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REPORT

On

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

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DESCRIPTION

PRODUCT COVERED:

USR/CNR - Class 2 LED Driver, Models

AC-72CD3.0UV, AC-84CD2.0UV-TS AC-84CD2.1ATEKF, AC-84CD2100ATNC,

AC-84CD2.1ATTKF, AC84CD2100ATBFY, AC-84CD2100ATFY, and AC-84CD1.75ATKK

AC-84CD1.75ATBKK, AC-84CD2.1BTMU,

AC-84CD2.0ATBCB, where D indicates dimming, YY may be D3 to indicate selectable output current, X may be any alphanumeric character from 0-9 or A-Z, "-" or, blank.

GENERAL:

The unit is a switch-mode constant-current isolating power supply with Class 2 output. The units consist of an isolation transformer and other related electronic circuitry connected in the end-use application via an input and output pigtail leads. The unit is also provided with 0-10V input dimming leads.

ELECTRICAL RATINGS:

Cat. No.	Input Voltage (V)	Frequency (Hz)	Input Current (A)	Max Output Voltage (Vdc)	Max Output Current (mA)
AC-72CD3.0UV	120-277	50/60	0.68-0.3	24	3000
AC-84CD2.0UV-TS AC-84CD2.1ATEKF AC-84CD2100ATNC AC-84CD2.1ATTKF AC84CD2100ATBFY AC-84CD2100ATFY	120-277	50/60	0.79-0.3	40	2100
AC-84CD1.75ATKK AC-84CD1.75ATBKK	120-277	50/60	0.79-0.34	51	1750
AC-84CD2.1BTMU	347	50/60	0.28	40	2100
AC-84CD2.0ATBCB	120-277	50/60	0.79-0.34	42	2000

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 and the Standard for Class 2 Power Units, UL 1310.

CNR indicates investigation to Canadian Standard for Light Emitting Diode (LED) Equipment for Lighting Applications, CAN/CSA C22.2 No. 250.13-14 and Power Supplies with Extra-Low-Voltage Class 2 Outputs, CAN/CSA C22.2 No. 223-M91.

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

PWB spacings have been evaluated in accordance with an Overvoltage Category II and Pollution Degree 1 (potted enclosure) per Clause 7.8.3 and Table 7.4 of UL 8750 with live parts to enclosure spacings evaluated per Table 7.6 and CSA C22.2 No. 223, Tables 2 and 3 per CSA C22.2 No. **250.13-14**,

Clause 8.7.3, including Table 5 with live parts to enclosure spacings evaluated per Table 7.

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

1. The LED drivers have been evaluated using an electronic or resistive load resulting in the rated output current.
2. All units utilize a Class F insulation system for the isolation transformer (T3). The maximum recorded temperatures were 106°C on the transformer coil, and 86°C on the Tc point when tested at an ambient of 40°C.

The maximum recorded temperatures on the isolation transformer and case for Model AC-84CD1.75ATKK, AC-84CD1.75ATBKK were as follows when tested at an ambient of 50°C.

Transformer T2 Coil: 103.4°C
Tc Point on Case above T2: 74.5°C

The maximum recorded temperatures on the isolation transformer and case for Model AC-84CD2.1BTMU were as follows when tested at an ambient of 50°C.

Transformer T2 Coil: 87.6°C
Tc Point on Case above T2: 69.2°C

The maximum recorded temperatures on the isolation transformer and case for Model **AC-84CD2.0ATBCB** were as follows when tested at an ambient of 40°C.

Transformer T2 Coil: 78.0°C
Tc Point on Case above T2: 51.5°C

Transformer T2 Coil: 78.0°C
Tc Point on Case above T2: 54.3°C

Transformer T2 Coil: 77.1°C
Tc Point on Case above T2: 53.9°C

The need to repeat the temperature test shall be determined in the end-use product.

3. The products were tested while connected to a 20A branch circuit.
4. The Leakage current test was conducted.
5. The enclosure is required to be grounded in the end-use application.
6. Suitable for dry or damp locations.
7. Models AC-84CD2.0UV-TS, AC-84CD2.1ATEKF, AC-84CD2100ATNC, AC-84CD2.1ATTKF, AC84CD2100ATBFY, AC-84CD2100ATFY, AC-84CD1.75ATKK, AC-84CD1.75ATBKK and AC-84CD2.1BTMU comply with LVLE requirements per CSA C22.2 No. 250.13-12, Annex A and CSA Informs Ref. No. I13-020, and therefore can be marked Class 2 for Canada. These outputs shall not be accessible and shall be determined in the end-use application.