



Advance Xitanium outdoor LED drivers with SimpleSet technology are designed to give OEMs ultimate flexibility. With the drivers' wide operating windows and simple programming, luminaire manufacturers can design luminaires of different sizes and lumen levels for outdoor applications.

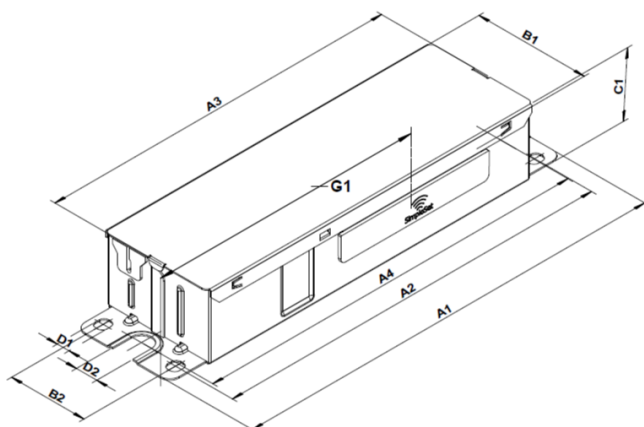
### Specifications

Input Voltage (Vac)	Output Power (W)	Output Voltage (V)	Output Current (A)	Efficiency @ Max Load	Max Case Temp. (°C) Life/UL	Input Current (A)	Input Power (W)	THD @ Max Load (%)	Power Factor @ Max Load	Surge Protect (Combi Wave, KV)	Dimming Range (%)	Min Dimming Current (mA)	Drive Type	
120	55	18-54	0.1-1.8	88.0	85 / 90	0.53	64	<10	>0.95	6	0-10V	1-100	7	CC
277				0.23		64	<15	>0.95						

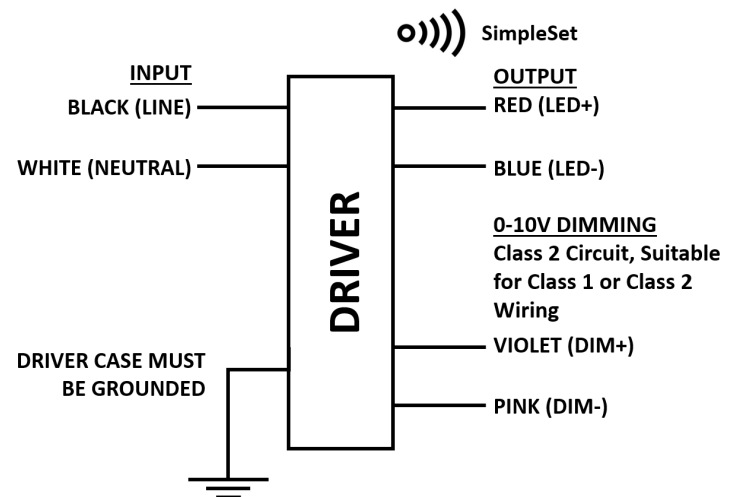
### Enclosure

Item	In(mm)	Tolerance (mm)
Overall length (A1)	6.61(168)	+/-0.5
Mounting Length (A2)	6.06(153.8)	+/-0.5
Case Length (A3)	5.5(139.8)	+/-0.5
Case Width (B1)	1.78(45.1)	+/-0.5
Mounting Width (B2)	1.22(31)	+/-0.5
Case Height (C1)	1.11(28.2)	+/-1
Mounting Hole Diameter (D1)	0.2(5)	+/-0.3
Mounting Hole Diameter (D2)	0.35(8.8)	+/-0.3
Center of SimpleSet antenna (G1)	4(101.5)	+/-3

### Mechanical Diagram



### Wiring Diagram



- Wire Length: 270 mm with 30 mm tolerance.
- Install in accordance with national and local electrical codes.
- The field-wiring leads or push-in terminals shall be fully enclosed.

# XI055C180V054BSJ2

## Features

- 50,000+ hour lifetime
- Programmable output current through SimpleSet
- 6kV combi-wave surge rating to comply with ANSI C28.77-5 CAT C low
- Configurable Driver Thermal Limit (DTL)

## Benefits

- Enables long life luminaire designs
- Fast and simple way of programming
- Enables fixture designs with wide variety of loads and current
- No external surge protection required to pass C82.77-5 CAT C low

## Application

- Area
- Roadway
- Parking garages
- Floodlights
- High-bay, Mid-bay, Low-bay fixtures

## Logistical data

Specification item	Value
Product name	XI055C180V054BSJ2
EOC	XI055C180V054BSJ2
Logistic code 12NC	9290 027 66013
Product code	XI055C180V054BSJ2M
Pieces per box	12
Weight	404 gram

All the specifications are typical and at  $T_{\text{ambient}} = 25^{\circ}\text{C}$  unless specified otherwise

## Electrical input data

Specification item	Value	Value	Unit	Condition
Rated input voltage range	108...305		$V_{\text{ac}}$	Performance range
Rated input voltage	120	277	$V_{\text{ac}}$	
Rated input frequency	50...60	50...60	Hz	Performance range
Rated input current	0.53	0.23	A	@ rated output power @ rated input voltage
Rated input power	64.0	64.0	W	@ rated output power @ rated input voltage
Efficiency	88.0	89.0	%	@ rated output power @ rated input voltage
Rated input voltage DC	125...250		$V_{\text{dc}}$	Performance range

## Electrical output data

Specification item	Value	Unit	Condition
Output voltage	18...54	$V_{\text{dc}}$	Class 2 Output
Output voltage max.	60	V	Open Circuit Voltage
Output current	100...1800	mA	
Output current min programmable	100	mA	
Min output current	7	mA	
Output current tolerance $\pm$	5	%	within performance window
Output current ripple LF	$\leq 15$	%	Ripple = peak / average, < 3kHz
Output power	0.1...55.0	W	
Minimum performance output power	18	W	Power factor > 0.9 and THD < 20%

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## Control interfaces

Specification item	Value	Unit	Condition
Control method	0-10V		
Dimming range	1...100	%	Default range
Dimming Source Current	0.15	mA	
Maximum Dimming Voltage	12	V	
Dimming Leakage Current	0.01	mA	Max number of driver in parallel, refer to Design-in Guide

## Isolation

U = Max. working voltage

Isolation per UL-8750	Input	Output	0-10V	Enclosure
Input	-	2U + 1kVac	2U + 1kVac	2U + 1kVac
Output	2U + 1kVac	-	2U + 1kVac	500Vac
0-10V	2U + 1kVac	2U + 1kVac	-	2U + 1kVac
Enclosure	2U + 1kVac	500Vac	2U + 1kVac	-

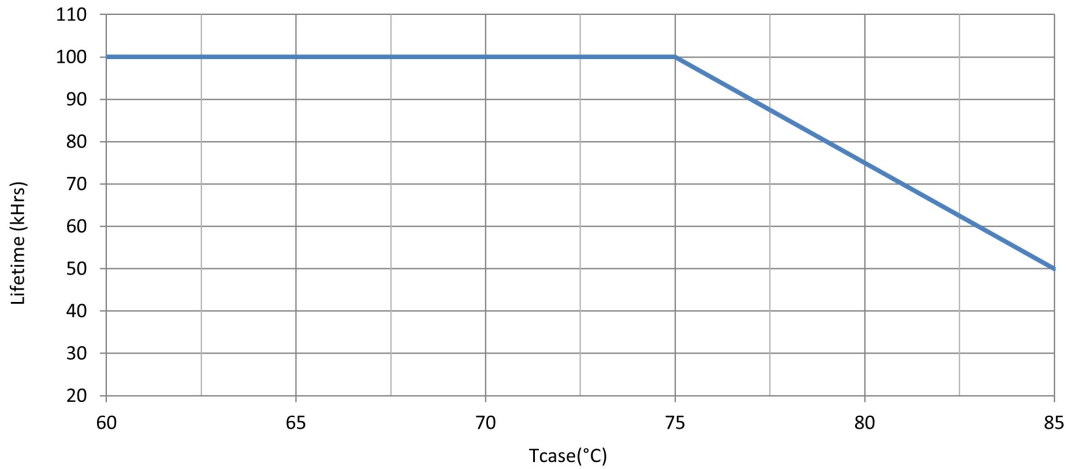
## Operational temperatures and humidity

Specification item	Value	Unit	Condition
Ambient temperature	-40...+55	°C	Higher ambient temperature allowed as long as T <sub>case-max</sub> is not exceeded
T <sub>case-UL</sub>	90	°C	Max. temperature measured at T <sub>case-point</sub>
T <sub>case-life</sub>	85	°C	C10 = 50000 hours measured at T <sub>c</sub> -point

## Lifetime

Specification item	Value	Unit	Condition
Driver lifetime	50,000	hours	Measured temperature at T <sub>case-point</sub> is T <sub>case-life</sub> . Maximum failures = 10%

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Maximum failures = 10%

## Programmable features

Specification item	Available	Default setting	Condition
Set Adjustable Output Current (AOC)	NFC, SimpleSet	1050 mA	
Driver Temperature Limit (DTL)	Yes		
Adjustable Light Output (ALO)	Yes		
Adjustable Light Output (ALO) min level	Yes		
Constant Light Output (CLO)	Yes		
0-10V	Yes		
Dynadimmer	Yes		
Min Dim Level (%)	Yes		
Dim to off	Yes		
OEM Write Protection (OWP)	Yes		

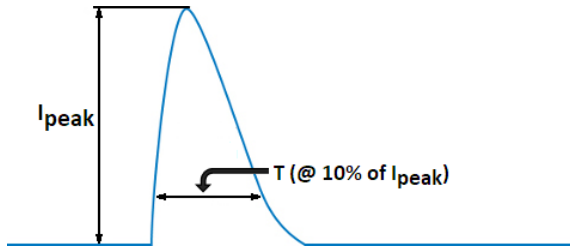
## Non-programmable features

Specification item	Value	Condition
Open load protection	Yes	Automatic recovering
Short circuit protection	Yes	Automatic recovering
Over power protection	Yes	Automatic recovering
Overtemperature protection	Yes	Automatic recovering

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## Inrush current

Specification item	Value	Unit	Condition
Inrush current	6.79	A	Input voltage 120V
Inrush current	17.1	A	Input voltage 277V
Inrush peak width	170.5	$\mu$ s	Input voltage 120V, measured at 10% height
Inrush peak width	107	$\mu$ s	Input voltage 277V, measured at 10% height



## Surge immunity

Specification item	Value	Unit	Condition
Mains surge immunity (diff. mode)	6	kV	ANSI Surge Type 1.2/50us Combination Wave (w/t 2 ohm)
Mains surge immunity (comm. mode)	6	kV	ANSI Surge Type 1.2/50us Combination Wave (w/t 2 ohm)

## Approbation

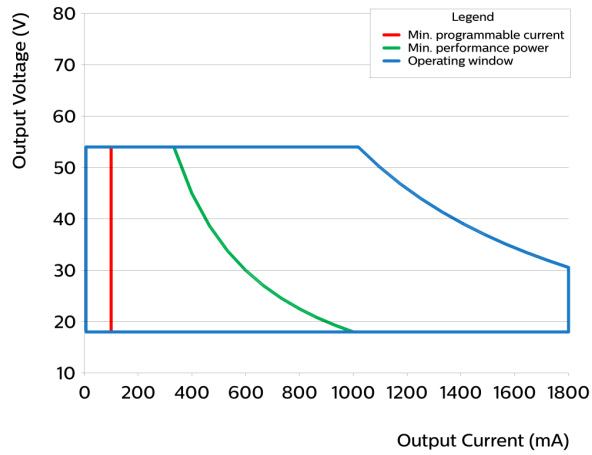
Specification item	Value
Approval Marks / Agency Approbations	NOM / RoHS / UL Class P / UL Listed US & Can
EMI standards	FCC Title 47 Part 15; Class A
Environmental protection rating	UL damp & dry, Type HL

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## Graphs

### Operating window

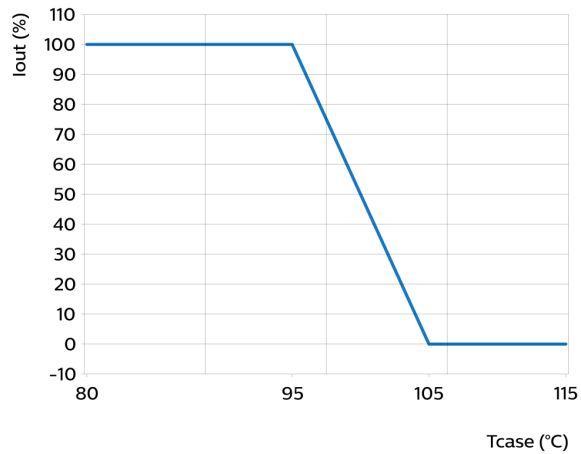
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- Factory default output current is 1.05A.
- To get a 100% to 1% dimming range, the output current setting through AOC should be  $\geq 0.7A$ .
- Factory default minimum dimming is 10%. This can be adjusted between 1% and 100% using Advance MultiOne.

### Over Temperature Protection

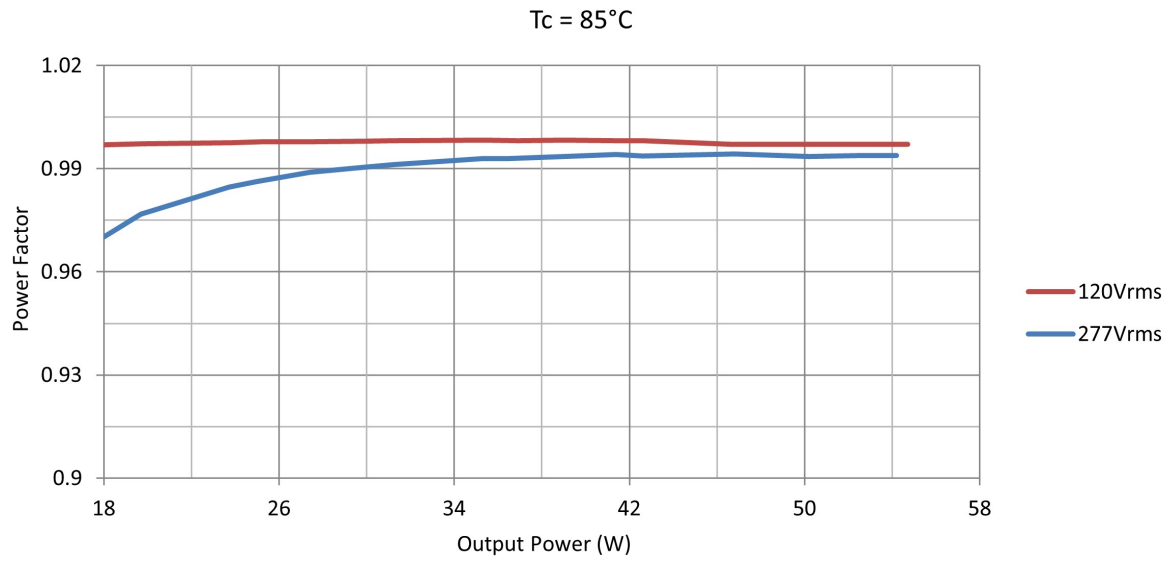
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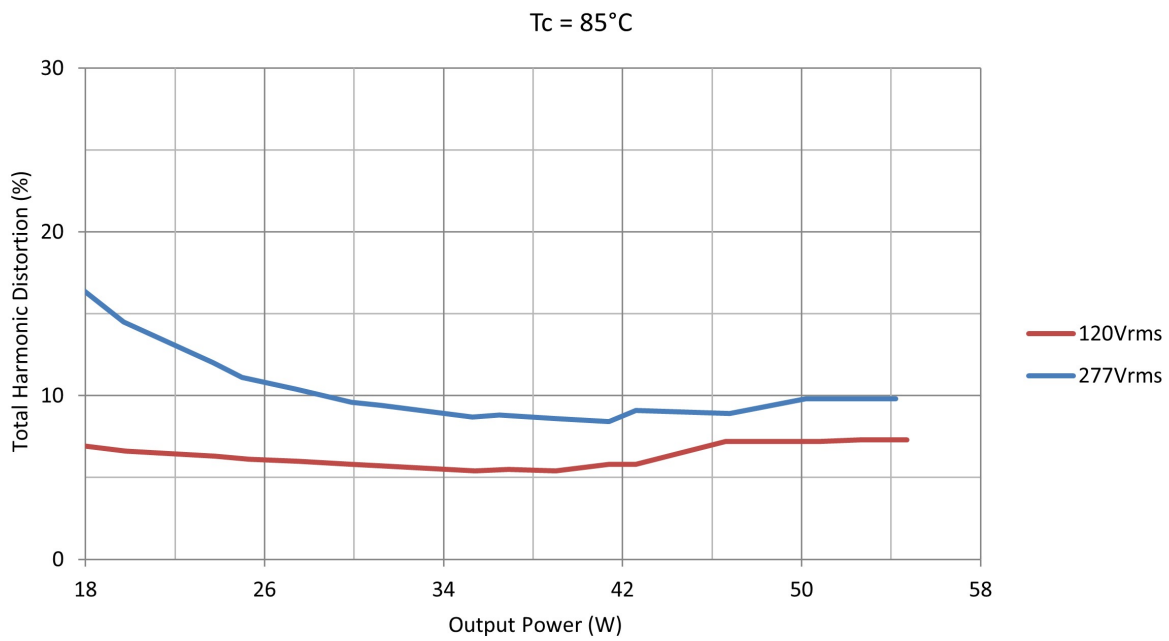
Adjustable via DTL with MultiOne Programming.

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## Power factor versus output power

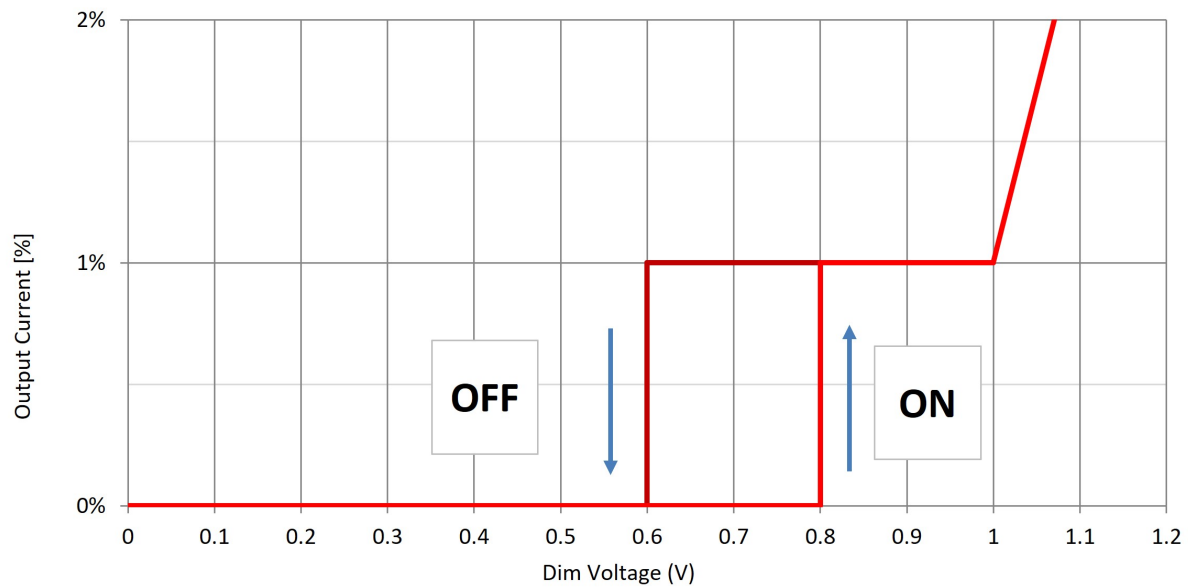
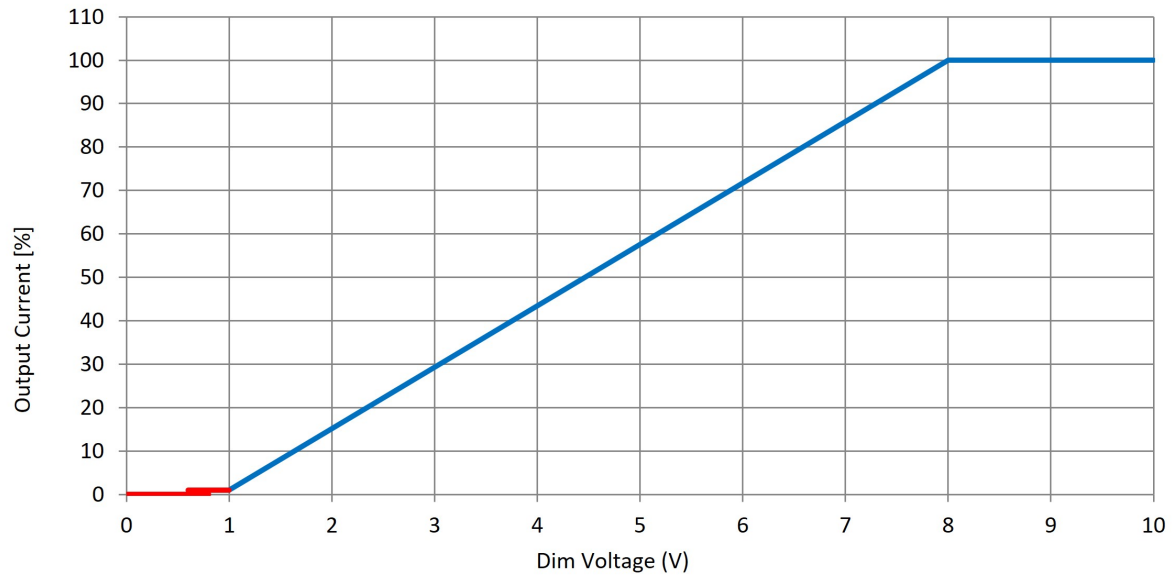


## THD versus output power

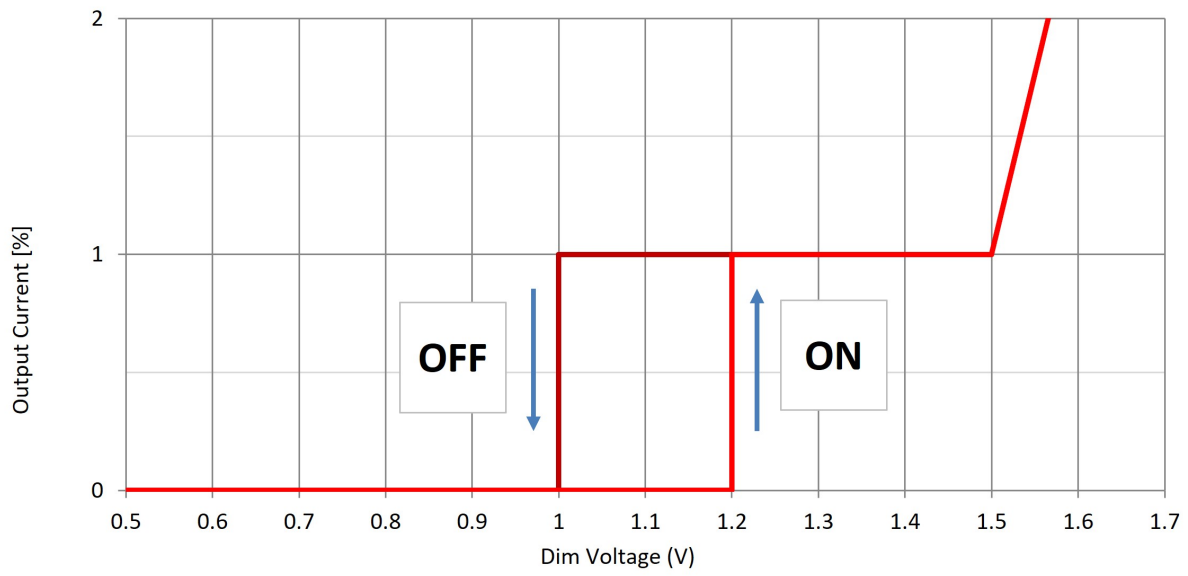
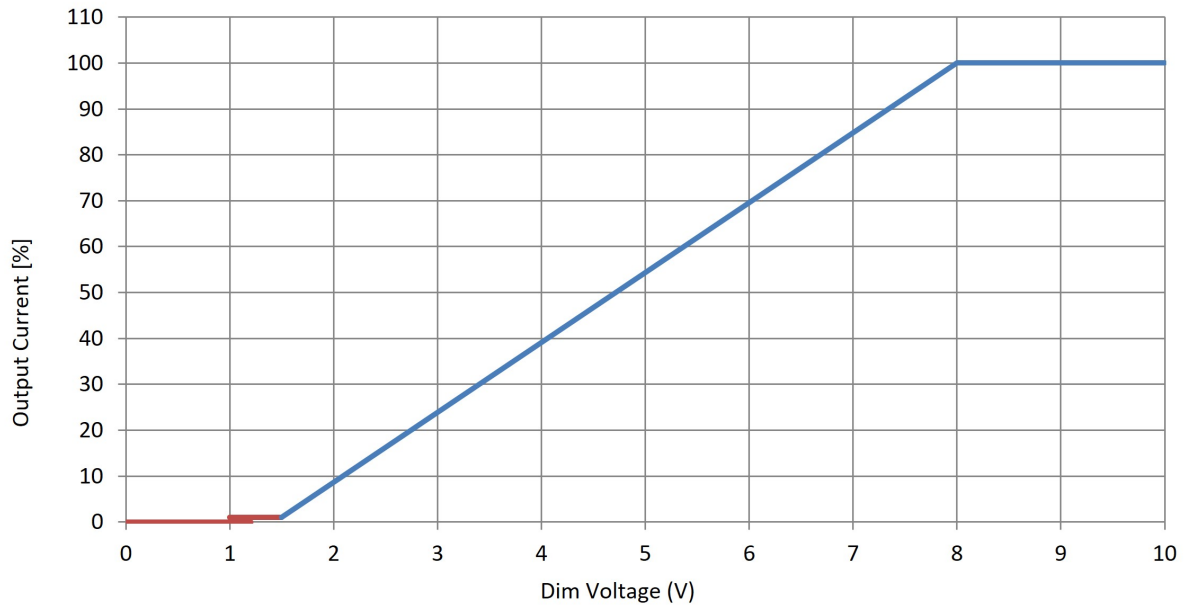


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## I<sub>out</sub> as function of 0-10V interface

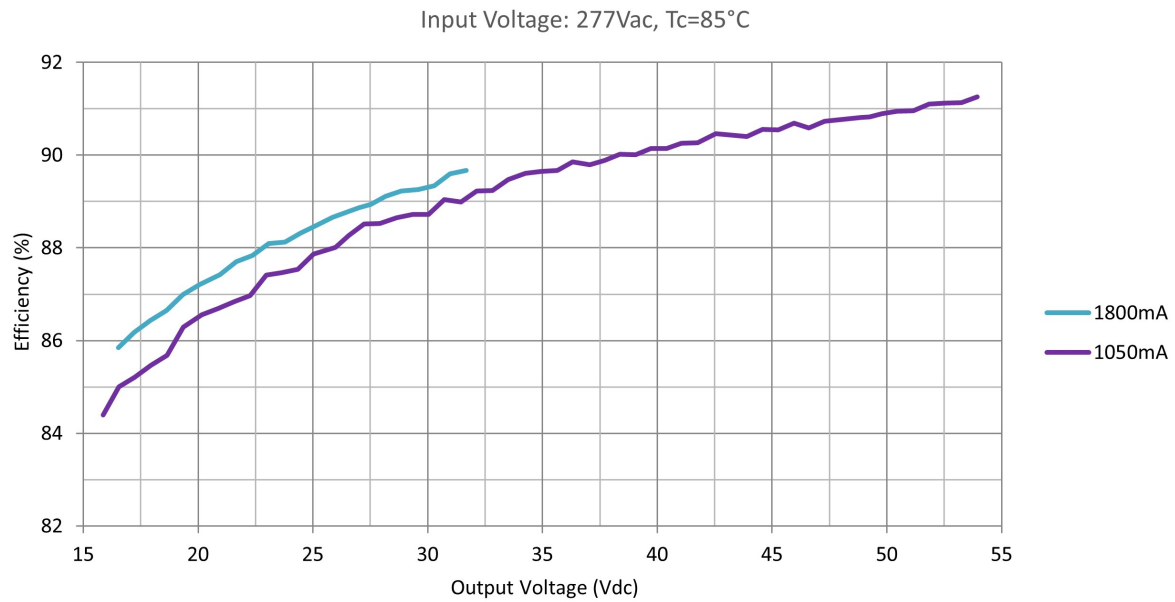
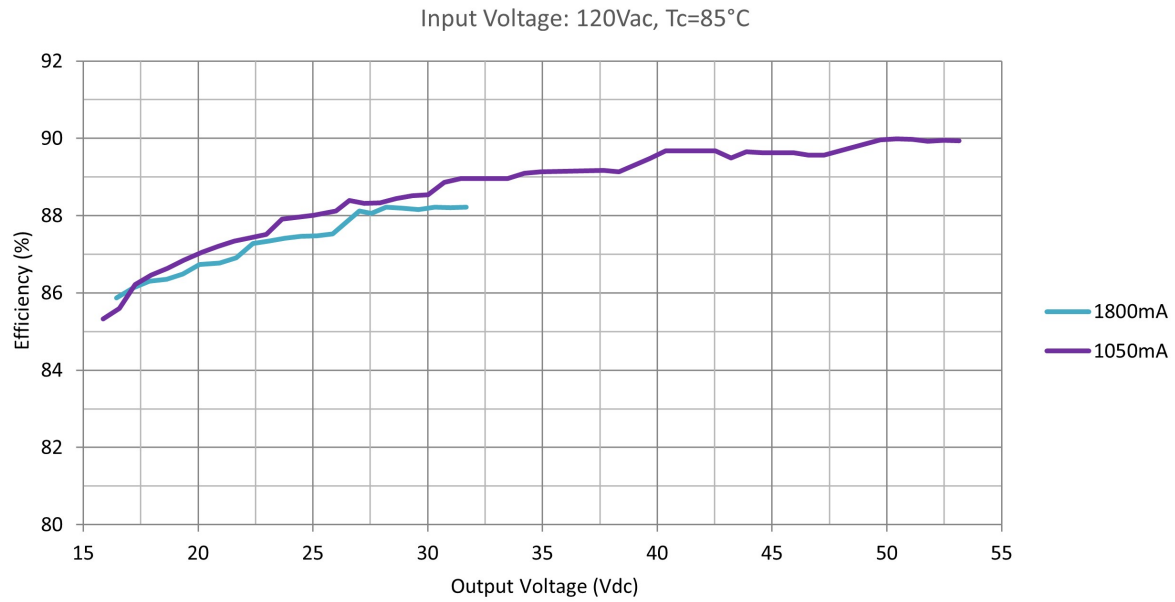


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## Efficiency as function of $V_{out}$



### Approved Dimmer List

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

### 0.6V Dim to Off (factory default)

Symbol	Parameter	Min	Typical	Max	Unit
Von	Turn on threshold	0.7	0.8	0.9	V
Voff	Turn off threshold	0.5	0.6	0.7	V
Ton	Turn on time		300		mS
Toff	Turn off time			1000	mS

### 1.0V Dim to Off (traditional dimmer)

Symbol	Parameter	Min	Typical	Max	Unit
Von	Turn on threshold	1.1	1.2	1.3	V
Voff	Turn off threshold	0.9	1	1.1	V
Ton	Turn on time		300		mS
Toff	Turn off time			1000	mS

