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REPORT

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

Antron Electronics Co. Ltd
Tainan Hsien Taiwan

DESCRIPTION

PRODUCT COVERED:

* USR, CNR – Class 2 LED Drivers, Models AC-30C833ABNV AC-30C833UV, AC-40CD1.05ATSD, AC-40CD1.05BCW, AC-40CD1.05BFN, AC-40CD1.67AQCZ, AC-40CD1.4AQKE, AC-50CD2.5ARDQ, AC-21CD1.4UV, AC-15CD440UV, AC-15CD440ABNR, AC-17C700BM, AC-23CD1.15UVTS, AC25CD1.05ATEAR, AC-43CD1.8UVBTT, AC-29CD950AQBKP, AC-46CD1.7BDTEF, AC46CD1.7BDBTEF, AC36CD1.8ATBTEH, AC36CD1.8BTBTEH, AC-36CD1.8BTTEH, AC-9CD450AEHF, AC-9CD450BEHF, AC-18CD900BTTEG AC18CD900BTBTEG, **AC-18CD900BDEHG**, AC-35CD1.75ARDR **and** AC-50CD1.4BTMS, where YY indicates an optional switch designated as D2, D3, or D4 and represents two, three, or four different output current settings in the range below.

GENERAL:

The units are constant current, switch-mode isolating power supply with Class 2 output. The units consist of transformers and other related electronic circuitry provided with input/output pigtail leads for connection in the end-use application.

ELECTRICAL RATINGS:

Cat. No.	Input Voltage (V) 50/60 Hz	Input Current (A)	Max Output Voltage (Vdc)	Output Current (mA)
AC-40CD1.67AQCZ AC-40CD1.4AQKE		0.4-0.18	29	700-1400
AC-40CD1.05ATSD		0.4-0.17	38	1050
AC-40CD1.05BCW	347	0.14	51	1050
AC-40CD1.05BFN				
AC-30C833ABNV AC-30C833UV	120-277	0.32-0.13	36	833
AC-21CD1.4UV		0.22-0.11	15	1400
AC-15CD440UV AC-15CD440ABNR		0.07-0.16	34	440
AC-50CD2.5ARDQ		0.6-0.27	24	1700-2500
AC-17C700BM	120	0.185	24	700
AC-23CD1.15UVTS	120-277	0.29-0.13	25	700-1150
AC25CD1.05ATEAR	120-277	0.27-0.11	29	750-1050
AC-43CD1.8UVBTT	120-277	0.55-0.25	30	1050-1800
AC-29CD950AQBKP	120-277	0.32-0.14	35	500-1050
AC-46CD1.7BDTEF AC46CD1.7BDBTEF	347	0.18	40	1700
AC36CD1.8ATBTEH	120-277	0.41-0.18	26	1800
AC36CD1.8BTBTEH AC-36CD1.8BTTEH	347	0.16		
AC-9CD450AEHF	120-277	0.13-0.06	20	450
AC-9CD450BEHF	347	0.05		
AC-18CD900BTTEG	347	0.07	20	900

AC18CD900BTBTEG **AC-18CD900BDEHG**				
AC-35CD1.75ARDR	120-277	0.36-0.16	20	1750
AC-50CD1.4BTMS	**347**	**0.18**	**36**	**700-1400**

Where “D” after the model number indicates it is provided with 0-10 V dimming circuitry

TECHNICAL CONSIDERATIONS (NOT FOR UL FIELD REPRESENTATIVE USE):

Use – For use only in (or with) complete equipment where the acceptability of the combination is determined by UL LLC.

USR – Indicates investigation to the United States requirements UL Standard for Safety for Light Emitting Diode (LED) Equipment for Use In Lighting Products, UL 8750.

CNR – Indicates investigation to the Canadian Standard for the Standard for Power Supplies with Extra-Low-Voltage Class 2 Outputs, CAN/CSA-C22.2 No. 223.

The outputs were evaluated as Class 2 per UL Standard for Safety for Class 2 Power Units, UL 1310.

CN – Either the Canadian Standards Association Certification or Component Acceptance Mark or the UL Listing or UL Recognition Mark for Canada.

Spacing's have been evaluated in accordance with an Overvoltage Category II and Pollution Degree 1 (potted enclosure) per Exception #1 of cl. 7.8.3 of UL 8750 (with live parts to enclosure spacing's evaluated per Table 7.6) and CSA C22.2 No. 223, Clause 4.10.6 and CSA C22.2 No. 107.1 via the CSA Reference Standard C22.2 No. 0.2 for voltages > 250Vac per cl. 4.17.1 and Table 6 (which included live parts to enclosure).

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Conditions of Acceptability - When installed in the end-use equipment, the following are among the considerations to be made:

1. The power supply shall be installed in compliance with the enclosure, mounting, spacing, casualty, temperature, and segregation requirements of the end-use application.

2. All units utilize a Class B insulation system for the isolation transformer.

3. The drivers were temperature tested in a 55°C oven. The maximum temperature on the enclosure, above T2, was 87.7°C for Model (represents models and AC-40CD1.4UV-QS), 83.1°C for Model AC-30C833ABNV, AC-30C833UV, 78.6°C for Model AC-21CD1.4UV, and AC-15CD440UV, AC-15CD440ABNR, 83.1°C for Model AC-60CD2.5UV-QS, 86.6°C for Model AC-17C700BM, 88.0°C for model AC-43CD1.8UVBTT (represents AC-23CD1.15UVTS, AC25CD1.05ATEAR and AC-29CD950AQBKP)

   Model represents models AC-46CD1.7BDTEF, AC46CD1.7BDBTEF, AC-40CD1.05BCW, and AC-40CD1.05BFN) was tested in a 50°C ambient. The maximum temperature measured on the enclosure above T2 was 79°C.

   Model AC36CD1.8ATBTEH (represents models AC-18CD900BTTEG, AC18CD900BTBTEG, **AC-18CD900BDEHG**, AC-9CD450AEHF, and AC-9CD450BEHF) was tested in a 50°C ambient. The maximum temperature measured on the enclosure above T2 was 81°C.

   Model AC36CD1.8BTBTEH, AC-36CD1.8BTTEH (represents model AC-46CD1.7BDTEF, AC46CD1.7BDBTEF) was tested in a 40°C ambient. The maximum temperature measured on the enclosure above T2 was 76°C.

   Model AC-50CD1.4BTMS **(represents model** AC-50CD1.4BTMS**) was tested in a 55°C ambient. The maximum temperature measured on the enclosure backside of T2 was 71.9°C.**

4. The products were tested while connected to a 20A branch circuit. Additional testing shall be considered in the end-use product if used on a branch circuit greater than 20A.

5. The products are provided with input and output pigtail leads. The suitability of the leads shall be determined in the end-use application.

6. Tests were conducted using resistive and/or electronic loads.

7. The enclosure is required to be grounded in the end-use application. Proper grounding shall be evaluated during the end-product installation since the unit only employs functional bonding to the case.

*8. Models AC-40CD1.05ATSD, AC-40CD1.4UV-QS, AC-60CD2.5UV-QS, AC-15CD440UV, AC-15CD440ABNR, AC-21CD1.4UV, AC-23CD1.15UVTS, AC25CD1.05ATEAR, AC-43CD1.8UVBTT, AC-29CD950AQBKP **and** AC-50CD1.4BTMS are provided with a 0-10 V dimming circuit where testing utilized the 10 Volt OC condition as the worst case output condition.
Dim circuit evaluated per UL 935, SB8, SB9, and SB11 as "Class 2".

9. Models AC-40CD1.05BFN and AC-50CD1.4BTMS comply with LVLE requirements per CSA Informs Ref. No. I13-020, and therefore can be marked Class 2 for Canada. These outputs shall not be accessible which shall be determined in the end-use application.