D20CC180HRVPWX12-F

2000mA Programmable LED Driver

➢ 180W constant current output with 0-10V dimming
➢ Full featured programmability with 12Vdc 200mA auxiliary output
➢ Low standby power (<0.5W) in dim-to-off state

Performance

Input Voltage	347 ~ 480 Vac
Input Current Max	0.58A / 347V 0.42A / 480V
Input Power Max	200W
Input Frequency	50 - 60 (Hz)
Power Factor	> 0.95 @ max load
THD max	< 20 % @ max load
Output Voltage (Refer to Driver Operating Range)	50V to 90V @ 2.00 Amps 50V to 130V @ 1.39 Amps
Max. Output Current	2000mA
Min. Dimming Current	50mA
Output Power	180W
Standby Power	< 0.5W @ 347Vac
	< 0.5W @ 480Vac
Line Regulation	±3 %
Load Regulation	±5 %
Output Current Ripple	<10% (Pk-Pk/avg)
Inrush Current* Peak / >10% Duration	347V: 52A / 200uS 480V: 78A / 220uS

* source impedance per NEMA 410

Protection
    Over Voltage, Under Voltage, Short Circuit, Over Temp
Safety:
    UL 8750 & CSA 250.13
    UL Class P

Auxiliary Output

Output Power	2.4W
Output Voltage	12Vdc
Output Current	200 mA

Physical

|	
Length	9.50 in
Width	2.38 in
Height	1.58 in
Mounting Length	8.90 in
Weight (lbs)	2.6 lbs
Lead Lengths (+/- 1 in)	
Blk, Wht, Purple, Pink*	11.5 in
Red(+), Blue(-), Orange, Yellow/Black	11.5 in

Lead-wires are 18 AWG 105°C /600V solid copper.

Environmental

EMI and RFI	Meets FCC part 15 (Class A) Non-Consumer Limits
Sound Rating	Class A
Operating Temperature	-40°C to 55°C (-40°F to 131°F)
Storage Temperature	-40°C to 85°C (-40°F to 185°F)
Warranty Tc	85°C max for 50k Hr Life
Location Rating	UL Dry & Damp, Type HL
IP Rating	IP66
Transient Protection	IEEE C62.41 6kV**

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

Wiring Diagram:

(+) ORG
(-) YEL/BLK → AUX
(+) VIO
(-) PNK* → DIM
(+) RED
(-) BLU → LED
N WHT
L BLK
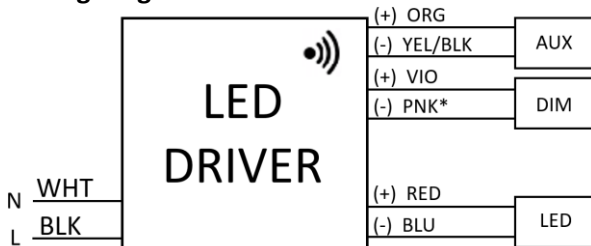
- **NOTE:** Unused Orange and Yellow/Black leads must be individually capped off when auxiliary output power is not used.
- * **Note:** The Gray has been changed to Pink for the negative 0-10V dimming control lead.

Ordering Information

Order Number	Description	Qty/Carton
D20CC180HRVPWX12-F010C	2000mA 180W	10

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Programmable Features
Output Current
Minimum Dimming Level
Dim-to-Off
Dimming Curve
(Linear, Linear Soft Start, Logarithimc)
Lumen Maintenance
Thermal Overload

Programming System	
Software	EVERset Programming Software
Hardware	LDPC000A Configuration Tool
Driver Interface	Wireless via RFID
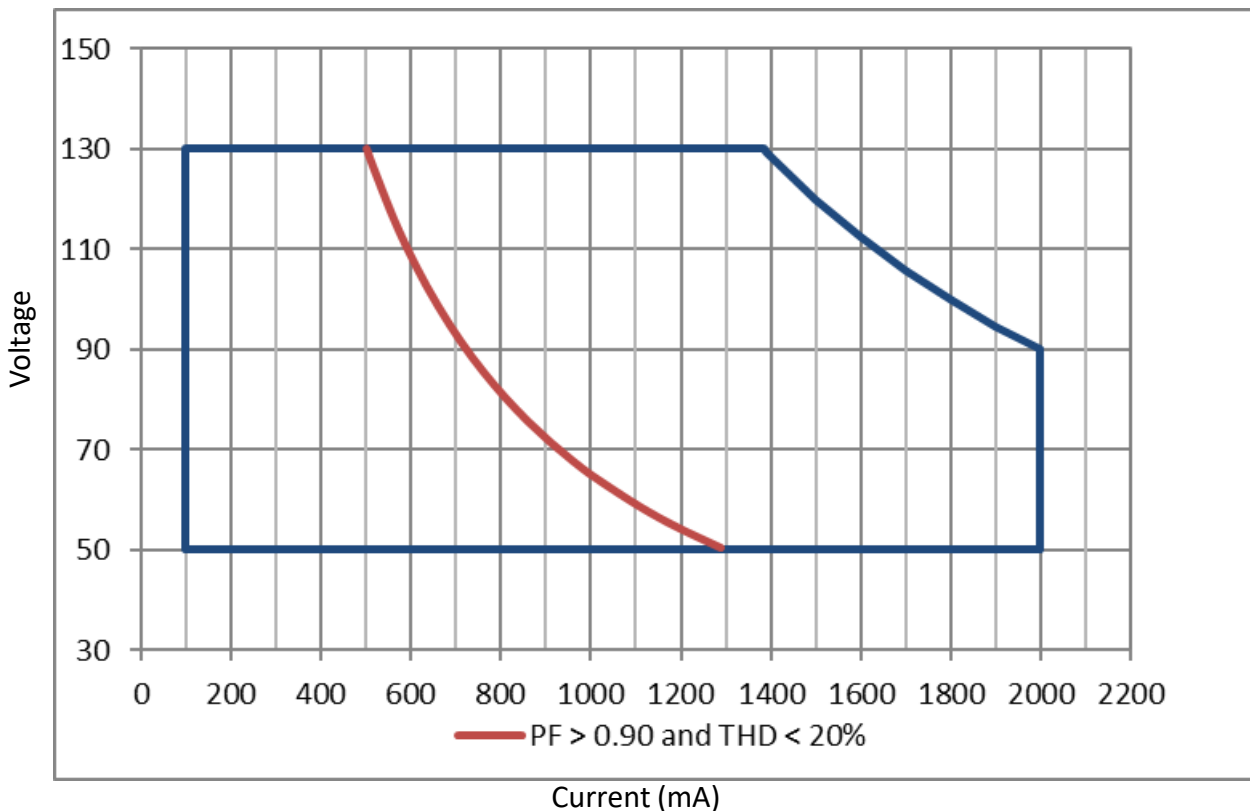
*Refer to application notes EVD10, EVD11 and EVD15 at www.unvlt.com for additional information on programmable features.

Driver Operating Range:

Current (mA)

PF > 0.90 and THD < 20%

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0-10V Dimming

Linear Dimming to 10%

Output Current Dimming Curve
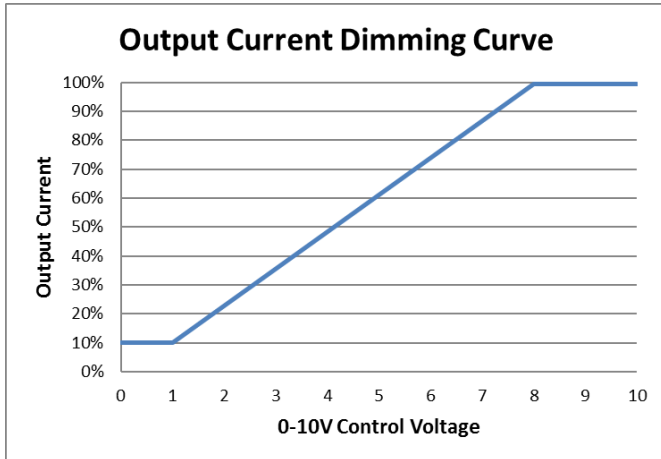
Linear Dimming w/ Dim-to-Off

Output Current Dimming Curve
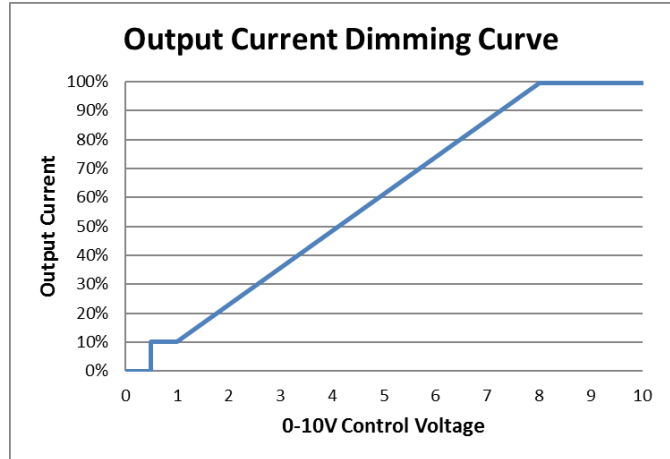
* Driver ships with Dim-to-Off disabled. Dim-to-Off must be enabled through the EVERset programming software.

0-10V Analog Dimming Interface
• Analog 0 to 10 Vdc Voltage Control
• Use Violet (+) & Pink* (-) for connection to 0-10 Vdc.
• 10V = maximum output
• 0V = dim-to-off or programmed minimum dimming level
• Wiring Violet & Pink* together provides min. light output.
• Capping Violet & Pink* separately provides 100% light output.
• 0-10V interface can be wired as Class 1 or Class 2 Circuit.
• Driver will source a maximum of 165uA for control needs.
• Controller must sink current from the 0-10V control leads.

| Programmable Dimming Features		
Feature	**Range**	**Factory Default**
Maximum Output Current	100 - 2000mA	default = 2000mA
Minimum Dimming Level	50 - 1000mA	default = 200mA
Dimming Curve	(Linear, Linear Soft Start, Logarithmic w/ factor 1 to 7)	default = Linear
Dimming Control Voltage Range		
Max Bright Control Voltage	7 - 9Vdc	default = 8Vdc
Min Dim Level Control Voltage	1 - 3Vdc	default = 1Vdc
Dim-to-Off	0.1 - 1.7Vdc; 0 = disabled	default = 0Vdc

* Refer to application note EVD10 at www.unvlt.com for additional information on programmable dimming features.

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Driver Thermal Overload Foldback
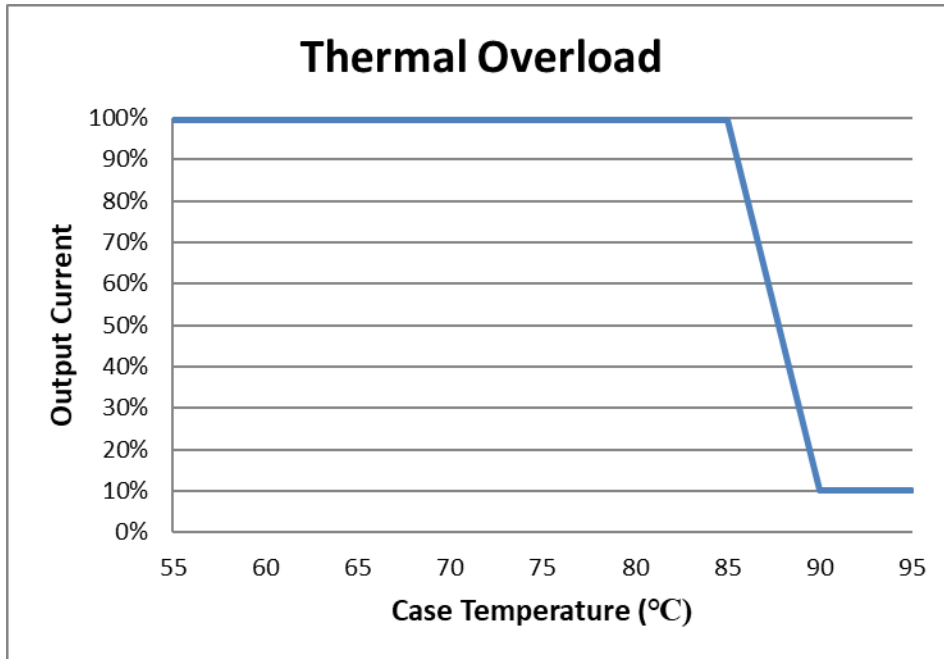
Example with the Output Current set to 2000mA, Starting Temperature set to 85°C, Ending Temperature set to 90°C and Ending Output Current set to 200mA (10%).

Programmable Thermal Overload		
Feature	Range	Factory Default
Starting Temperature	25 - 89°C	default = disabled
Ending Temperature	26 - 90°C	default = disabled
Ending Output Current	50 - 2000mA	default = disabled

*Refer to application note EVD15 at www.unvlt.com for additional information on Programmable Thermal Overload.

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Performance: Efficiency

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

Efficiency Vs. Output Voltage, 347V in

Efficiency Vs. Output Voltage, 480V in
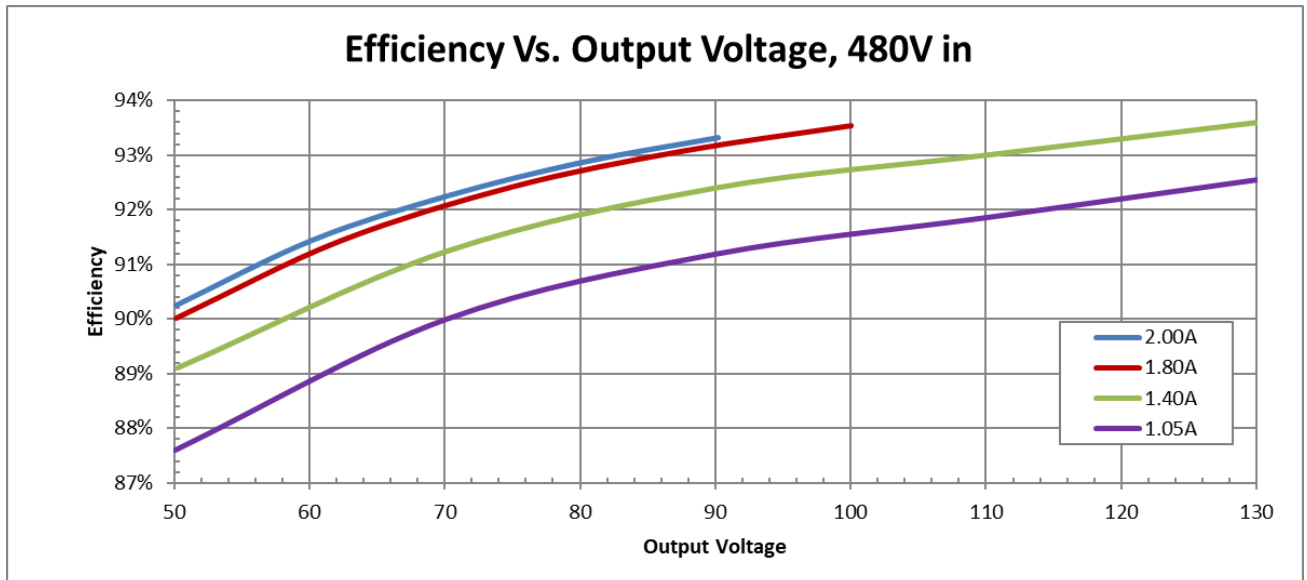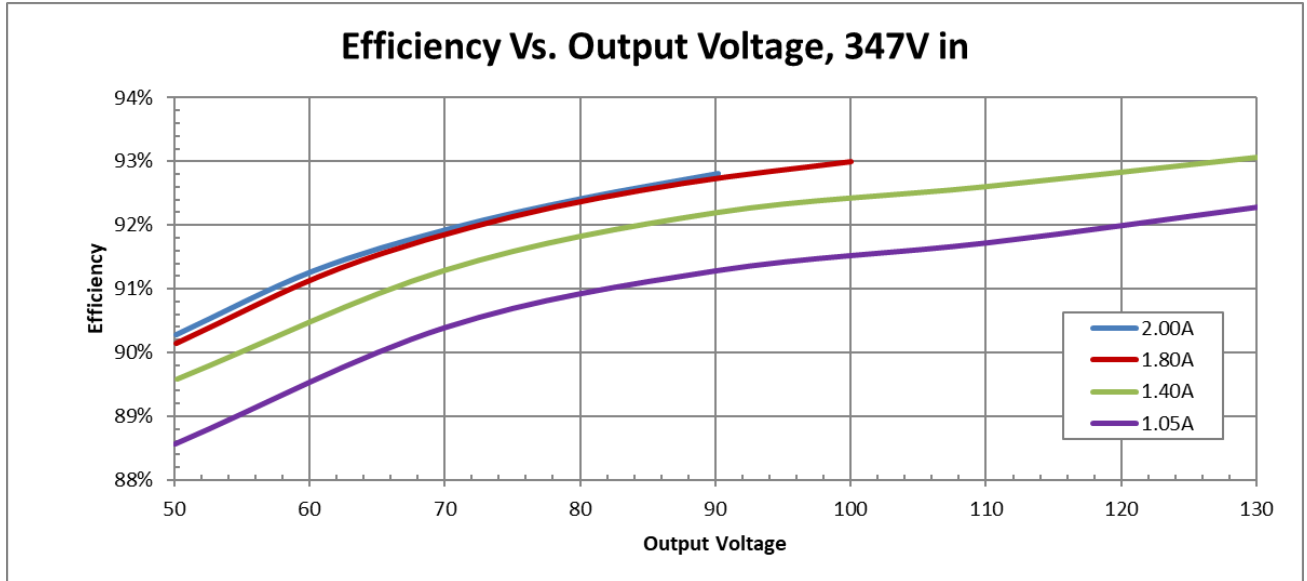
Application and operation performance specification information subject to change without notification.

Performance: Total Harmonic Distortion, & Power Factor

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

Total Harmonic Distortion vs Output Power

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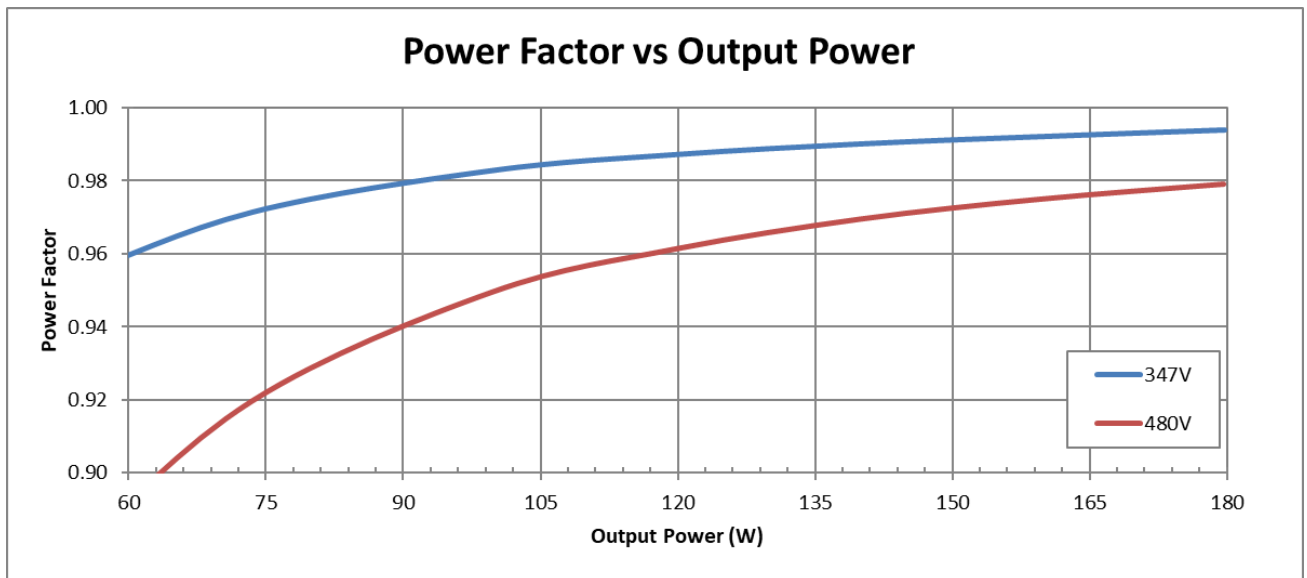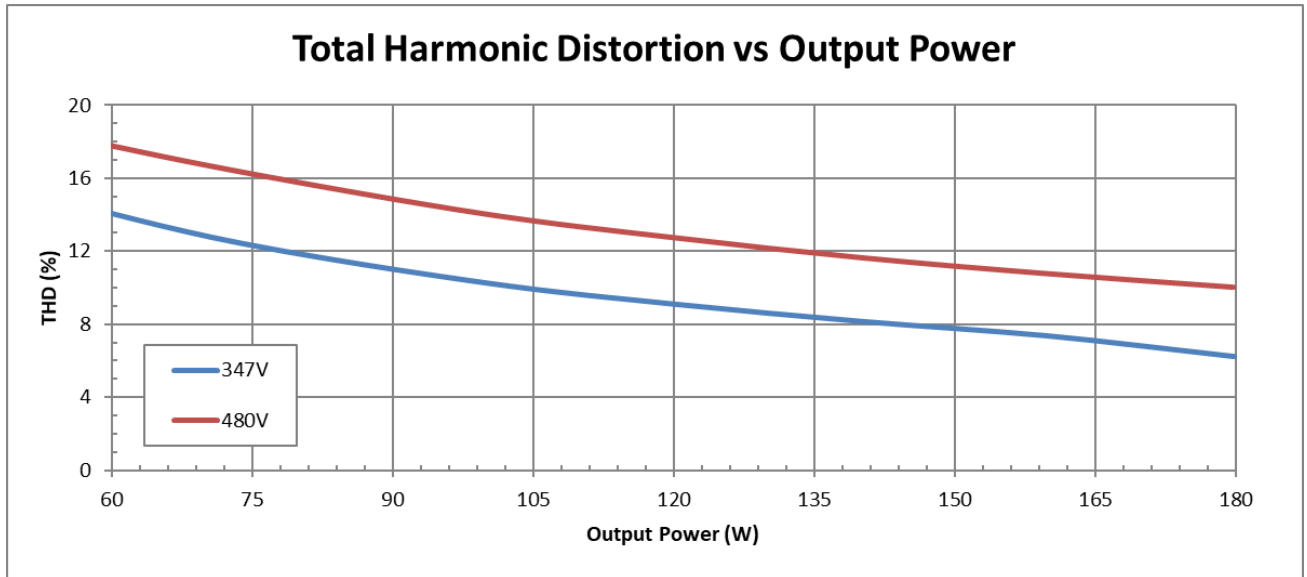
Output power based on maximum rated output current and varying load voltages.

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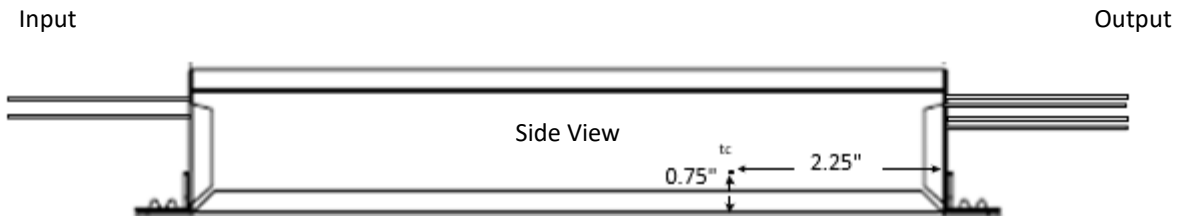Application and operation performance specification information subject to change without notification.

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Dimensional Diagram:
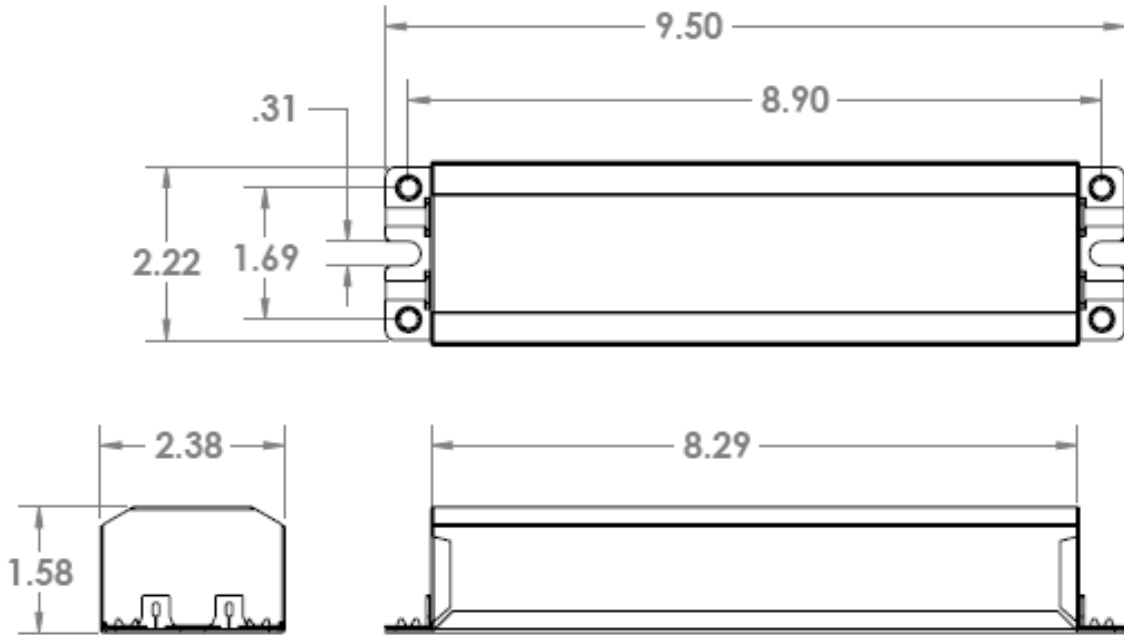
Tc Location:

Input   Output

Side View

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Transient Protection

Transient	Differential Mode (L-N)	Common Mode (L-G, N-G, L&N-G)
IEEE C62.41 1.2/50μs Combination Wave (w/t 2Ω)	> 6kV*	> 6kV*

Isolation

Isolation	Input	Output	0-10V	Auxiliary	Enclosure
Input	-	2xU + 1kV	2xU + 1kV	2xU + 1kV	495V*
Output	2xU + 1kV	-	2xU + 1kV	2xU + 1kV	2xU + 1kV
0-10V	2xU + 1kV	2xU + 1kV	-	2xU + 1kV	2xU + 1kV
Auxiliary	2xU + 1kV	2xU + 1kV	2xU + 1kV	-	2xU + 1kV
Enclosure	495V*	2xU + 1kV	2xU + 1kV	2xU + 1kV	-

U = Max Input Voltage

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

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.

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