



D23CC90HRVT-F

HRV Dimmable LED Driver w/ Tuning

- 2300mA Constant Current Output
- Class 2, 90W Output
- 0-10V Dimming Control to 10%



Performance

Input Voltage	347 ~ 480 Vac
Input Current Max	0.32 /347V 0.23/480V
Input Power Max	100W
Input Frequency	50 - 60 (Hz)
Power Factor	> 0.95
THD max	< 20 %
Output Voltage	18-40V
Output Current	230mA - 2300mA
Output Power	90W
Line Regulation	±3 %
Load Regulation	±5 %
Output Current Ripple	<10%
Inrush Current	347V: 45A / 90uS
Peak / >50% Duration	480V: 68A / 100uS

- * Refer to charts for additional information
- Harmonic Emissions comply with ANSI C82.77
 - Inrush current complies with NEMA 410

Environmental

EMI and RFI	Meets FCC part 15 (Class A) Non-Consumer Limits
Minimum Operating Temperature	-40°C (-40°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
tc	85°C (185°F) max
Location Rating	UL Dry & Damp, Type HL
Transient Protection	IEEE C62.41 6kV/6kV**

**Driver uses MOVs for transient protection.
Refer to application note EVD07 at www.unvlt.com for additional information on Hi-Pot Testing.

Physical

Length	9.50 in (241.3 mm)
Width	2.40 in (61.0 mm)
Height	1.55 in (39.4 mm)
Mounting Length	8.89 in (225.8 mm)
Weight (lbs)	2.6
Lead Lengths	
Black, White	11.5 in
Red(+), Blue(-), Gry, Vio	11.5 in

Lead-wires are 18 AWG 90°C /600V solid copper.

Protection

Over voltage, Under voltage, and short circuit.

Safety:

UL 8750 & CSA 250.13

Hi-Pot Testing:

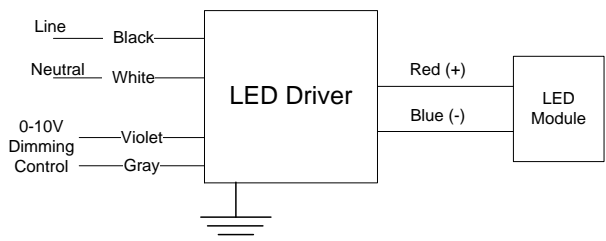
Line/Neutral to Ground MOV Installed
Minimum clamping of 420V

Ordering Information

Order Number	Description	Qty/Carton
D23CC90HRVT-F20KC	Standard Product	10

*Consult Factory for Tuning ordering information

Wiring Diagram:



Application and operation performance specification information subject to change without notification.



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Programmable Tuned Output Settings

- This Everline LED Driver can be configured to set its current output to a selected fraction of their maximum rated design level. This function is called tuning (or also high-end trim) and it can be implemented with the LDTC01A using the Selector rotary switches. Tuning assignments are stored in driver memory and are not lost when power is removed. All factory produced drivers are tuned to maximum output unless otherwise noted on the label.
- Tuning SET Levels are listed in the table to the right. The SET Level corresponds to an associated Output Current value.
- Refer to application note EVD06 at www.unvlt.com for additional information.
- Actual tuned output current values will be within +/- 3% of current listed in the table

Set Value	Output Current (A)
100	2.33
99	2.31
98	2.29
97	2.26
96	2.24
95	2.22
94	2.19
93	2.17
92	2.15
91	2.12
90	2.10
89	2.08
88	2.05
87	2.03
86	2.01
85	1.98
84	1.96
83	1.94
82	1.91
81	1.89

Set Value	Output Current (A)
80	1.87
79	1.84
78	1.82
77	1.80
76	1.78
75	1.75
74	1.73
73	1.71
72	1.68
71	1.66
70	1.63
69	1.61
68	1.59
67	1.56
66	1.54
65	1.52
64	1.49
63	1.47
62	1.45
61	1.42

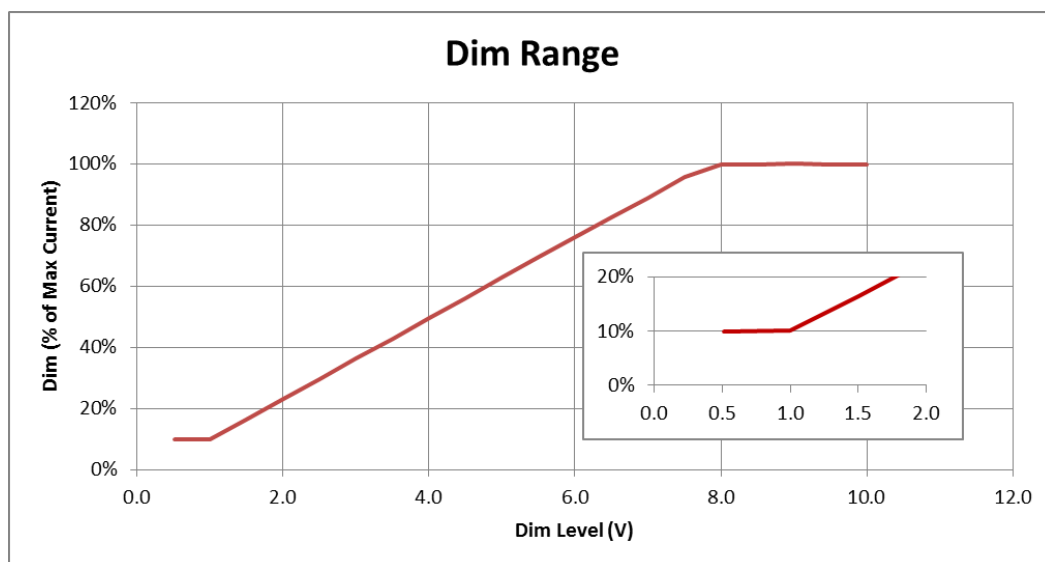
Set Value	Output Current (A)
60	1.40
59	1.38
58	1.35
57	1.33
56	1.31
55	1.28
54	1.26
53	1.24
52	1.21
51	1.19
50	1.17
49	1.14
48	1.12
47	1.10
46	1.07
45	1.05
44	1.03
43	1.00
42	0.98
41	0.96
40	0.93



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0-10V Dimming



0-10V Analog Dimming Interface

Analog 0 to 10 vDC Voltage Control

- Use Violet (+) & Gray (-) for connection to 0-10vDC.
- 10v = maximum output, 0v = minimum output
- Driver protected if line voltage is applied.
- Wiring Violet & Gray together provides min. light output.
- Capping Violet & Gray separately provides 100% light output.
- 0-10V interface can be wired as Class 1 or Class 2 Circuit.
- Driver will source a maximum of 250uA for control needs.



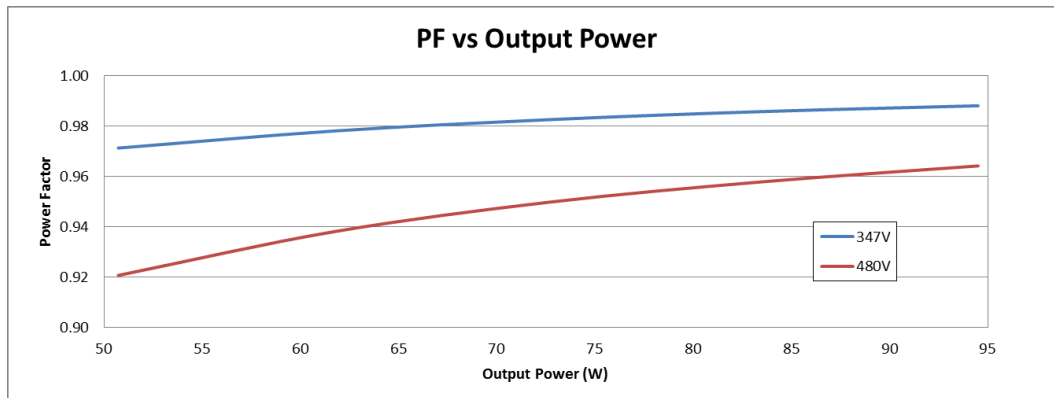
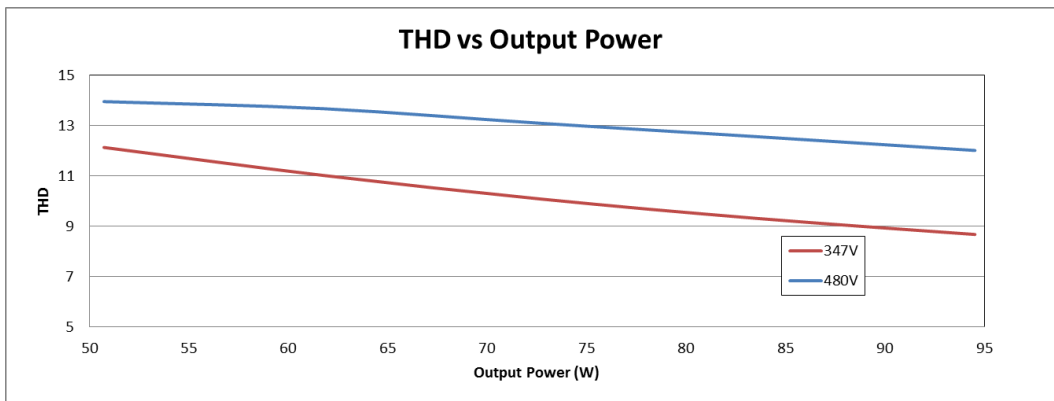
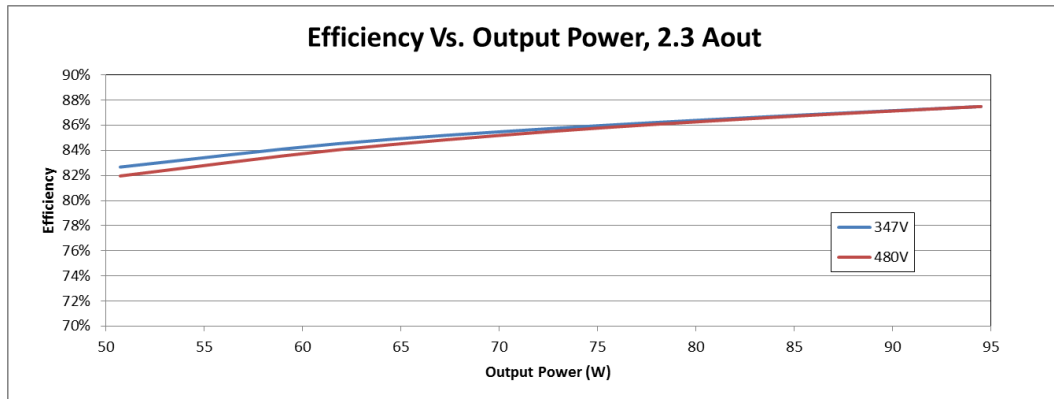
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Performance: Efficiency, THD, & Power Factor

Typical performance measurements are shown. The charts are to be used as a guideline and not for specification use.



Output power based on maximum rated output current and varying load voltages.

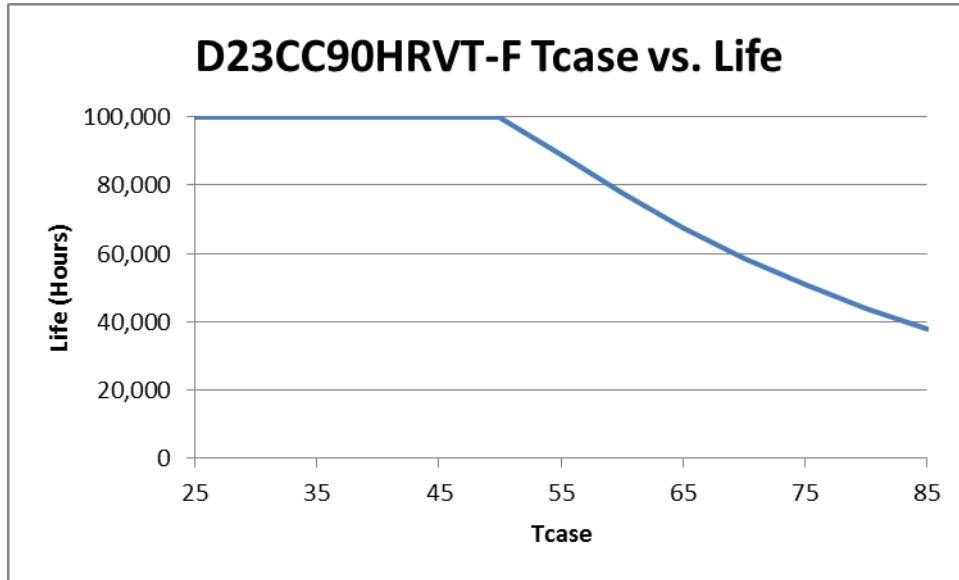


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Life vs. Driver Tcase

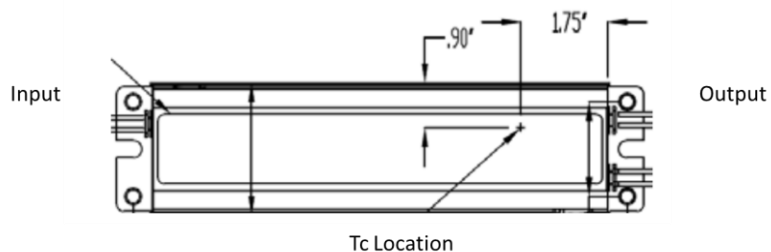


The Data curve provided predicts the LED Driver life based on the case temperature measured at the Tc location identified on the label or specification sheet. The Telecordia SR-332 standard is used to generate the prediction curves.

Dimensional Diagram



TC Location



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Conditions of Acceptability –

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

1. The driver shall be installed in compliance with the enclosure, mounting, mounting surface, strain relief, pushback relief, spacing, segregation, and all other applicable requirements of the End Product in which it is employed. Suitability shall be determined during End Product Certification Evaluation.
2. The maximum available output parameters were within the maximum allowable limits for Class 2, inherently limited as specified in the UL 1310 standard for Class 2 Power Units, and in accordance with the Canadian safety standard CSA C22.2 No. 223.
3. The driver is suitable for use in “DRY” or “DAMP” locations.
4. The driver was evaluated for use in a 53°C elevated ambient and the maximum case temperature at (Tc) location – as identified on the label in Illustration #4 - should not exceed 85°C when the driver is installed in the end-use application.
5. The input (Black, White) and the output (Red, Blue, Gray and Violet) connection wires of the driver are R/C (AVLV2/8), 18 AWG, 90°C. The suitability of the leads shall be determined in the end-use application.
6. The case must be grounded in the end use.
7. All parts of these models are fully submerged in potting compound in accordance with sub-clause 41.1(c) of UL 844.
8. The Leakage Current measurements were not performed on this unit. Compliance with leakage current requirements shall be determined in the end-product standard.” And, leakage current available from output leads shall be considered.

FCC Statement: This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Warranty:

Universal Lighting Technologies warrants to the purchaser that each power supply will be free from defects in material or workmanship for a period of 5 years from the date of manufacture when properly installed per instructions and under normal operating conditions of use. Call 1-800-225-5278 for technical assistance.

EVERLINE™

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