# XEL-030D
## DuoDim™ Commercial Series

10~30W, 5% 0-10V Dimming /1% Phase-Cut Dimming (TRIAC/ELV/MLV) Driver

| Nominal Input Voltage (Vin) | Family Output Power Range (W) | Output Voltage Range (Vout) | Output Current Range (A) | Max Efficiency (%) | UL Max Case Temp. TC (°C) | THD (%) | Power Factor | Dimming Method | Dimming Range (% of Iout) |
|---|---|---|---|---|---|---|---|---|---|
| 120~277Vac | 8~30W MAX | 24~32Vdc<br>26~42Vdc | 0.30~0.70A | ≤ 88% (typical) | 90°C | < 20% | > 0.9 | 0-10V & TRIAC/ELV/MLV | Phase-Cut: 1-100%<br>0-10V:5-100% |

- **Ideal for Residential & Commercial Lighting**
- **Driver Optimized for COB Based Designs**
- **Indoor or Outdoor Use**
- **Universal AC input (108~305Vac)**
- **DuoDim™ Technology (0-10V & Phase-Cut) (Optional Phase-Cut only)**
- **Enables Energy Star & DLC compliant fixtures**
- Turn on/off in less than 500 miliseconds
- Built-in Commercial grade Surge Protection
- Integrated over voltage & open load, over current, short circuit & temperature protection
- Turn on & Full power operation between -30°C to +60°C ambient[1]
- XenerQi Industry Leading 5 Year True Warranty™ [2]
- UL Class P & Class 2 Output Driver
- Class A Noise Rating
- Complies to FCC CFR Title 47 Part 15

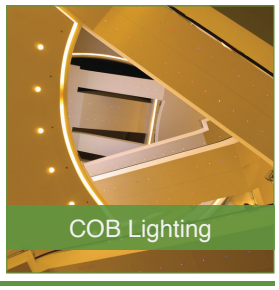
See product specific data pages for details.

Variants available:

**ALTERNATE PACKAGES**

XEL-040D

## Typical Applications

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# Dimensions & Installation

(not to scale)

## CASE

| | |
|---|---|
| **Material** | Painted White Steel |
| **Unit Weight** | See variant pages for details |
| **Dimensions** | 126.5mm x 60.5mm x 30mm / 5.0” x 2.4” x 1.2” |

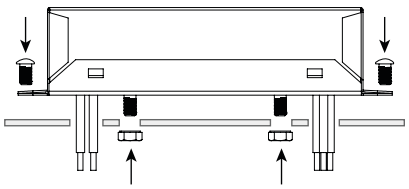
## WIRING

| | |
|---|---|
| **Input Wires** | 18AWG (UL1569) (**L**:Black, **N**:White) |
| **Output Wires** | 18AWG (UL1569) (**LED+**:Red, **LED-**:Blue) |
| **DIM Wires** | 18AWG (UL1430) (**DIM+**:Purple, **DIM-**:Gray) |
| **Wire Lengths** | 152.4mm (±3mm) / 6” (±0.12”) |
| **Strip Lengths** | 9.5mm (±0.5mm) / 0.375” (±0.02”) |

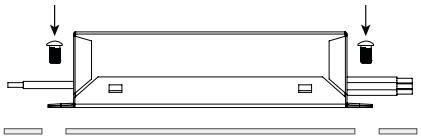
## MOUNTING & INSTALLATION

| | |
|---|---|
| **Fixings** | 2x M6*8mm / 12-24*5/15” Fastners / 2x M4 Nuts |

**DEU (Bottom Exit)**



**DBU (Side Exit)**



**WARNING: TO REDUCE THE RISK OF FAILURE / INJURY**

DRIVER CASE MUST BE ELECTRICALLY GROUNDED.

DRIVER MUST BE INSTALLED IN LUMINAIRE IN ACCORDANCE WITH THE LOCAL CODES.

FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY AND/ OR DAMAGE TO THE SYSTEM.

*(DRIVER INSTALLATION WITHIN LUMINAIRE MUST FORM A FIRE RATED ENCLOSURE - ELECTRICAL CONNECTIONS MUST BE MADE WITHIN A FIRE RATED ENCLOSURE - COMPLIANCE IS THE RESPONSIBILITY OF THE LUMINAIRE MANUFACTURER)*

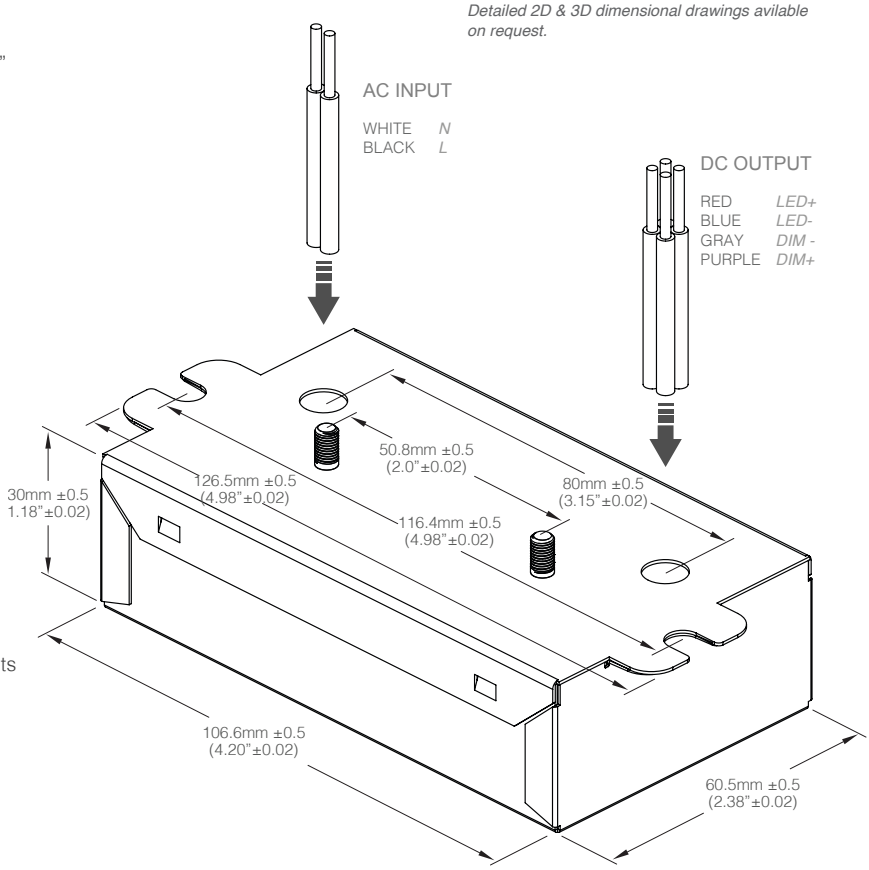
## LABELS

**Example Label**

## BOTTOM EXIT WIRE PACKAGE (DEU)

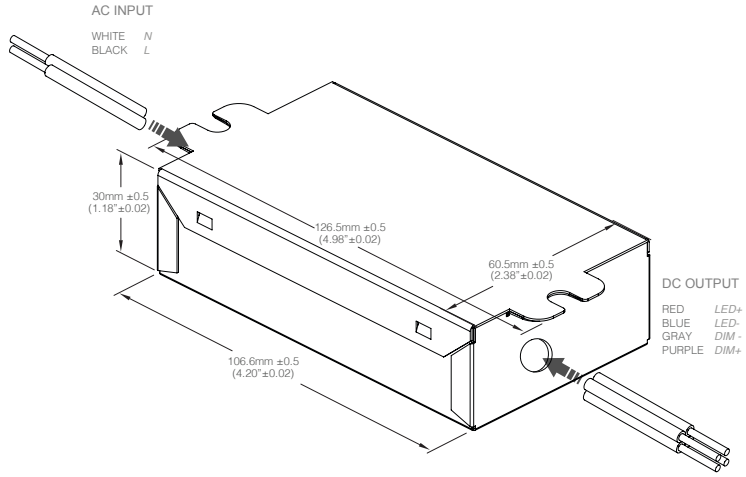
ORDER CODE: XEL-030D**E**U

*Detailed 2D & 3D dimensional drawings avilable on request.*




## SIDE EXIT WIRE PACKAGE (DBU)

ORDER CODE: XEL-030D**B**U

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# Specification Data

| | | |
|---|---|---|
| **Output**[3] | Power Range | 10~30W MAX (See Available Models for variant specific data) |
| | Current Range | 0.30~0.70A (Not Dimmed - See Available Models for variant specific data) |
| | Output Voltage Range | 24~42Vdc (Full Power 30 ~ 42dc) |
| | Optimized Vf Range[6] | 36~38Vdc (For 42 max) / 28~30Vdc (For 32 max) |
| | Line Regulation[3] | ±5% |
| | Load Regulation[3] | ±5% |
| | Turn On/Off Time | 500ms |
| **Input** | Voltage Range[4] | 120 ~ 277Vac Nominal (108 ~ 305Vac Operational) |
| | Max Input Power | 37W |
| | Frequency Range | 47 ~ 63 Hz |
| | Power Factor | PFC > 0.9 at ≥ 75% of full power[4] |
| | THD | THD < 20% at ≥ 75% of full power[4] |
| | Typical Inrush Current | <TBCA @120V (per ANSI test method. Compliant with NEMA410-2015)<br><TBCA @277V (per ANSI test method. Compliant with NEMA410-2015) |
| **Dimming**[8] | Mode A | DC Dimming Control: 0-10Vdc (5%) Sink / Source |
| | Mode B (Phase Cut)[9] | TRIAC/ELV/MLV Phase Cut Dimming (1%) |
| | TRIAC Support | Forward Reverse Phase & ELV Dimmers |
| | 0-10V Source Current | 260µA (Isolated) |
| | Compatibility | IEC Compliant. Linear curve |
| **Protection** | Short Circuit | Auto-restart (after fault removed) |
| | Over Voltage & Open Load | Vout < 60V (Class-2) |
| | Over Current | Inherently limited over operational range |
| | Over Temperature | Current foldback at hotspot greater than 85°C (shut down at <100°C)[5] |
| **Environment** | Working Temperature | -30°C ~ 55°C ambient[1] (Tc rated for 85°C) |
| | Working Humidity | 20% ~ 90% RH non-condensing |
| | UL Rating | Dry / Damp location use |
| | Storage Temperature | -40°C ~ 85°C ambient |
| | Storage Humidity | 10% ~ 90% RH non-condensing |
| | Vibration & Impact Resistance | 3 ~ 50Hz 1g (for 30 minutes) / 1 g/s (Impact Resistance) |
| | Operating Life | 50,000 Hours (at 95% max power, Tc < 75C)<br>(*Higher Operating Temperature Model Available - Contact Sales)* |
| **Safety & EMC** | Safety Standards | UL8750, Class 2 (UL1310), Class P rated |
| | Noise Rating | Class A (Less than 24dB measured at 1 meter) [3,7] |
| | EMI Conduction & Radiation | Compliant with FCC CFR Title 47 Part 15 Class B (Class A @ 277V)<br>CAN ICES (A) (B @ 277V) / NMB-005 (A) (B @ 277V)<br>Compliant with European CE Requirements |
| | EMC Susceptibility | EN61000-4-3, EN61000-4-2, EN61000-4-4 |
| | Transient Immunity | 2kV/1kA Combination, 2.5kV Ringwave<br>Modes: L-N, L-G, N-G<br>*For applications with higher surge protection requirements, pair with XenerQi's lighting optimized surge protectors:*<br>10K Surge Protection: XEL-PA10S-277 / XEL-SU10C-277<br>20K Surge Protection: XEL-PA20S-277 / XEL-SU20C-277 |

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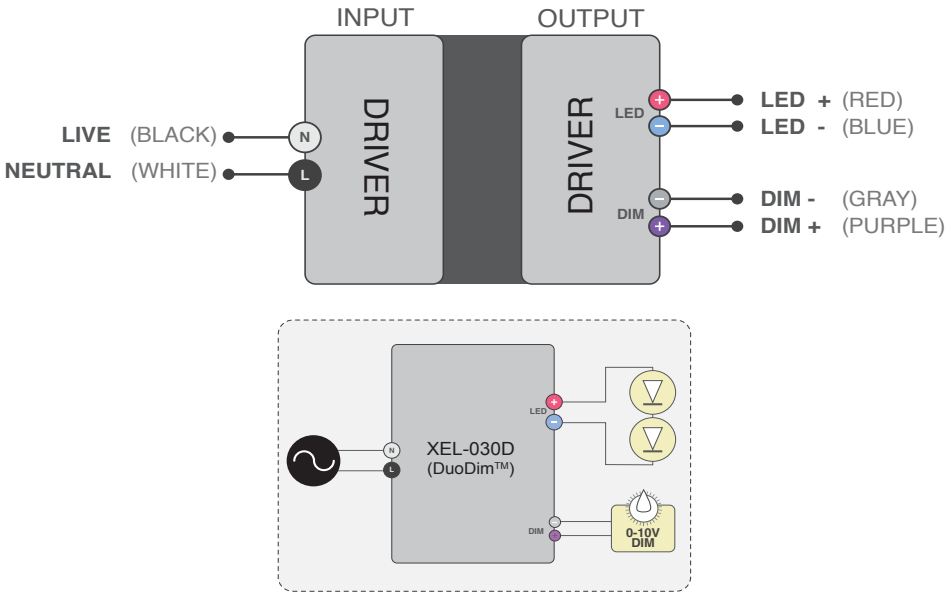
## Typical Application & Wiring Diagram




## Ordering Codes & Available Models

ORDER CODE ('**X**' indicates type/feature selection)

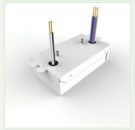
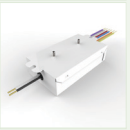
XEL-030D**X**U-C**AAAA**-042-DNT01P

**E**: Bottom Exit Wires Case
**B**: Side Exit Wires Case

**Current Rating**
(see model table below)

CASE OPTIONS:

BOTTOM / SIDE EXIT WIRES

| XEL-030D**E** | XEL-030D**B** |
|---|---|
|  |  |

| | Part Number / Ordering Codes (Replace X with case choice) | Output Current (mA) | Output Voltage Range (V) | Maximum Efficiency [6,7] | Max Output (W) |
|---|---|---|---|---|---|
| FIXED Output Current Variants | XEL-030D**X**U-CX700-042-DNT01P | 700 | 26 ~ 42 | 87.0% | 29.4W |
| | XEL-030D**X**U-CX550-042-DNT01P | 550 | 26 ~ 42 | 87.0% | 23.1W |
| | XEL-030D**X**U-CX500-042-DNT01P | 500 | 26 ~ 42 | 84.0% | 21.8W |
| | XEL-030D**X**U-CX450-042-DNT01P | 450 | 26 ~ 42 | 85.0% | 18.9W |
| | XEL-030D**X**U-CX350-042-DNT01P | 350 | 26 ~ 42 | 84.0% | 14.7W |
| | XEL-030D**X**U-CX315-042-DNT01P | 315 | 26 ~ 42 | 85.0% | 13.2W |
| | XEL-030D**X**U-CX250-042-DNT01P | 250 | 26 ~ 42 | 84.0% | 10.5W |

Customized Variants available upon request. Replace 'X' with required feature alphanumeric when ordering.

[1] Ambient is estimated. Actual temperatures determined by trigger point temperature at driver hotspot. Assumed case is correctly mounted on flat surface.
[2] Warranty refers to operation for conditions listed under "Operating Life". For specific warranty details refer to XenerQi published warranty document.
[3] Parameters guaranteed only over nominal input range.
[4] Shutdown requires power cycle to recover.
[5] Units optimized for LED load Vf as per "Optimized Vf" value in specification data. If not value is specified 36 or 42Vf nom is assumed.
[6] Tested under two conditions: with & without dimmer connected.
[7] Value listed is family maximum or minimum best case value as appropriate & can vary depending on part number.
[8] Driver is designed to meet the 2019 flicker recommendations from IEEE/NEMA with an emphasis on human factors engineering. When the driver is utilized with the appropriate LED load and conditions, the Luminaire should be able to meet IEEE-1789 recommendations for Green/Low-Risk.
[9] Dimming performance may vary depending on brand and make of dimmer used as well as number of drivers connected to it.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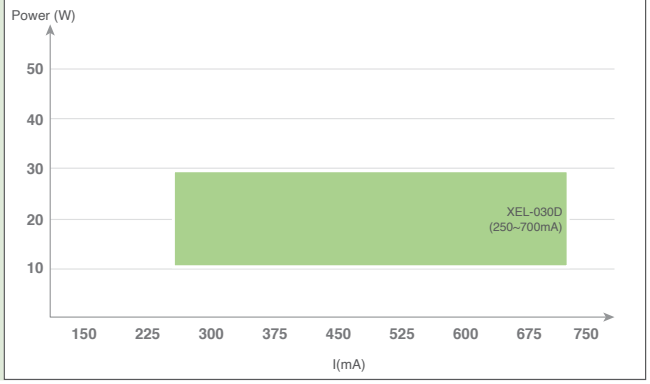
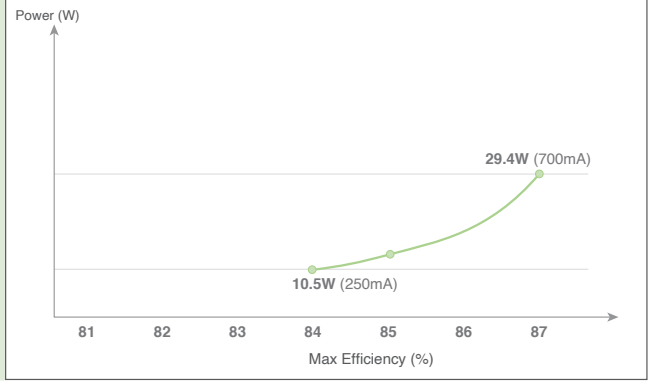
# Operation Performance-Family

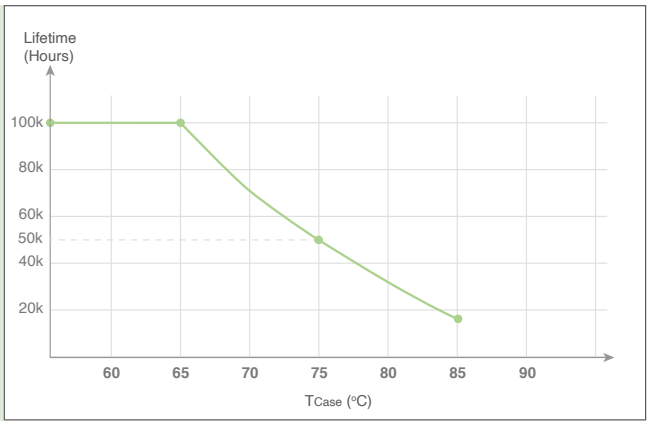
## Power / Driver Output Current



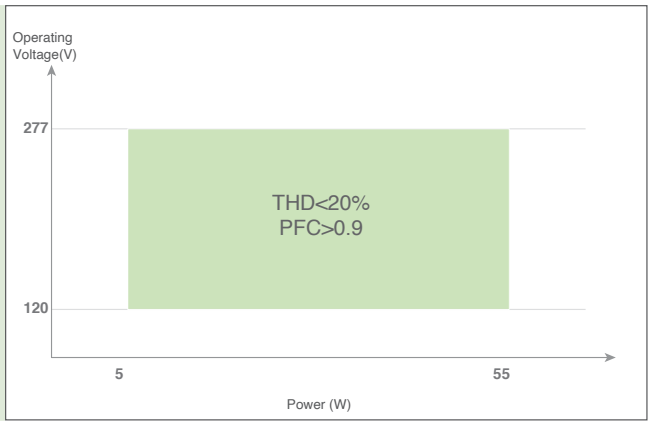

## Power (W) Vs Efficiency (%)



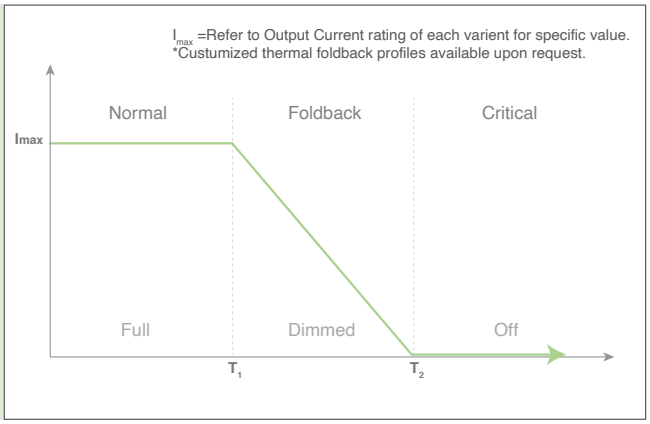

## Lifetime Temperature Deteriation



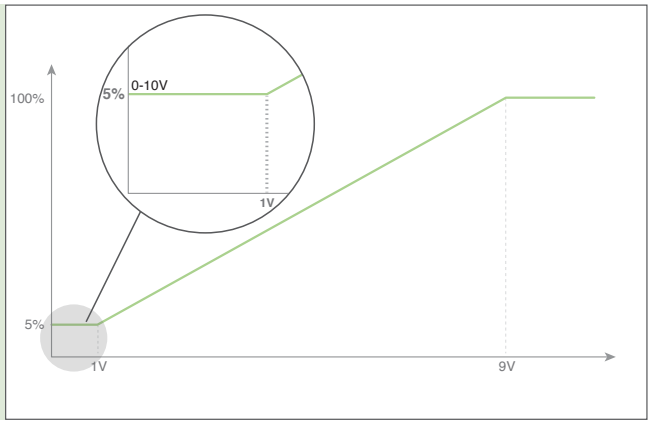

## Power Factor / THD Range




## Output Current Vs Temperature[1]




## 0-10V Dimming Curve





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