ADVANCE by signify

# LED Driver

## Xitanium

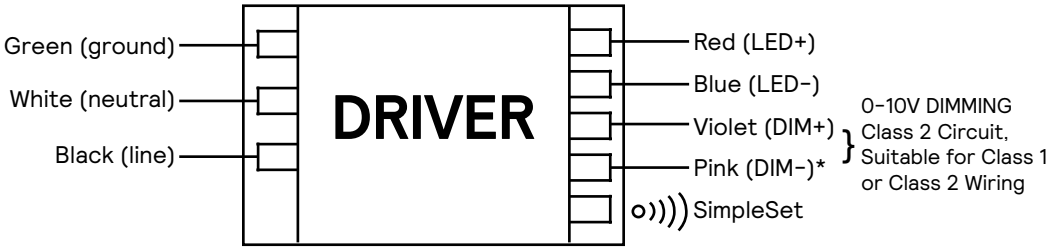
XI036C140V054BSM2 (bottom entry)
XI036C140V054BSD2 (side entry)

**Advance Xitanium range of downlight LED Drivers** are designed to provide OEMs with ultimate flexibility. These models are compatible with standard 0-10V dimming systems to deliver reliably smooth dimming performance down to a minimum of 1%. Enabled with SimpleSet technology, these drivers offer the needed flexibility & performance for the application with precise tuning of drive currents, selectable dimming curves and adjustable minimum dimming levels. With wide operating windows, compact size and simple current adjustability, luminaire manufacturers can easily design downlight fixtures with desired lumen levels to suit the application.

### Specifications

| Input Volt. (Vac) | Output Power (W) | Output Volt. (V) | Output Current (A) | Efficiency@ Max. Load and 70°C Case (%) | Max. Case Temp. (°C) | Input Current (A) | Max. Input Power (W) | THD @ Max. Load (%) | Power Factor @ Max. Load | Surge Protection (Ring-Wave, KV) | Envir. Protection Rating | Driver Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 120 | 36 | 10-54 Class 2 Output | 0.1/1.4 | 84 | Tc-life: 80°C Tc-UL: 90°C | 0.35 | 44.5 | <10% | >0.95 | > 2.5 | UL damp & dry | Constant Current |
| 277 | | | | 85 | | 0.15 | | <15% | | | | |

### Wiring Diagram




***DIM- will change from GREY to PINK from 2021 onwards.**

**WARNING**

- Install in accordance with national and local electrical codes.
- Use 18 AWG Solid Copper Wire Rated >= 90 °C.
- Strip Wire 3/8".
- For Class 2 wiring, use 20 AWG-16 AWG.
- The field-wiring leads or push-in terminals shall be fully enclosed.

**GROUNDING**

- Driver case must be grounded.

| Dimming | Dimming Range | Minimum Output Current (A) | Other Comments |
|---|---|---|---|
| 0-10V Suitable for Class 1 or Class 2 Wiring | 1% ~ 100% | 0.004 | Dimming source current: 150µA |



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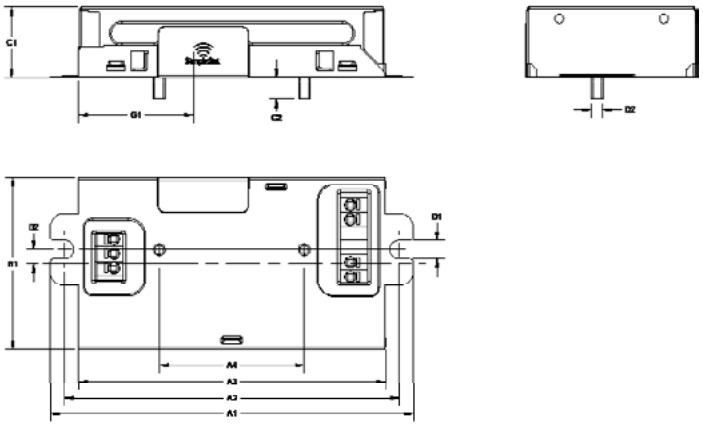
# Xitanium XI036C140V054BSM2 (bottom entry)
# XI036C140V054BSD2 (side entry)

## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

### Mechanical Diagram

**XI036C140V054BSM2** (bottom entry)



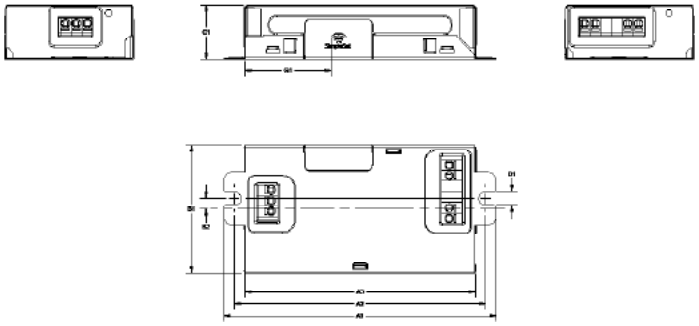
### Enclosure

**XI036C140V054BSM2** (bottom entry)

| | In (mm) | Tolerance (mm) |
|---|---|---|
| Overall Length (A1) | 4.98 (126.6) | ± 0.5 |
| Mounting Hole Distance (A2) | 4.59 (116.6) | ± 0.5 |
| Case Length (A3) | 4.21 (107.0) | ± 0.5 |
| Stud Distance (A4) | 2.00 (50.7) | ± 0.5 |
| Case Width (B1) | 2.36 (59.9) | ± 0.5 |
| Mounting Hole Distance (B2) | 0.20 (5.0) | ± 0.5 |
| Case Height (C1) | 0.98 (24.9) | ± 1.0 |
| Stud Height (C2) | 0.28 (7.2) | ± 0.5 |
| Mounting Hole Diameter (D1) | 0.25 (6.3) | ± 0.3 |
| Stud Diameter (D2) | #8-32 | N/A |
| Center of SimpleSet Antenna (G1) | 1.55 (39.4) | ± 3.0 |

### Mechanical Diagram

**XI036C140V054BSD2** (side entry)



### Enclosure

**XI036C140V054BSD2** (side entry)

| M1 can | In. (mm) | Tolerance (mm) |
|---|---|---|
| Overall Length (A1) | 4.98 (126.6) | ± 0.5 |
| Mounting Hole Distance (A2) | 4.59 (116.6) | ± 0.5 |
| Case Length (A3) | 4.21 (107.0) | ± 0.5 |
| Case Width (B1) | 2.36 (59.9) | ± 0.5 |
| Mounting Hole Distance (B2) | 0.20 (5.0) | ± 0.5 |
| Case Height (C1) | 0.98 (24.9) | ± 1.0 |
| Mounting Hole Diameter (D1) | 0.25 (6.3) | ± 0.3 |
| Center of SimpleSet Antenna (G1) | 1.55 (39.4) | ± 3.0 |



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# Xitanium XI036C140V054BSM2 (bottom entry)
# XI036C140V054BSD2 (side entry)

## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

### Features
- 50,000+ hour lifetime[1]
- SimpleSet Programmable
- Large operating window
- 1% minimum dim level
- Compatible with Philips Fortimo Downlight modules

### Benefits
- SmartMate style housing enables easy design-in with excellent thermal performance
- Enables Simple, Fast, Flexible application-specific configurations
- Enables fixture designs with comprehensive application coverage for various loads and lumen levels
- A single source system offer optimized for performance

### Application
- Indoor Downlight applications
- Wall sconces and ceiling surface luminaires
- Retail
- Hospitality
- Offices (corridors, conference rooms, lobby areas)
- Floodlights

### Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

### Product Data

| | |
|---|---|
| **Order Information** | |
| Full Product Code | XI036C140V054BSM2 [bottom entry] (Mid-Pack, 16pcs/Box), 12NC: 929002721013<br>XI036C140V054BSD2 [side entry] (Mid-Pack, 16pcs/Box), 12NC: 929002721113 |
| Line Frequency | 50/60Hz |
| Min. Mains Voltage Operational | 108Vac |
| Max. Mains Voltage Operational | 305Vac |
| **Output Information** | |
| Maximum Open Circuit Voltage | <=60Vdc (Class 2 Output) |
| Output Current Ripple (ripple = peak to average / average) | 15% max @ max Iout / 4% max @ Frequency range 60Hz-3KHz |
| Output Current Tolerance (In the performance window) | <5% |
| Flicker | Pst:≤0.5 / SVM:≤1.0 |
| Protections | Short Circuit and Open Circuit Protection for LED + and LED- and Temperature Foldback |
| **Features** | |
| 0-10V Dimming | 150µA source current from driver. See dim curve for detail |
| AOC (Adjustable Output Current) | 0.1A-1.4A via SimpleSet programming (refer to graph and notes below) |
| Additional SimpleSet Configurable Features | Adjustable minimum dimming level, Dimming curve selection (Linear or Logarithmic), Adjustable Output level, Adjustable Output Min, OEM Write Protection, Dim to off function |
| **Environment & Approbation** | |
| Operating Ambient Temp. Range | -40°C to +50°C |
| UL Max Case Temperature (Tcase) | 90°C |
| Agency Approbations | UL8750, NOM, Class P(cUL, UL),UL60730 SREC |
| Electromagnetic Compliance | FCC Title 47 Part 15 Class A |
| Audible Noise | <24dB Class A |
| Weight | 0.44 Lbs / 0.2 kgs |

1. Advance Xitanium LED Drivers are manufactured to engineering standards correlating to a designed and average life expectancy of 50,000 hours of operation at maximum rated case temperature. Minimum 90% survivals based on MTBF modeling.



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# Xitanium XI036C140V054BSM2 (bottom entry)
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## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

### Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

### 0-10V Dimming Interface

Dimming source current from the driver: 150µA (@ 0<Vdim<8V)
Minimum Dim Level: 1% of Iout (minimum 4mA)
Maximum output voltage on the dimming wires: 12V

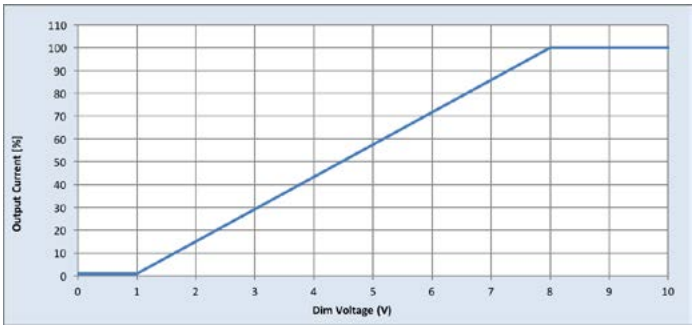
Standby Power: 0.5W
Leakage current of dimming leads: 0.005mA, recommended max number of control circuits in parallel refer to Design-In Guide

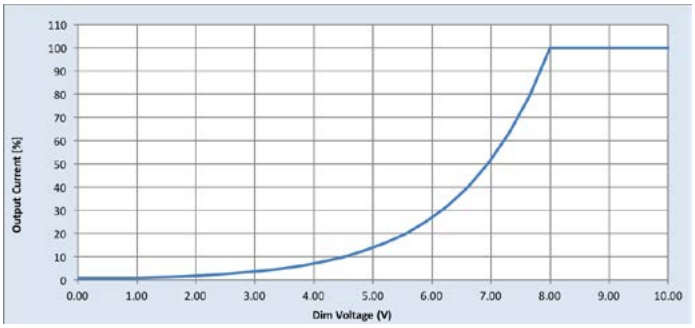
### 0-10V Dimming Interface

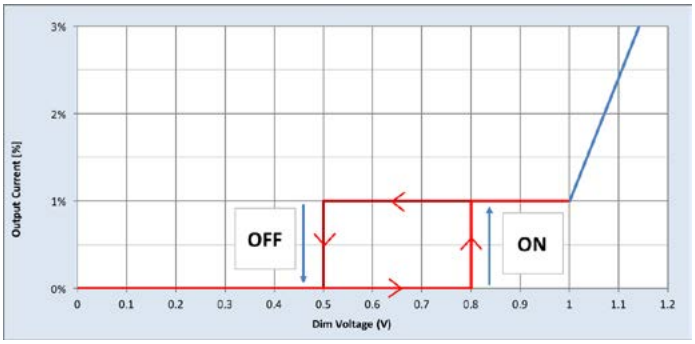
| Symbol | Parameter | Min | Typical | Max | Unit |
|---|---|---|---|---|---|
| Von | Turn on threshold | 0.7 | 0.8 | 0.9 | V |
| Voff | Turn off threshold | 0.4 | 0.5 | 0.6 | V |
| Ton | Turn on time | - | - | 250 | mS |
| Toff | Turn off time | - | - | 1000 | mS |

### Approved Dimmer List

| Manufacturer | Manufacturer Part Number |
|---|---|
| Lutron | Visit www.lutron.com/advance for a list of dimmers (Mark VII) that will work with this driver |
| Leviton | IllumaTech IP7 series |
| Philips | Sunrise - SR1200ZTUNV |



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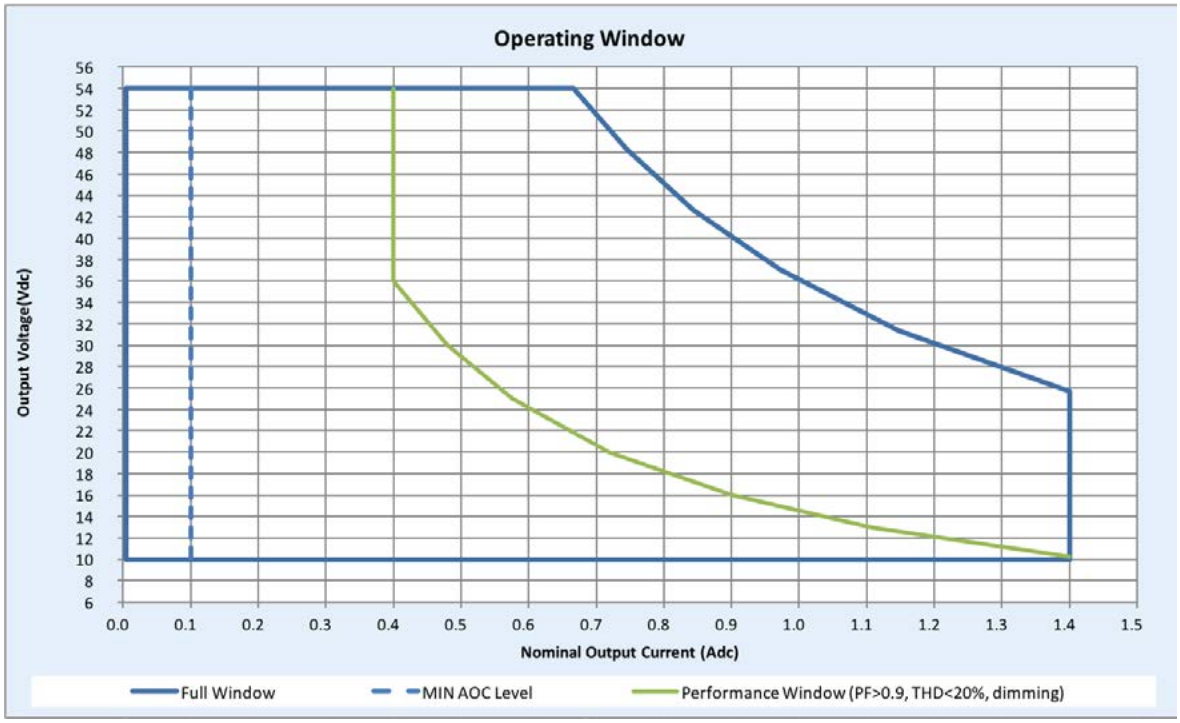
# Xitanium XI036C140V054BSM2 (bottom entry)
# XI036C140V054BSD2 (side entry)

## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

### Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

### Operating Window




**NOTE:**

1. Factory default output current is 1.4A
2. For dimming to a minimum level of 1% the output current setting through AOC should be ≥ 0.4A



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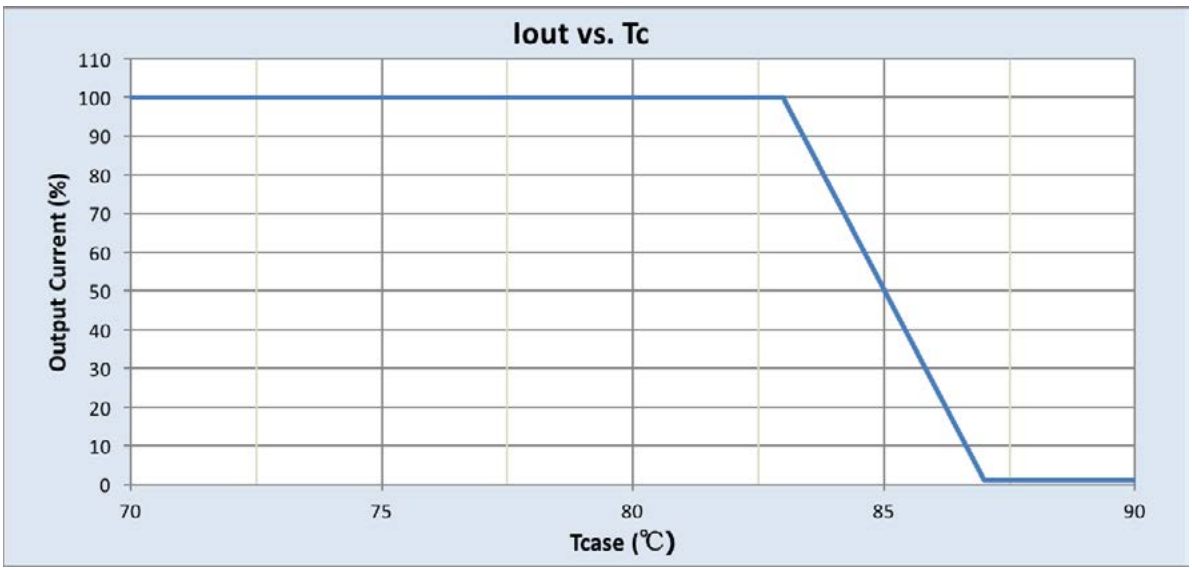
## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

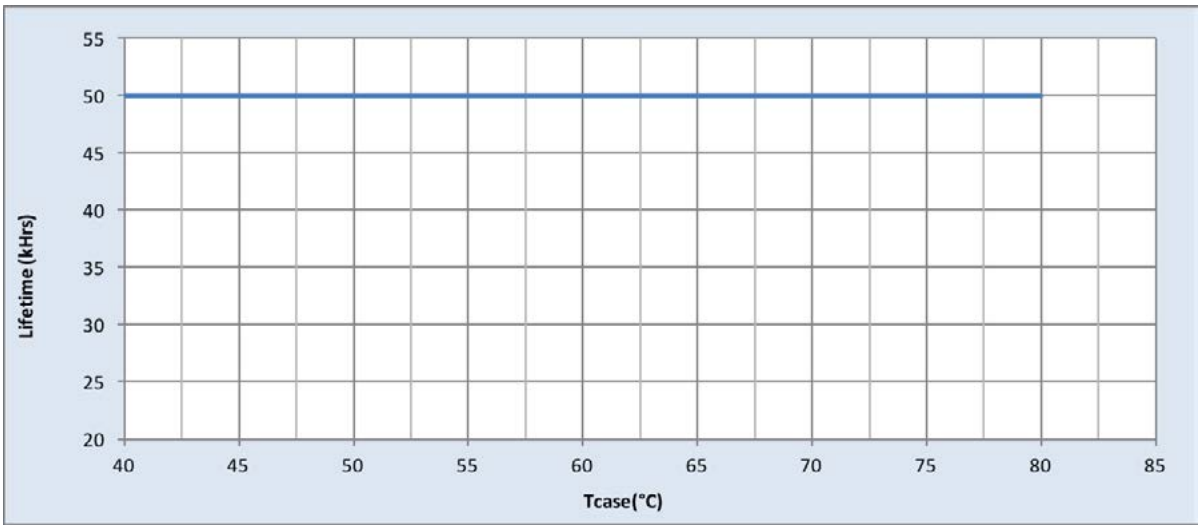
### Electrical Specifications

All the specifications are typical and at 25°C Tcase unless specified otherwise.

### Output Current Vs. Driver Case Temperature




### Driver Lifetime vs. Driver Case Temperature



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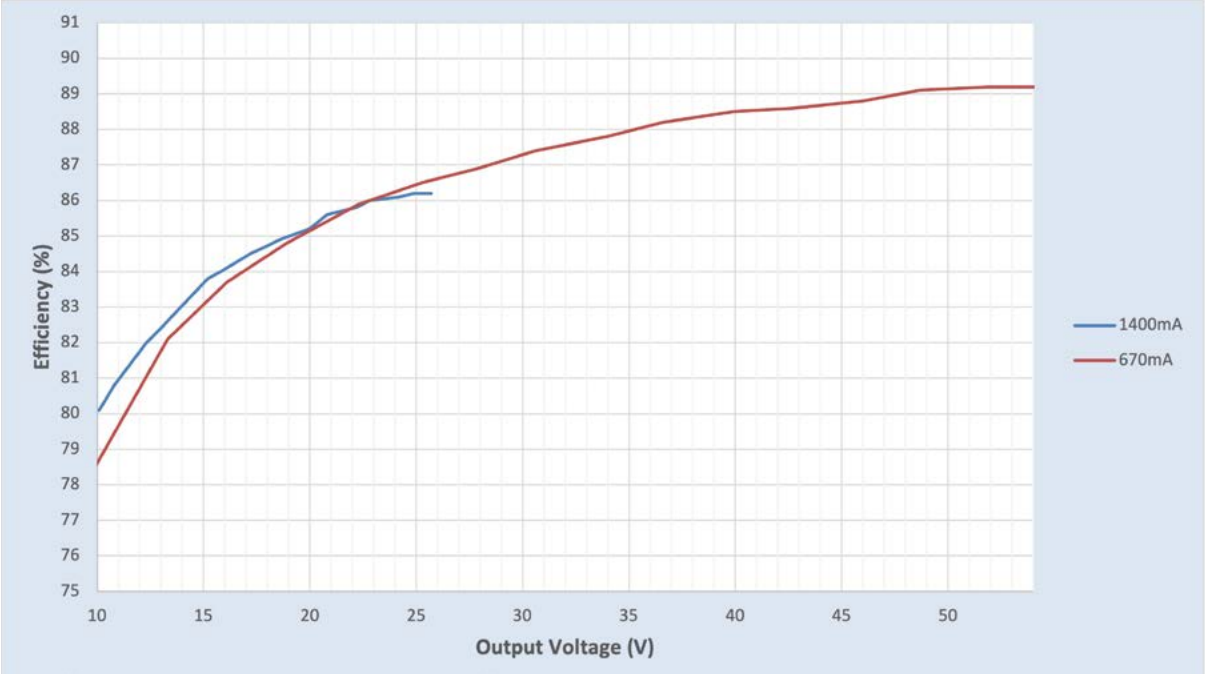
# Xitanium XI036C140V054BSM2 (bottom entry)
# XI036C140V054BSD2 (side entry)

## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

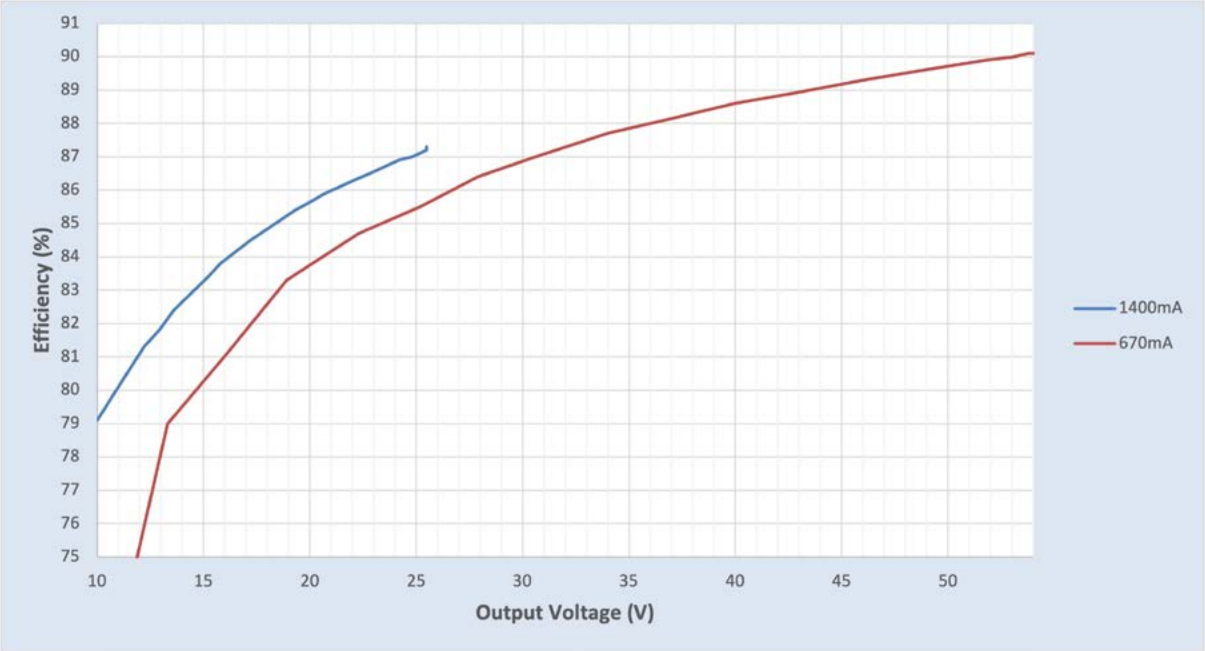
### Performance Characteristics

Based on measurements on a typical sample at 80°C case. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

### Efficiency Vs. Output Voltage 120V




### Efficiency Vs. Output Voltage 277V



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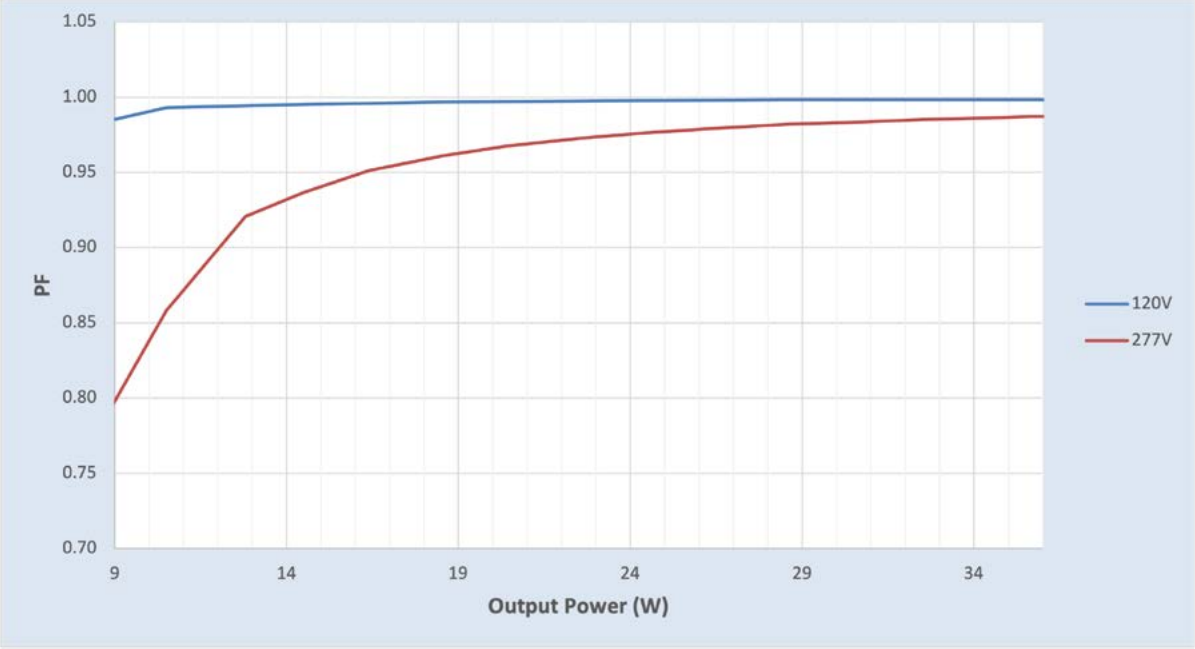
# Xitanium XI036C140V054BSM2 (bottom entry)
# XI036C140V054BSD2 (side entry)

## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

### Performance Characteristics

Based on measurements on a typical sample at 80°C case. The accuracy of the measurements is within the tolerance of the measurement instruments. The graphs are meant to be a guideline and not a specification.

### Power Factor Vs. Output Power




### Total Harmonic Distortion (THD) Vs. Output Power

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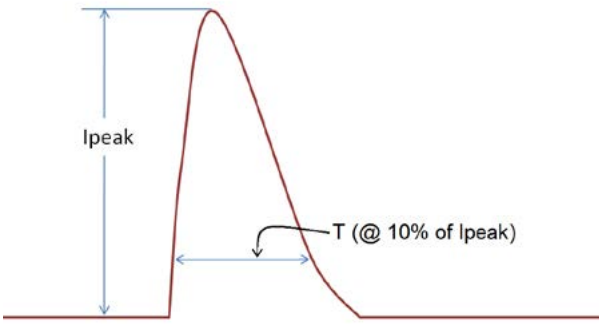
## 36W 0.1-1.4A 54V 0-10V INT (1% dim) with SimpleSet

### Inrush Current Info




| Vin | Ipeak | T (@ 10% of Ipeak) |
|---|---|---|
| 120 Vrms | 9A | 50µS |
| 277 Vrms | 28A | 59µS |

Inrush current is measured at peak of the corresponding line voltage.
Source impedance per NEMA 410.

### Lightning Surge Info

| ANSI Surge Type | Differential Mode (L-N) | Common Mode (L-G, N-G, L&N-G) |
|---|---|---|
| 100kHz Ring Wave (w/t 30Ω) | >2.5KV | >2.5KV |

### Isolation

| Isolation | Input | Output | 0-10V | Enclosure |
|---|---|---|---|---|
| Input | - | 2xU+1kV | 2xU+1kV | 2xU+1kV |
| Output | 2xU+1kV | - | 2xU+1kV | 500V |
| 0-10V | 2xU+1kV | 2xU+1kV | - | 2xU+1kV |
| Enclosure | 2xU+1kV | 500V | 2xU+1kV | - |

U = Max input voltage

### UL Conditions of Acceptability

Please contact your representative for a copy of the latest UL Conditions of Acceptability (COA).

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