

## 1500mA Programmable LED Driver

- Universal (120-277V) Input Voltage
- Class 2, 55W Constant Current Output with 0-10V dimming
- Full featured programmability with 12Vdc 100mA auxiliary output



### Performance

|                       |                                                                               |
|-----------------------|-------------------------------------------------------------------------------|
| Input Voltage         | 120 ~ 277 Vac                                                                 |
| Input Current Max     | 0.54 /120V 0.23/277V                                                          |
| Input Power Max       | 65W                                                                           |
| Input Frequency       | 50 - 60 (Hz)                                                                  |
| Power Factor*         | > 0.95                                                                        |
| THD max*              | < 20 %                                                                        |
| Output Voltage        | 15V to 37V @ 1.50 Amps<br>(Refer to Power Curve Chart) 15V to 56V @ 0.98 Amps |
| Max. Output Current   | 1500mA                                                                        |
| Min. Dimming Current  | 75mA                                                                          |
| Output Power          | 55W                                                                           |
| Standby Power         | < 2.8W @ 120Vac<br>< 3.5W @ 277Vac                                            |
| Line Regulation       | ±3 %                                                                          |
| Load Regulation       | ±5 %                                                                          |
| Output Current Ripple | <10% (Pk-Pk/avg)                                                              |
| Inrush Current        | 120V: 10.3A / 250uS                                                           |
| Peak / >50% Duration  | 277V: 17.5A / 250uS                                                           |

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

### Ordering Information

| Order Number         | Description      | Qty/Carton |
|----------------------|------------------|------------|
| D15CC55UVPA12-FS010C | Standard Product | 10         |

Protection:  
Over Voltage, Under Voltage, Short Circuit, Over Temp

Safety:  
UL 8750 & CSA 250.13  
Class P

### Auxiliary Output

|                |        |
|----------------|--------|
| Output Voltage | 12 Vdc |
| Output Current | 100 mA |

### Physical

|                                           |         |
|-------------------------------------------|---------|
| Length                                    | 6.59 in |
| Width                                     | 2.37 in |
| Height                                    | 1.53 in |
| Mounting Length                           | 6.00 in |
| Weight (lbs)                              | 1.5     |
| Lead Lengths (+/- 1 in)                   |         |
| Blk, Wht, Purple, Pink*                   | 11.5 in |
| Red(+), Blue(-)                           | 11.5 in |
| Orange, Yellow/Black, Black/Wht, Blue/Wht | 11.5 in |

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

### Environmental

|                      |                                                    |
|----------------------|----------------------------------------------------|
| EMI and RFI          | Meets FCC part 15 (Class A)<br>Non-Consumer Limits |
| Operating            | -40°C to 55°C                                      |
| Storage Temperature  | -40°C to 85°C                                      |
| tc                   | 85°C max for warranty<br>90°C max for UL           |
| 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.universaldouglas.com](http://www.universaldouglas.com) for additional information  
on Hi-Pot Testing.



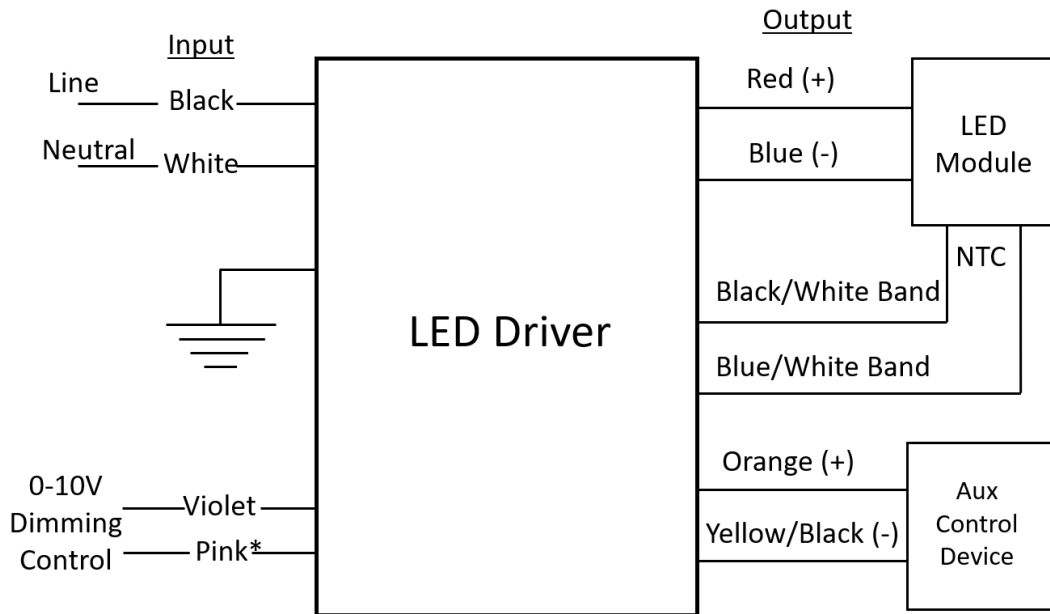
Application and operation performance specification information subject to change without notification.

| Programmable Features                                     |
|-----------------------------------------------------------|
| Output Current                                            |
| Minimum Dimming Level                                     |
| Dim-to-Off                                                |
| Dimming Curve<br>(Linear, Linear Soft Start, Logarithmic) |
| Lumen Maintenance                                         |

| Programming System |                              |
|--------------------|------------------------------|
| Software           | EVERset Programming Software |
| Hardware           | LDPC000A Configuration Tool  |
| Driver Interface   | Wired via 0-10V leads        |

\*Refer to application notes EVD10 and EVD11 at [www.universaldouglas.com](http://www.universaldouglas.com) for additional information on programmable features.

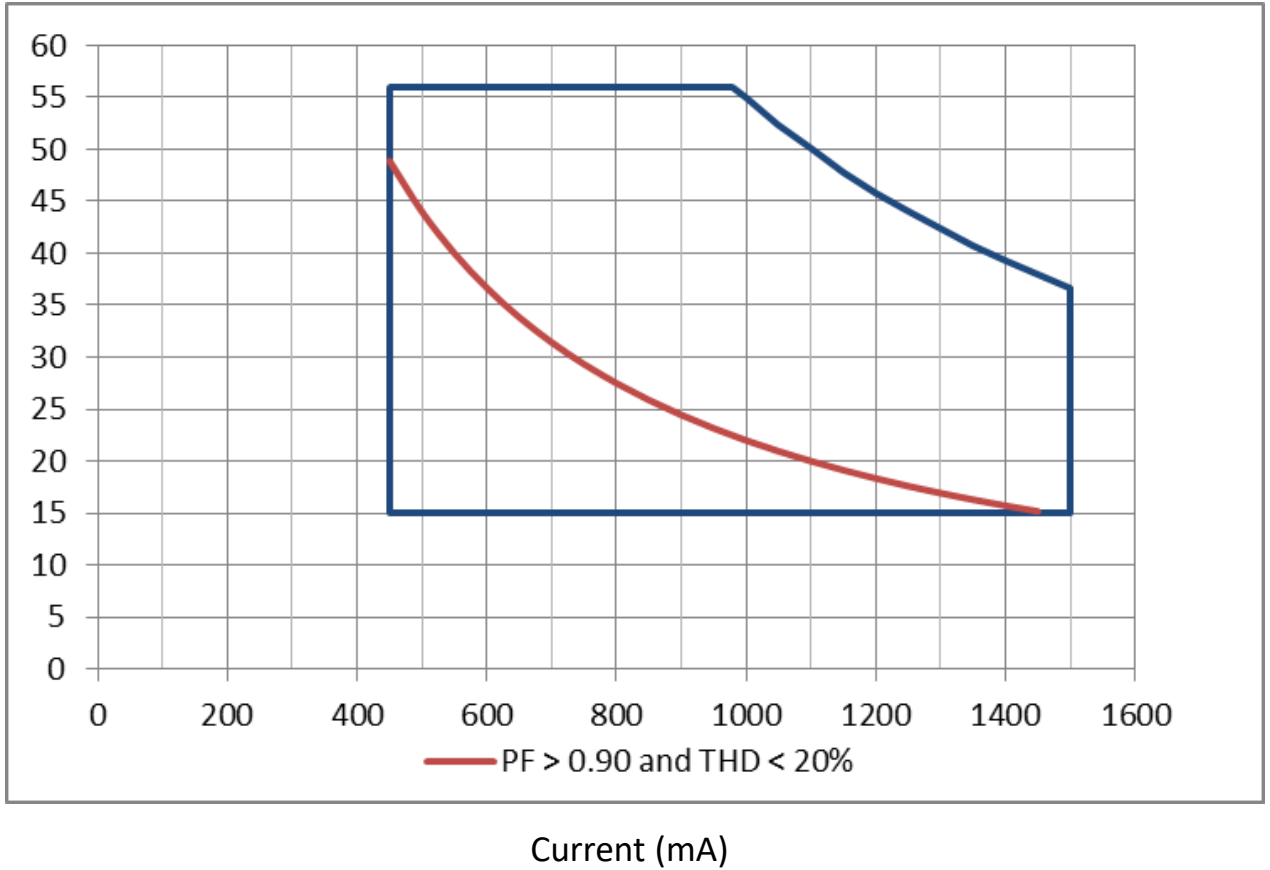
## Wiring Diagram



- **NOTE:** Unused Black/White and Blue/White leads must be individually capped off when thermal foldback control is not used.
- **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.

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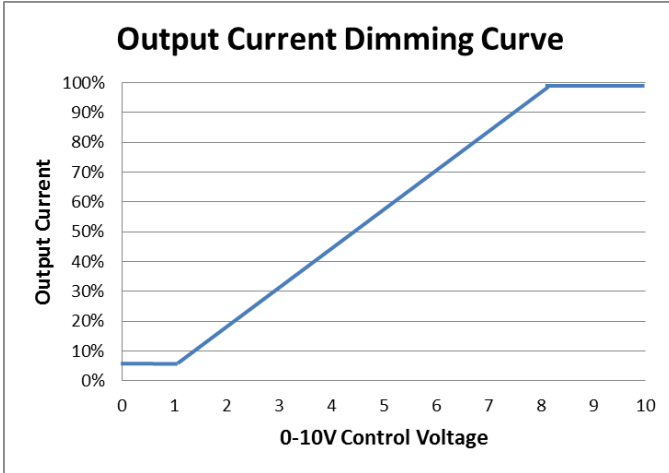
## Driver Operating Range:



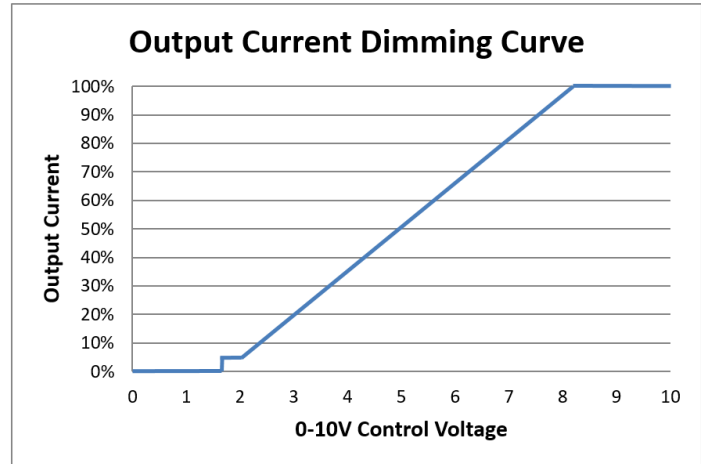
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## 0-10V Dimming

Linear Dimming to 5%



Linear Dimming w/ Dim-to-Off



### 0-10V Analog Dimming Interface

- Analog 0 to 10 vDC Voltage Control
- Use Violet (+) & Pink\* (-) for connection to 0-10vDC.
- 10v = maximum output, 0v = minimum output
- 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.

\* Driver ships with Dim-to-Off disabled. Dim-to-Off must be enabled through the EVERset programming software.

### Programmable Dimming Features

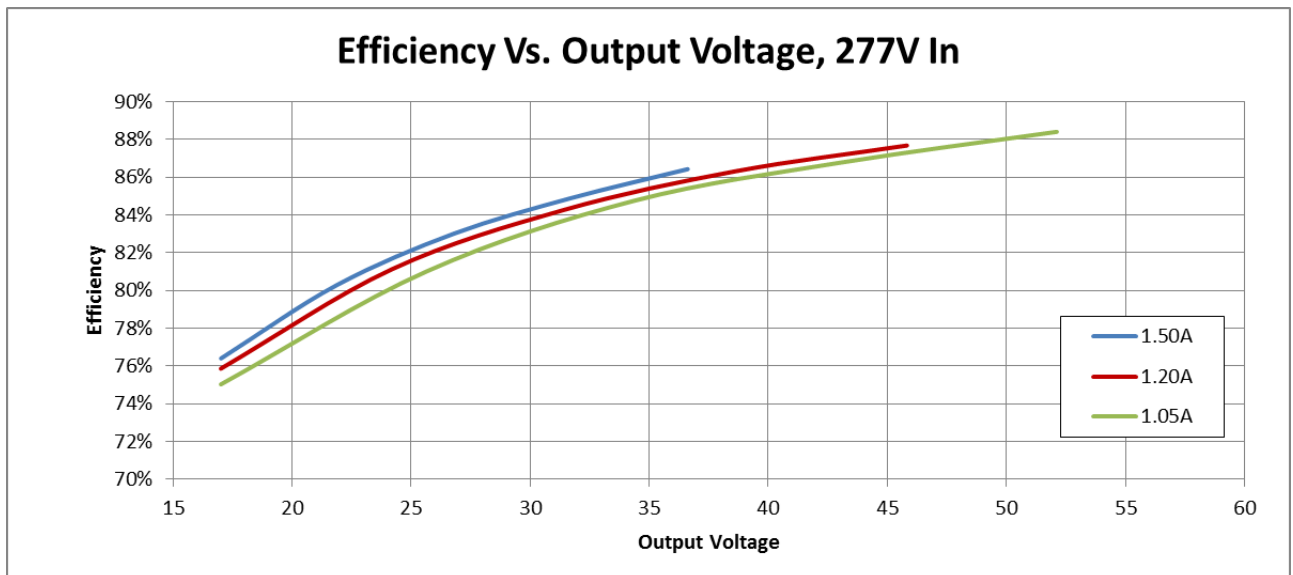
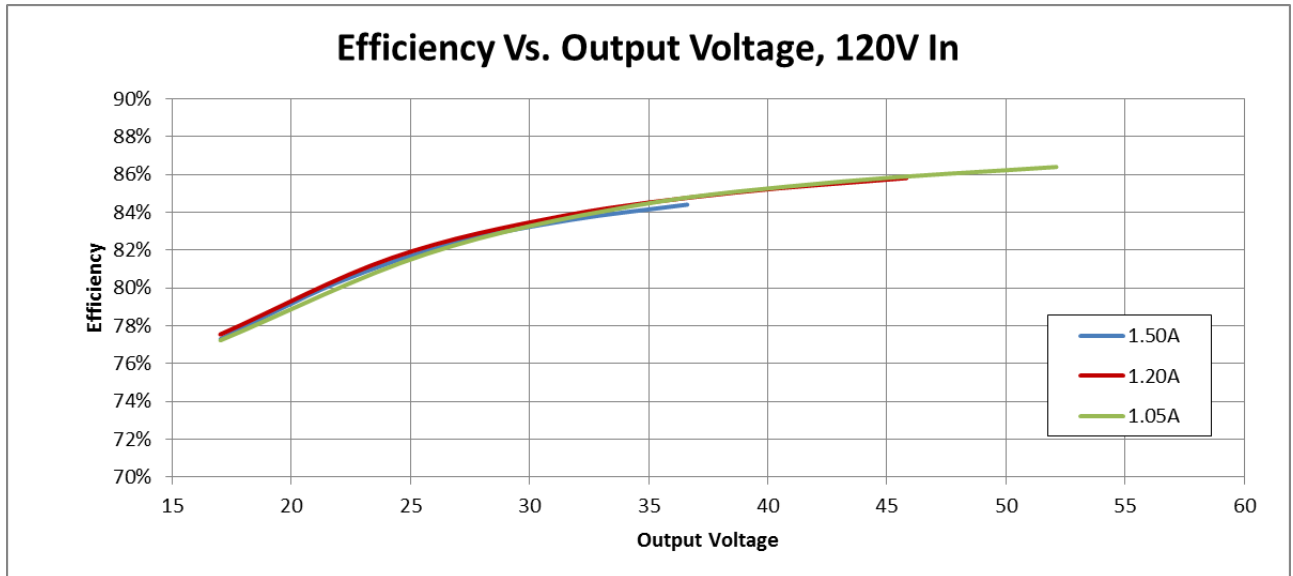
| Feature                       | Range                                                     | Factory Default           |
|-------------------------------|-----------------------------------------------------------|---------------------------|
| Maximum Output Current        | 450 - 1500mA                                              | default = 1500mA          |
| Minimum Dimming Level         | 75 - 375mA                                                | default = 75mA            |
| 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                                              | default = 0Vdc (disabled) |

\* Refer to application note EVD10 at [www.universaldouglas.com](http://www.universaldouglas.com) for additional information on programmable dimming features.

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## Performance: Efficiency

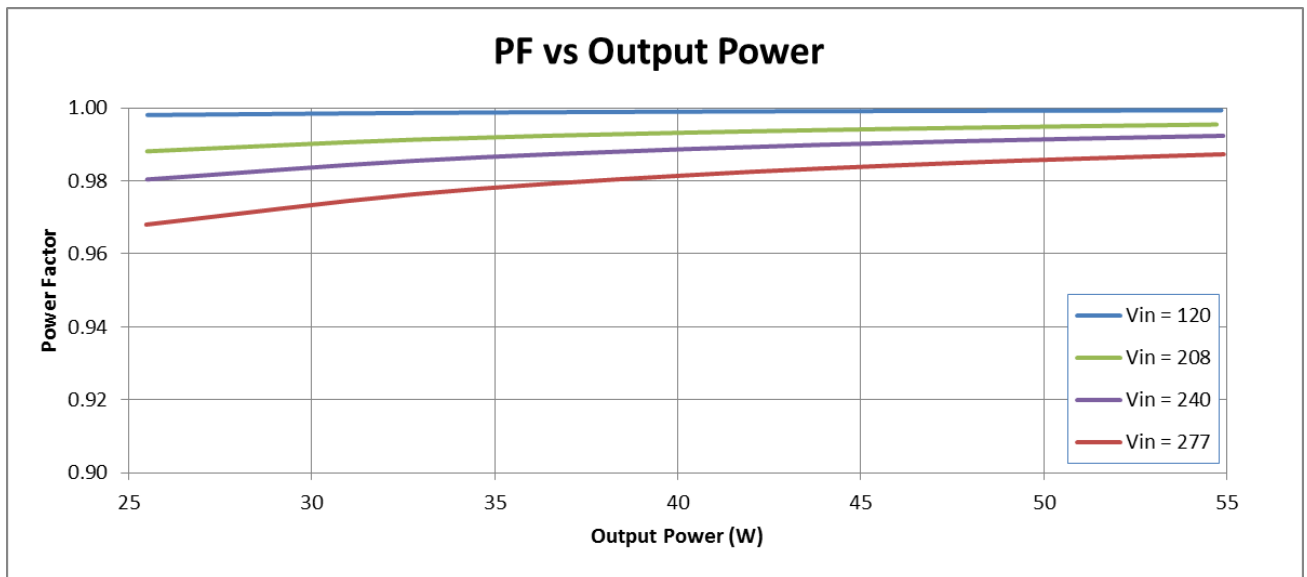
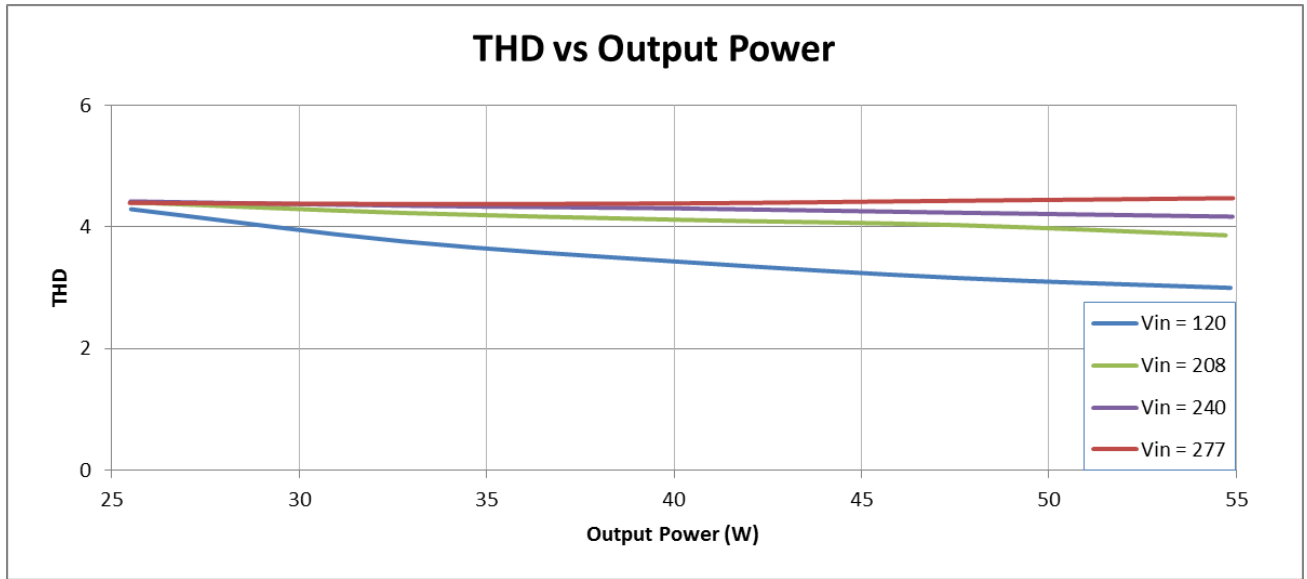
Typical performance measurements are shown. The charts are to be used as a guideline and not for specification use.



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## 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.



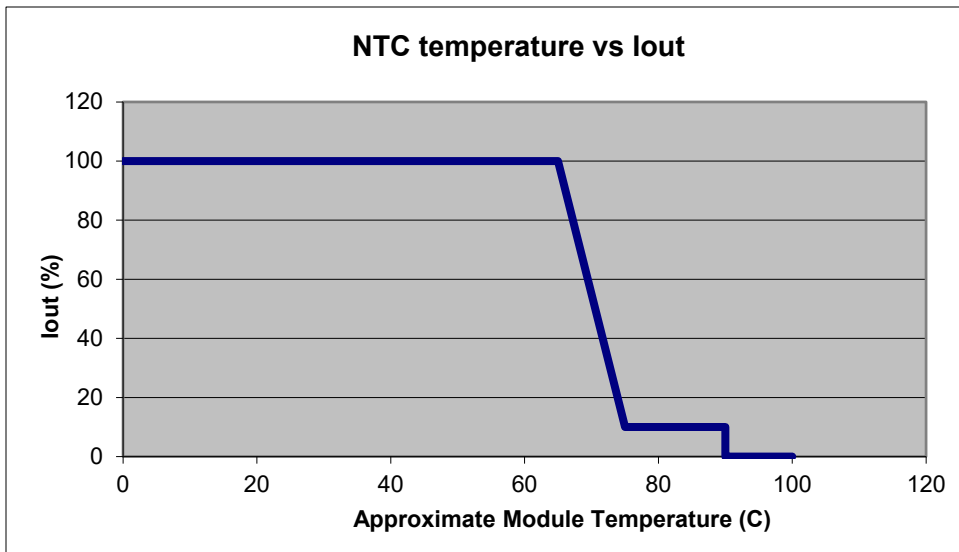
Output power based on maximum rated output current and varying load voltages.

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## Module Thermal Foldback Protection

### Thermal Foldback Control

- Luminaire temperature monitoring/protection
- LED Driver reduces output current for external thermal protection if an NTC (Negative Thermal Coefficient) is connected to the Black/White and Blue/White leads.
- **NOTE:** Unused Black/White and Blue/White leads must be individually capped off when thermal foldback control is not used.
- See application note EVD02 on [www.universaldouglas.com](http://www.universaldouglas.com) for more information.



(Example with the Murata NTC p/n NCP18XV103J03RB)

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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<br>Combination Wave (w/t 2Ω) | > 6kV**                 | > 6kV**                       |

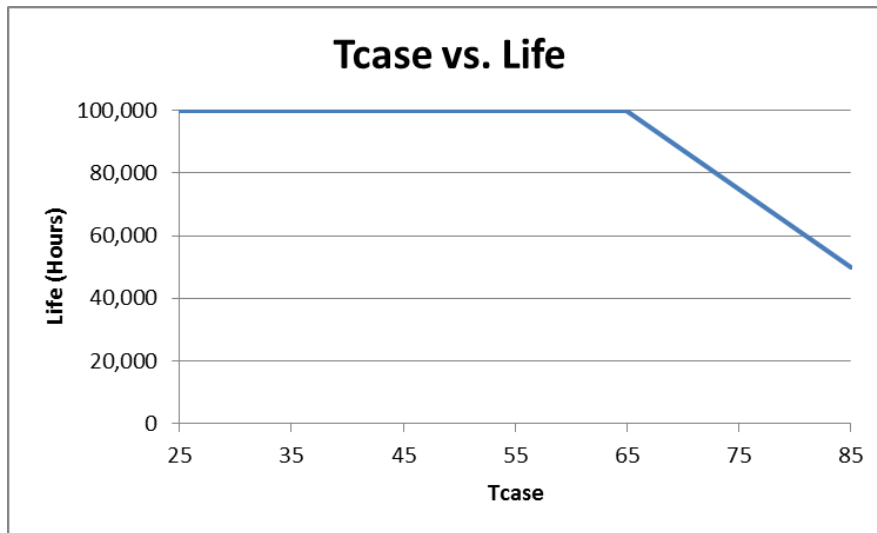
\*\*Driver uses MOVs for transient protection.

Refer to application note EVD07 at [www.universaldouglas.com](http://www.universaldouglas.com) for additional information on Hi-Pot Testing.

| Isolation |           |              |           |              |              |           |
|-----------|-----------|--------------|-----------|--------------|--------------|-----------|
| Isolation | Input     | Output       | 0-10V     | Auxiliary    | NTC          | Enclosure |
| Input     | -         | 2xU + 1kV    | 2xU + 1kV | 2xU + 1kV    | 2xU + 1kV    | 410V      |
| Output    | 2xU + 1kV | -            | 2xU + 1kV | Non-isolated | Non-isolated | 700V      |
| 0-10V     | 2xU + 1kV | 2xU + 1kV    | -         | 2xU + 1kV    | 2xU + 1kV    | 2xU + 1kV |
| Auxiliary | 2xU + 1kV | Non-isolated | 2xU + 1kV | -            | Non-isolated | 700V      |
| NTC       | 2xU + 1kV | Non-isolated | 2xU + 1kV | Non-isolated | -            | 2xU + 1kV |
| Enclosure | 410V      | 700V         | 2xU + 1kV | 700V         | 2xU + 1kV    | -         |

U = Max Input Voltage

## Life vs. Driver Tcase

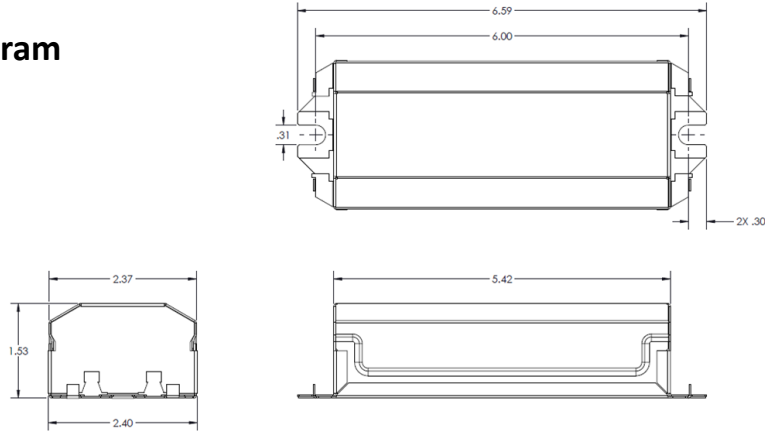


The Data curve provided predicts the LED Driver life based on the case temperature measured at the Tc location identified on the label or specification sheet. The Telecordia SR-332 standard is used to generate the prediction curves.

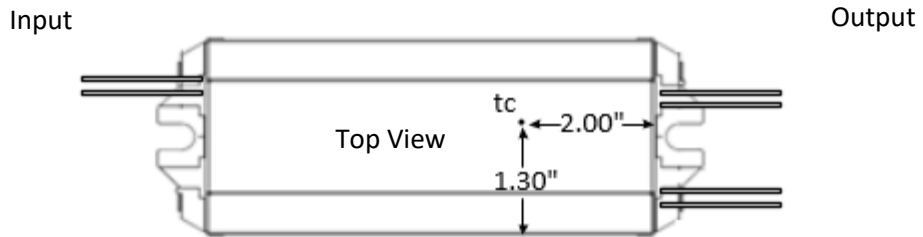
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## Dimensional Diagram



## Tc Location



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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