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Report

On

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

Astec International Ltd Philippines Branch
Metro Manila 1110, Philippines

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DESCRIPTION

PRODUCT COVERED:

USR, CNR - Component, LED Drivers, Isolated Class 2 output, Model LDS100-24, LDS100-24-H, LDS100-30-H and LDS100-31-H.

GENERAL:

The products covered by this Report are LED drivers. Each unit consists of a switch mode power transformer and other related electronic circuitry. Each unit is provided with leads for input and output connections.

USR indicates investigation to the Standard for Light Emitting Diode (LED) Equipment for Use in Lighting Products, UL 8750, 1st edition, November 18, 2009, and the Standard for Class 2 Power Units, UL 1310, 5th edition, revision date September 30, 2010.

CNR indicates investigation to Canadian Standard for Power Supplies With Extra-Low-Voltage Class 2 Outputs, CAN/CSA C22.2 No. 223-M91, 2nd edition, revised date September 2009.

ELECTRICAL RATINGS:

Model	Input, 50/60 Hz		Output (Red -Black)	
	Voltage, Vac	Current, A	Voltage, Vdc	Current, A
LDS100-24	100-240	1.5	24	4.1
LDS100-24-H	100-277	1.5	24	See Below
LDS100-30-H	100-277	1.5	30	See Below
LDS100-31-H	100-277	1.5	31	See Below

Model	Input Voltage, Vac	Maximum room ambient temperature	
		\$ Ta, °C	Tc, °C
LDS100-24	100	57	90
	120	53	90
	180-240	56	90

\$ - test condition given by client, it is for reference only.

Model	Input Voltage, Vac	Output Current, A	Maximum room ambient temperature	
			Ta, °C	Tc, °C
LDS100-24-H	100	3.49	53	90
	120-277	4.1	53	90
LDS100-30-H	100	2.69	52.5	90
	120-277	3.16	55	90
LDS100-31-H	100	2.69	\$52.5	90
	120	3.16	\$48.9	90
	180-277	3.16	\$53.1	90

TECHNICAL CONSIDERATIONS (NOT FOR FIELD REPRESENTATIVE'S USE):

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

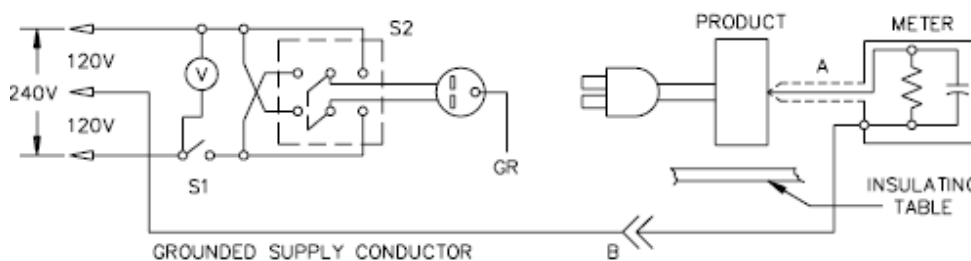
These components have been judged on the basis of the required spacings in the Standard for Light Emitting Diode Equipment for Use in Lighting, UL 8750, 1st Edition, Table 7.4 and the Canadian Standard for Power Supplies with Extra Low Voltage Class 2 Outputs, CAN/CSA C22.2 No. 223-M91, 2nd edition, Clause 4.10, which should cover the components themselves if submitted for unrestricted Listing.

Condition of Acceptability - The following items are to be considered when evaluating the power unit in the end-use product:

1. The devices shall be used within Recognized ratings as specified above.
2. The output (Red/Black) of each unit complies with Class 2 criteria of UL 1310.
3. Each device is provided with 18 AWG input and output leads. The strain relief test was not conducted on this device. The suitability of input and output connections shall be determined in end-use application.
4. Temperature has been conducted using resistive loading. The necessity of repeated Temperature Test shall be determined in each end use application.
5. Transformers employ Class 155(F) insulation system.
6. The suitability of grounding means and grounding wire connection shall be determined by end product.
7. Each device is not intended for field wiring used.
8. Each device is intended to be connected to a maximum 20 A branch circuit.
9. The devices are of the constant current type that requires the proper number of LED modules and controllers that does not exceed the maximum output voltage/current.
- *10. For Model LDS100-24, the measured maximum external enclosure temperature is **88.89 °C (on top of enclosure)** and **88.80 °C (on mounting side)**, **89.15 °C (on top of enclosure)** and **89.03 °C (on mounting side)**, **88.35 °C (on top of enclosure)** and **88.29 °C (on mounting side)** when the room ambient temperature are at **53 °C, 56 °C** and **57 °C** respectively. The suitability shall be determined in end application.

Conditions of Acceptability (CONT'D)

11. The devices employ input surge suppression protection, Type TVR14681 under UL File E314979, which is suitable for use in Point-of-utilization applications (e.g., cord-connected, direct plug-in, receptacle type and surge protective device's installed at the utilization equipment being protected. The suppressed voltage rating is 420 Vac. The suitability of use of this component shall be determined in the end-product application.
12. The devices employ input surge suppression protection, Type SIOV-S14K420 under UL File E321126, which Surge Parameter 6 kV peak voltage, 500 A peak current for Surge Test for VPR Test and Operating Duty Cycle Test. The suppressed voltage rating is 420 Vac. The suitability of use of this component shall be determined in the end-product application.
13. No mechanical test has been conducted for the models and the metal chassis is considered as dead metal. The devices shall be mounted in the intended manner in an enclosure, having adequate strength and thickness with acceptable spacing being provided.
14. The leakage current test passed with the use of following circuit for the unit is intended for connection to a 3-wire, grounded neutral power supply. The leakage current test shall be determined in end use if differ from below circuit.



15. The dimmable circuit is not being evaluated, this shall be determined in the end-product use.
16. Each device has been evaluated for dry and damp location use only.
- *17. For Models LDS100-30-H and LDS100-31-H, the measured maximum external enclosure temperature (T_c) is **89.6 degree C when test oven is set to room ambient temperature at 53.3 degree C at 100 Vac**. The suitability shall be determined in end application.
18. For Model LDS100-24-H, the measured maximum external enclosure temperature is 89.3 °C (on top of enclosure) and 89.6 °C (on mounting side) at 53 °C ambient. The suitability shall be determined in end application.