

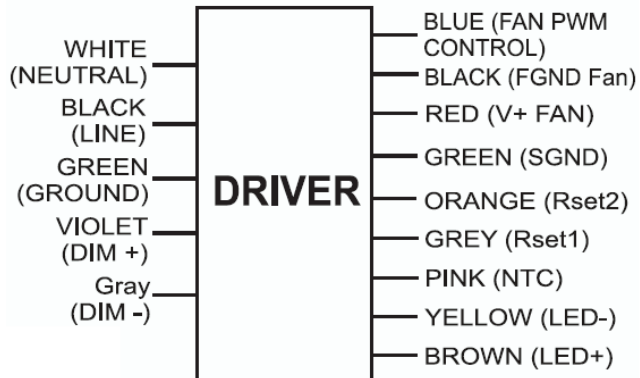
## XR025C100V036XPM1

### Electrical Specifications

|                 |                                |
|-----------------|--------------------------------|
| Brand Name      | XITANIUM                       |
| Description     | XITANIUM 25W 0.3-1.0A TE/0-10V |
| Input Voltage   | 120V                           |
| Input Frequency | 60Hz                           |
| RoHS            | Yes                            |
| Status          | Released                       |

| Output Power (W) | Output Voltage (V) | Output Current (A) | Efficiency@ Max Load | Max Case Temp. (°C) | Input Current | Max. Input Power (W) | Inrush Current (A <sub>in</sub> /50%-μs) |           | THD @ Max Load (%) | Power Factor @ Max Load | Surge Protection Common/Diff (KV) | Weight (Lbs/kgs) | Envir. Protection Rating |
|------------------|--------------------|--------------------|----------------------|---------------------|---------------|----------------------|------------------------------------------|-----------|--------------------|-------------------------|-----------------------------------|------------------|--------------------------|
| 25               | 18 ~ 36            | 0.3-1.0            | 120V                 | 75 °C               | 120V          | 34                   | 120 Vin                                  | 13.7/ 160 | 12                 | >0.9                    | 1.5/1.5                           | 0.981/ 0.445     | UL Dry & Damp            |
|                  |                    |                    | 81.5%                |                     | 0.28A         |                      |                                          |           |                    |                         |                                   |                  |                          |

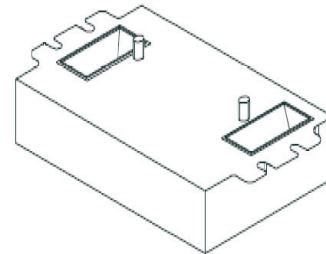
#### Wire Diagram



Input and output use lead-wires.  
Lead-wires are 18AWG 105C/600V solid copper.

| Dimming Method | Dimming Range | Minimum Output Current (A) | Min (typ). Output Power(W) | Other Comments |
|----------------|---------------|----------------------------|----------------------------|----------------|
| 0-10V          | 10% ~ 100%    | 0.03                       | 0.5                        |                |
| Trailing edged | 10% ~ 100%    | 0.03                       | 0.5                        |                |

#### Enclosure



|                 | in. (mm)   |
|-----------------|------------|
| Case Length     | 4.21 (107) |
| Case Width      | 2.99 (76)  |
| Case Height     | 1.29 (33)  |
| Mounting Length | 4.96 (126) |
| Mounting Width  | 2.99 (76)  |



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| RoHS              | Yes                            |
| Status            | Released                       |

| Product Data                         |                                                                                     |
|--------------------------------------|-------------------------------------------------------------------------------------|
| Order code                           | XR025C100V036XPM1                                                                   |
| Full product code                    | XR025C100V036XPM1                                                                   |
| Full product name                    | Xitanium 25W 0.3-1.0A TE/0-10V Dimming                                              |
| Net weight per piece                 | 0.455 KG / 0.981lbs                                                                 |
| Interfaces                           | 0-10V Dimming                                                                       |
| Ambient Temp Range                   | -20C to +50C                                                                        |
| Corresponding Tcase                  | -15C to +75C                                                                        |
| Line Voltage                         | 120V                                                                                |
| Line Current                         | 0.28A @ 120V                                                                        |
| Line Frequency                       | 60Hz                                                                                |
| Envir. Protection Rating             | UL Dry & Damp                                                                       |
| Life @ TC 75 C                       | 50000 hr                                                                            |
| Suitable for Outdoor use?            | NO                                                                                  |
| Max TC                               | 75C                                                                                 |
| Inrush current Width                 | Refer to table                                                                      |
| Min ballast number on MCB 16A type B | 20                                                                                  |
| Input Over-voltage                   | Can survive input over-voltage stress of 320VAC for 48 hours and 350VAC for 2 hours |
| LED Current Tolerance                | +/- 5% with full load                                                               |
| Earth leakage current                | 0.7 mA [max]                                                                        |
| Mains voltage safety (AC)            | +/-10%                                                                              |
| Mains voltage performance (AC)       | +/-10%                                                                              |
| Min. Mains voltage operational       | 108 V [min]                                                                         |
| Output peak voltage                  | 40V [max]                                                                           |
| Output Current ripple                | 20% @ 1000 mA (ripple = pk/avg)                                                     |
| THD total                            | < 20% @ max load                                                                    |
| PF @ Max Load                        | >0.90                                                                               |
| Wire Isolation                       | All wires are Double isolated to ground                                             |
| Protections                          | Short Circuit and Open Circuit Protection for LED + and LED-                        |

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| RoHS            | Yes                            |
| Status          | Released                       |

### Electrical Specifications

#### Installation & Application Notes:

##### Section I – Physical Characteristics

- 1.1 LED Driver shall be installed inside an electrical enclosure
- 1.2 Wiring inside electrical enclosure shall comply with 600V/105°C rating or higher.

##### Section II – Performance

- 2.1 LED Driver has a rated lifetime of 50,000 hours @ TC ≤75°C.
- 2.2 LED Driver tolerates sustained open circuit and short circuit output conditions without damage.
- 2.3 LED Driver maximum allowable case temperature is 75°C – see product label for measurement location.
- 2.4 LED Driver complies with the requirements of UL, CSA, FCC47 subpart 15.

##### Section III – UL Conditions of Acceptability (File E321253)

When installed in the end product, consideration shall be given to the following:

- 3.1 The equipment shall be installed in compliance with the enclosure, enclosure, mounting, spacing, casualty and the segregation requirements of the ultimate application.
- 3.2 Consideration should be given to measuring the temperatures on electronic components of power circuits and transformer windings when the unit is installed in the end-use equipment based upon mounting orientation, operating ambient and ventilation. Magnetic components L200, L300, L500 employ Class 130(B) insulation.
- 3.3 These drivers should be used within the recognized ratings.
- 3.4 The driver is suitable for use in “DAMP” and “DRY” locations.
- 3.5 The maximum available output parameters from 0-10v dimming circuit provided on LED driver were tested in accordance with supplement (SB) of UL935 and was found permissible for connection via Class 2 wiring.
- 3.6 When the drivers are installed in the end-use application, the case temperature should not exceed the temperature limits specified in the following table:

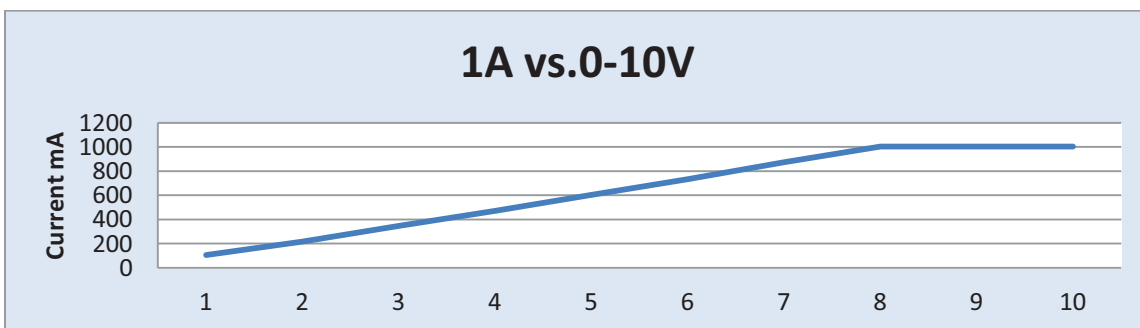
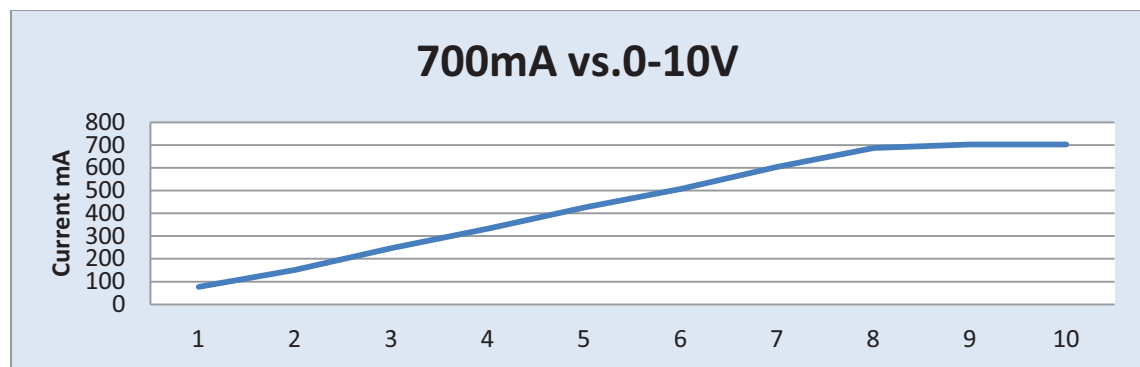
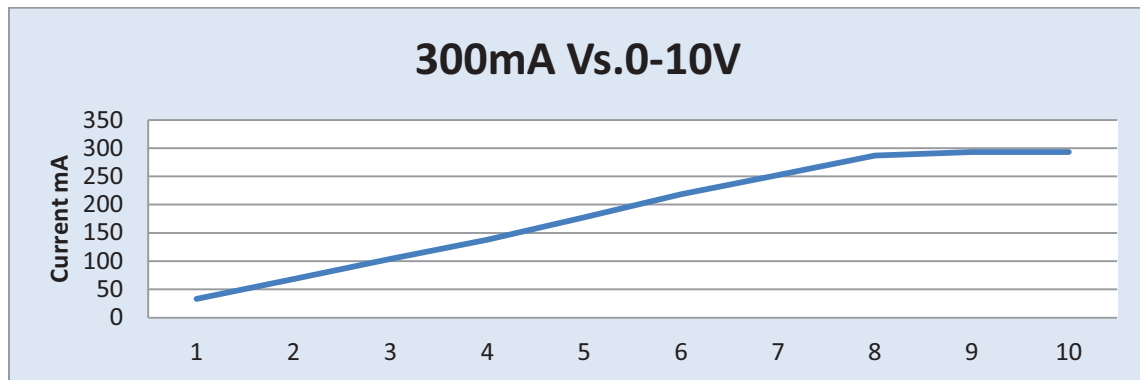
| Model No.         | Input Voltage, Hz | Max. Case @ Tc, °C |
|-------------------|-------------------|--------------------|
| XR025C100V036XPM1 | 120, 60 Hz        | 75                 |

- 3.7 The maximum measured leakage current was 0.10 mA while was connected to a 120 V branch Source.

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| Input Frequency | 60Hz                           |
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| Status          | Released                       |

### Electrical Specifications



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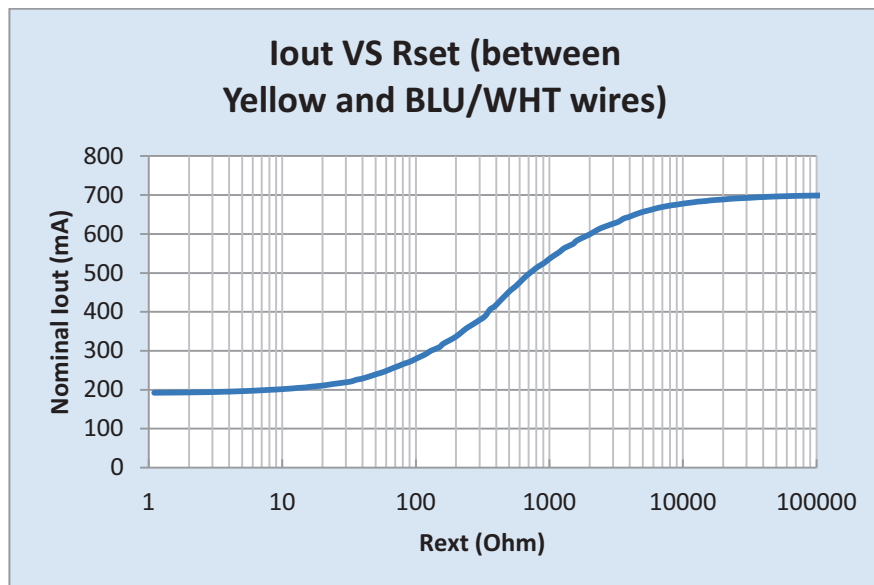
### Electrical Specifications

#### AOC (Adjustable Output Current) Settings:

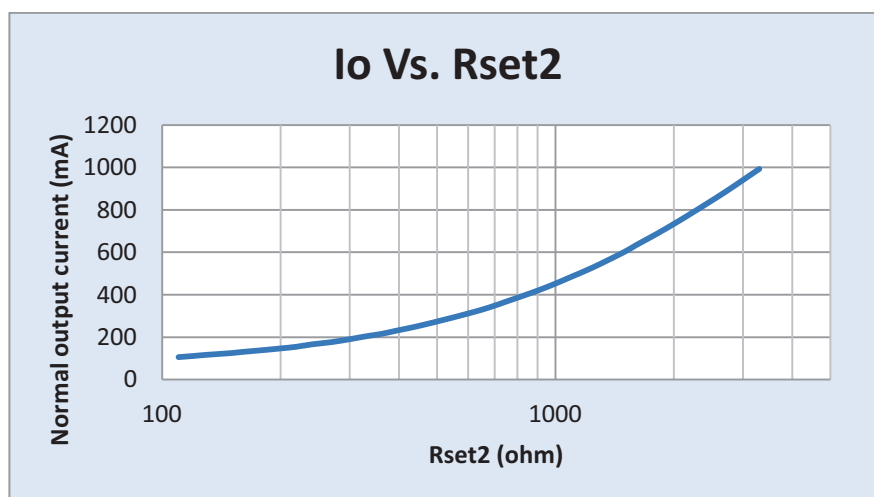
LED current tolerance with variation of Rset 1 is within +/- 5% of I<sub>max</sub>

#### 1.1 Rset2 Table

(Valid Range of Current 0.3-1.0A)



| Rset1 (Ohms) | Current(mA) |
|--------------|-------------|
| 1            | 191         |
| 100          | 214         |
| 620          | 309         |
| 910          | 347         |
| 935          | 350         |
| 1500         | 406         |
| 2200         | 455         |
| 3000         | 494         |
| 4115         | 530         |
| 4300         | 536         |
| 8200         | 599         |
| 18000        | 649         |
| 100000       | 691         |
| 1000000      | 700         |



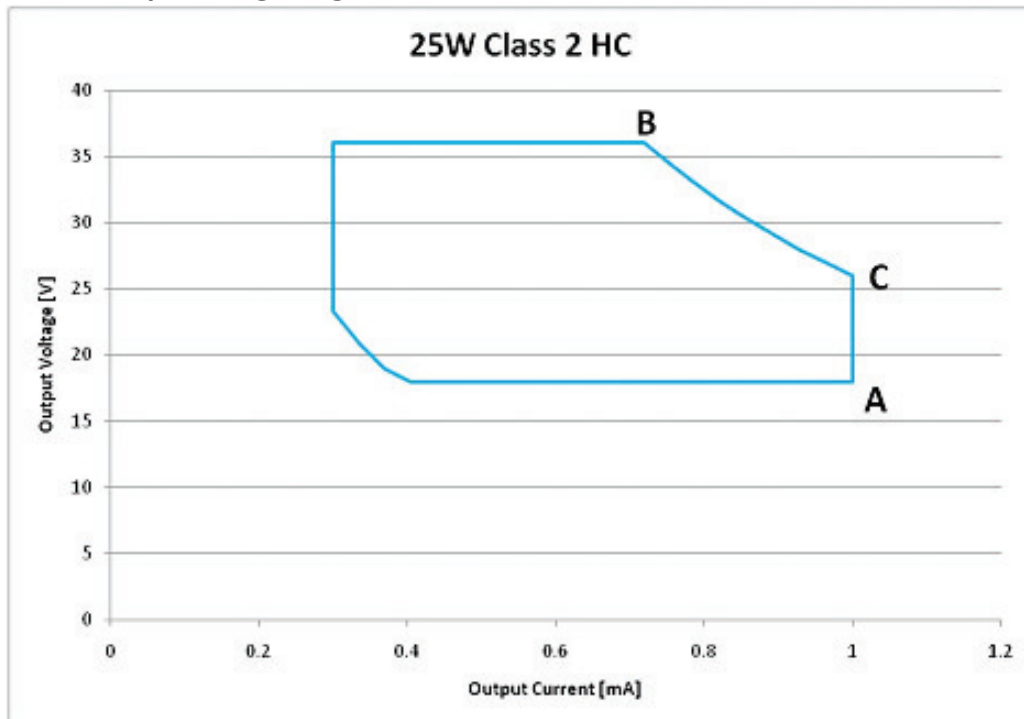
| Rset2(Ohms) | Current(mA) |
|-------------|-------------|
| 100         | 100         |
| 270         | 176.4368    |
| 360         | 214.6552    |
| 470         | 261.0632    |
| 560         | 296.5517    |
| 680         | 340.2299    |
| 750         | 367.5287    |
| 1000        | 452.1552    |
| 1300        | 544.9713    |
| 1500        | 602.2989    |
| 1800        | 684.1954    |
| 2700        | 883.477     |
| 3300        | 992.6724    |

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| Input Frequency | 60Hz                           |
| RoHS            | Yes                            |
| Status          | Released                       |

### Electrical Specifications

25W high current, operating range 18-36V, 300-1000mA:



Edged Dimming performance note:

- Between 27V and 36V (full load) dimming performance is ok for all dimmers;
- Between 24V and 27V (full load) dimming performance (instabilities in light level) is dimmer dependent;
- Below 27V (full load) not recommended, instabilities in light level may occur during dimming and switching on.

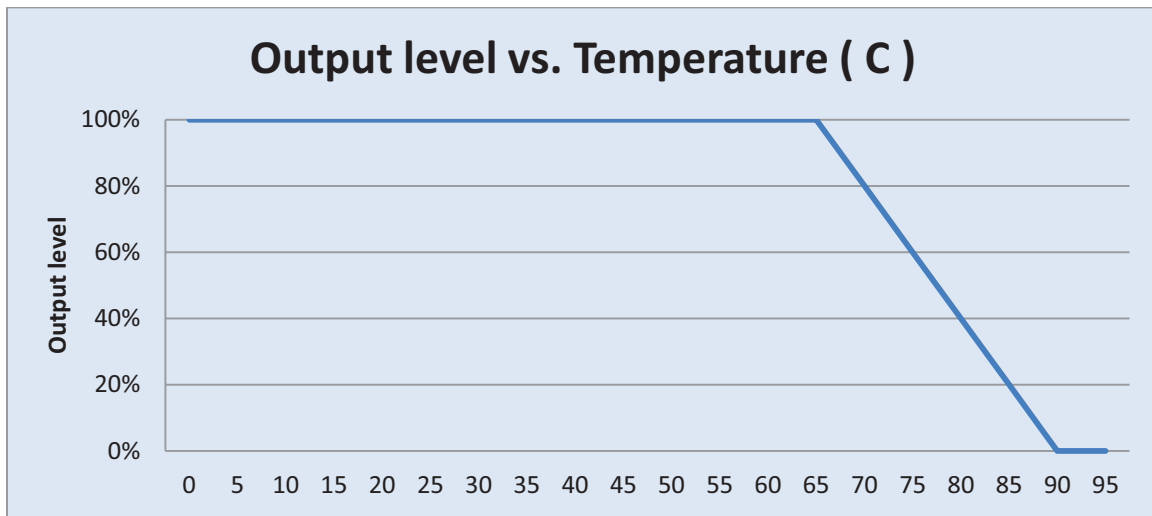
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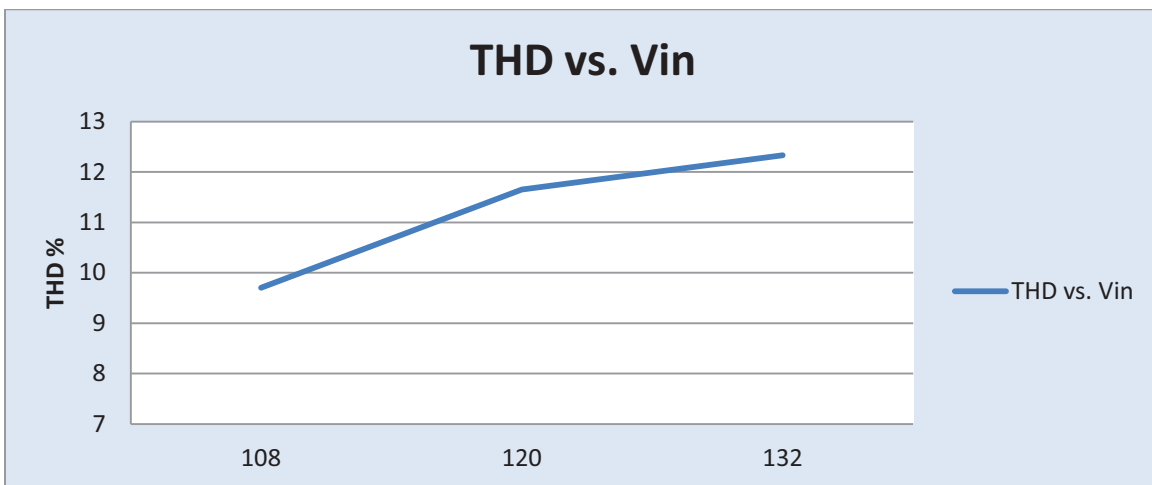
### Electrical Specifications

**Module Thermal Protection** can be implemented between 65C to 90C. Please refer to design guide for more details

**NTC part can be used:** NTC from Vishay, part number is 238161554153 (15kOhm  $\pm$  2% NTC, B25/85=3700)



THD vs. Vin of Driver:

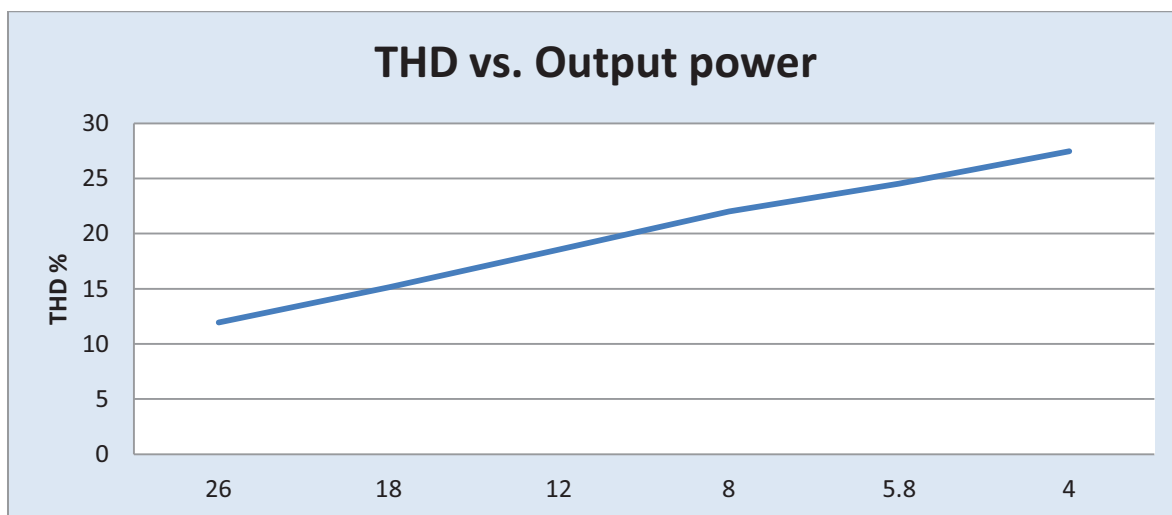


## XR025C100V036XPM1

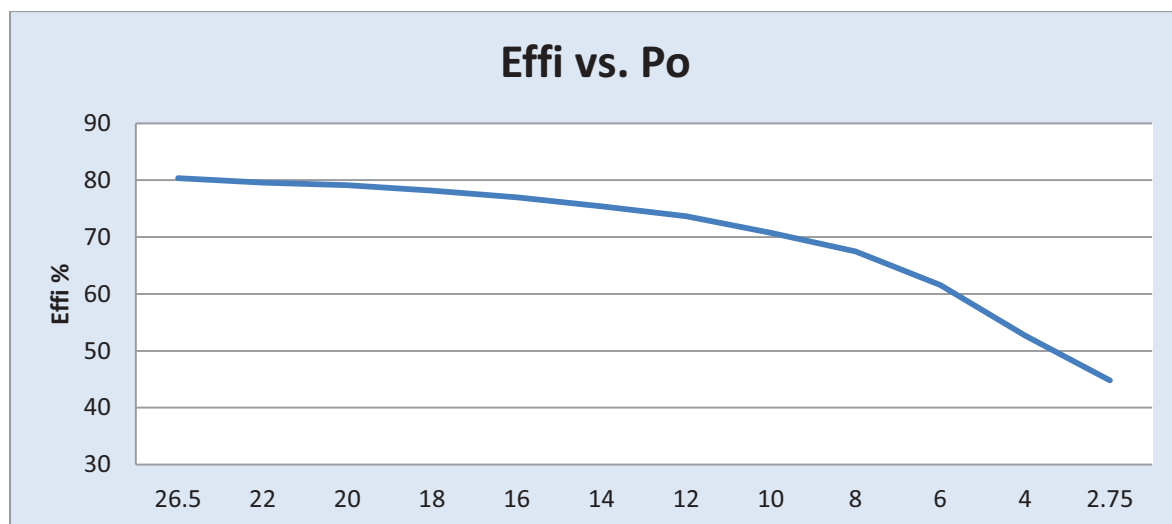
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### Electrical Specifications

#### THD vs. Output Power



#### Efficiency vs. Output power

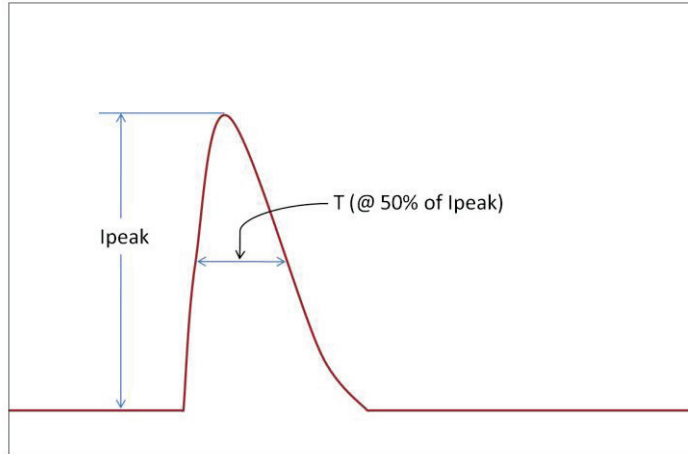


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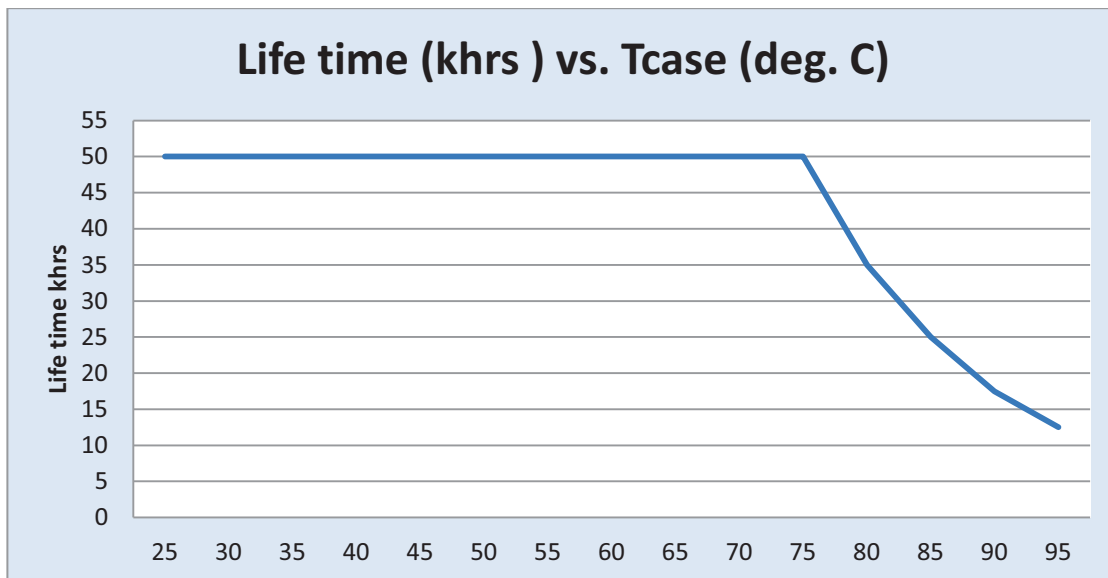
### Electrical Specifications

#### Inrush Current Info:



| Vin      | Ipeak  | T (@ 50% of Ipeak) |
|----------|--------|--------------------|
| 120 Vrms | 13.7 A | 160 $\mu$ s        |

#### Lifetime vs. Tcase of Driver:



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### Electrical Specifications

#### Failure Rate Info:

1. <0.2% per 1 kHr @<= Tcase 75 C

#### Isolation:

| Isolation   | Input Wires | Output Wires | 0-10v Wires | Chassis |
|-------------|-------------|--------------|-------------|---------|
| Input Wires | NA          | 2150         | 1500        | 2150    |
| 0-10v Wires | 1500        | 500          | NA          | 500     |
| Chassis     | 2150        | 500          | 500         | NA      |

|                           |                                |
|---------------------------|--------------------------------|
| Dimmer compatibility list | Lightolier ZP260QE (ELV 3-way) |
|                           | Lutron DVELV-303P (ELV 3-way)  |
|                           | Leviton VZE06-1LZ (ELV 3-way)  |
|                           | Lutron SELV-300P               |
|                           | Lightolier ZP425QE             |
|                           | Leviton IPEO4-1LX              |

#### Revision History:

| Rev No. | Date       | Description                         | Approval | Remarks |
|---------|------------|-------------------------------------|----------|---------|
| 1.1     | 1/20/2012  | * Add Envir. Protection Rating      | N.T.     |         |
| 1.2     | 03/02/2012 | *Remove the "M" at the end of part# | N.T.     |         |
| 1.3     | 03/05/2012 | *Update Rset2 Table                 | N.T.     |         |
|         |            |                                     |          |         |