11 show internal view of the LED Driver without potting compound. The design, shape and arrangement shall be as illustrated. Model PSDV850106U is identical to model PSDV850104U except model designation, a few components and PWB pattern, detailed difference described below;

No.	Item	CCN	Manufacturer (File Number)	Part/Model Number	Description / Technical Data	(F)I G (I)L L
1	Printed Wiring Board (PWB)	ZPMV2	Various	Various	Same as Model PSDV850104U, only difference is trace layout, see ILL. 16 (not to scale).	I16
2	Components	-	-	-	See ILL. 17 for all components. Critical components were described on model PSDV850104U except below items	I17
3	Thermistor (NT101S)	XGPU2, CN	Various	Various	Rated minimum 240 V, maximum 5.5 A .	
4	FET (QP101)	-	Various	Various	Rated minimum 650 V, maximum 13 A.	
5	Output Wire	AVLV2, CN	Various	Various	Rated minimum 300 V, 105 °C, 20 AWG.	
6	Secondary Rectifier Diodes (DM261, DM262)	-	Various	Various	Rated minimum 150 V, maximum 20 A.	
7	Heatsink (HS2) for QP101, DP172, QM111 and QM112	-	Various	Various	Metal, Overall 85.0 mm by 16.2 mm by 24.0 mm, overall 3.0 mm thick.	
8	Heatsink (HS3) for QM202, DM261, DM262 and NT201	-	Various	Various	Metal, Overall 50.0 mm by 24.0 mm by 32.4 mm, overall 2.0 mm thick.	
9	Thermal Pad	-	Various	Various	Rated minimum 150 °C, V-0.	
10	Potting compound	QMFZ2, CN	DOW CORNING CO LTD (E40195)	SYLGARD 170#	Rated 105 °C, minimum 1.5 mm thickness, potting silicone material, furnished as two liquid components. Partially surrounds circuit board in Housing.	F14
11	Capacitor (CX101S)	FOWX2, CN	Various	Various	(Hot-to-Neutral), rated 220 nF, minimum 305 Vac, 110 °C.	

Winding devices for model PSDV850106U - See below for details.

No.	Item	CCN	Manufacturer (File Number)	Part Number	Rating	(F)IG (I)LL
1	Line Choke (LX101S, LX102S)	-	-	-	Refer to Ill. 18 for details.	I18
*1.1	Core Cover and Coil Separator	QMFZ2	SOLVAY ENGINEERING PLASTICS GBU (E44716)	A 50H1 (r3)(f2)	Polyamide 66 (PA66), min. 0.75 mm thick, rated V-0, min. 130 °C RTI (elec) .	
	Alternate	QMFZ2	POLYPLASTICS CO LTD (E109088)	1140A66	Same as above except Polyphenylene Sulfide (PPHS), min 0.24 mm thick, rated 130 °C	
1.2	Coil	OBMW2	Various	Various	Enameled copper wire, rated min. 130 °C.	
*1.3	Core	-	-	-	Ferrite, Torodial type, overall 16.0 mm by 10.0 mm by 7.0 mm (OD x ID x H).	
1.4	Tube	YDPU2	SHENZHEN WOER HEAT-SHRINKABLE MATERIAL CO LTD (E20395)	WF	Min. 600 V rms, Max. Operation temperature 200 °C.	
1.5	Base	QMFZ2	MOMENTIVE SPECIALTY CHEMICALS GMBH (E61040)	PF 2736(a)(b)	0.46 mm thick min., rated V-0, 150 °C.	
	Alternate	QMFZ2	CHANG CHUN PLASTICS CO LTD(E59481)	T375HF	0.43 mm thick min., rated V-0, 150 °C.	
2	PFC (LP01)	-	-	-	Refer to Ill. 19 for details.	I19
*2.1	Core	-	-	-	Ferrite, EE type, measured overall 26.5 mm by 19.2 mm by 19.0 mm (L X W X H).	
*2.2	Bobbin	QMFZ2	SUMITOMO BAKELITE CO LTD (E41429)	PM-9820	Phenolic, rated V-0, 150 °C, minimum 0.46 mm thick.	
*2.3	Coil	QBMW2	Various	Various	Enameled copper wire, rated minimum 130 °C.	
*	Alternate	OBJT2	Various	Various	Insulated winding wire, rated minimum 130 °C.	
*2.4	Insulation tape	OANZ2	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD (E165111)	CT	Polyethylene terephthalate film tape, 0.025 mm thick per layer, rated minimum 130 °C,	
	Alternate	OANZ2	SYMBIO INC (E50292)	35660*@	Same as above.	
2.5	Barrier tape	ONAZ2	Various	Various	Rated minimum 130 °C.	
*2.6	Varnish	OBOR2	Various	Various	Rated minimum 130 °C.	

Winding devices for model PSDV850106U - See below for details. (CON'T)

No.	Item	CCN	Manufacturer (File Number)	Part Number	Rating	(F) IG (I) LL
3	Transformer (TM101)	-	Various	Various	Refer to ILL. 22 for details.	I22
3.1	Electrical insulation system	OBJY2	YAO SHENG ELECTRONIC CO LTD (E173643)	YCI-130	Rated Class 130 (B) electrical insulation system.	
	Alternate	OBJY2	JINLONG MACHINERY & ELECTRONICS CO LTD (E342835)	JLS.02	Rated Class 130 (B) electrical insulation system.	
3.2	Core	-	-	-	Ferrite, EE type, overall 23.4 mm by 18.2 mm by 18.4 mm (L X W X H)	
3.3	Bobbin	QMFZ2	Belong to electrical insulation system	Belong to electrical insulation system	Phenolic, rated V-0, 150 °C, minimum 0.65 mm thick.	
3.4	Coil	OBMW2	Belong to electrical insulation system	Belong to electrical insulation system	Rated minimum 130 °C.	
3.5	Insulation tape	OANZ2	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD (E165111)	CT	Polyethylene terephthalate film tape, 0.025 mm thick per layer, rated minimum 130 °C, min. 2 layers provided.	
	Alternate	OANZ2	SYMBIO INC (E50292)	35660*@	Same as above.	
3.6	Core fixing tape	OANZ2	Belong to electrical insulation system	Belong to electrical insulation system	Rated minimum 130 °C.	
3.7	Varnish	OBOR2	Belong to electrical insulation system	Belong to electrical insulation system	Rated minimum 130 °C.	

MODEL PSDV850107U - FIGS. 12 & 13

General - FIG. 12 and FIG. 13 show internal view of the LED Driver without potting compound. The design, shape and arrangement shall be as illustrated. Model PSDV850107U is identical to model PSDV850104U except model designation, a few components and PWB pattern, detailed difference described below;

No.	Item	CCN	Manufacturer (File Number)	Part/Model Number	Description / Technical Data	(F)IG (I)LL
1	Printed Wiring Board (PWB)	ZPMV2	Various	Various	Same as Model PSDV850104U, only difference is trace layout, see ILL. 20 (not to scale).	I20
2	Components	-	-	-	See ILL. 21 for all components. Critical components were described on model PSDV850104U except below items	I21
3	Thermistor (NT101S)	XGPU2, CN	Various	Various	Rated minimum 240 V, maximum 5.0 A .	
4	FET (QP101)	-	Various	Various	Rated minimum 600 V, maximum 13 A.	
5	Secondary Rectifier Diodes (DM261, DM262)	-	Various	Various	Rated minimum 150 V, maximum 20 A.	
6	Heatsink (HS2) for QP101, DP172, QM111 and QM112	-	Various	Various	Metal, Overall 85.0 mm by 16.2 mm by 24.0 mm, overall 3.0 mm thick.	
7	Heatsink (HS3) for DM261, DM262 and NT301	-	Various	Various	Metal, Overall 55.0 mm by 24.0 mm by 27.2 mm, overall 2.0 mm thick.	
8	Line Choke (LX101S, LX102S)	-	-	-	Same as winding device item #1 of model PSDV850106U.	I18
9	PFC (LP01)	-	-	-	Same as winding device item #2 of model PSDV850106U.	I19
10	Transformer (TM101)	-	-	-	Same as winding device item #3 of model PSDV850106U.	I22
11	Output wire	AVLV2, CN	Various	Various	Rated minimum 300 V, 105 °C, 22 AWG.	
12	Thermal pad	-	Various	Various	Rated minimum 150 °C, V-0.	
13	Potting compound	QMFZ2, CN	DOW CORNING CO LTD (E40195)	SYLGARD 170#	Rated 105 °C, minimum 1.5 mm thickness, potting silicone material, furnished as two liquid components. Partially surrounds circuit board in Housing.	F15
14	Capacitor (CX101S)	FOWX2, CN	Various	Various	(Hot-to-Neutral), rated 220 nF, minimum 305 Vac, 110 °C.	