



# SOSEN LED Driver, Your Smart Choice

## Specifications

### SS-36L Series LED Driver

Model: SS-36L-XX\*

Description: 36W LED Driver

Rev.: V00

Release Date: 2019-04-10

# SS-36L Series LED Driver

**SOSEN**  
LED DRIVER

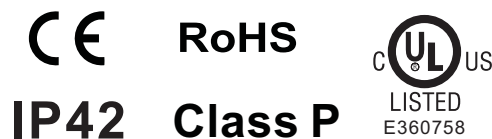


**LED DRIVER**

**L Series**

## Features:

- Efficiency up to 88%
- Isolated dimming: 1-10V, PWM, Resistor
- IP42
- Protections: SCP/OVP
- Class P
- Class 2
- TYPE HL, suitable for hazardous locations
- Built-in lightning protection circuit
- Warranty: 5 years



## Description :

SS-36L series is a 36W constant current driver with an input voltage range of 108-305Vac and a high power factor. Designed for LED lighting, this series is designed for wall washers, street lights, tunnel lights and area lighting. Adopting a new isolation dimming solution, compact housing design, good heat dissipation, greatly improving the reliability, stability and safety of the product.

## Model List:

Model	AC Input Range	Max. Pout	Vout Range	Full Power Vo Range	Iout	THD(Typ.)	PF(Typ.)	Eff.(Typ.)	Max.Tc
SS-36L-42*-XXXX	108-305Vac	36W	24-42V	34-42V	0.86A	10%	0.95	88%	90°C
					1.05A				
SS-36L-54*-XXXX	108-305Vac	36W	36-54V	48-54V	0.65A	10%	0.95	88%	90°C
					0.75A				

Default tested at 220Vac, full load, Ta 25°C.

1.  $P_o = V_o \cdot I_o = 36W$ , Full load

2. "\*" Optional B or space in the place of \* means additional function.

- Space is the base model without any optional function; Surge protection: L/N-PE: 6kV, L-N: 4kV (basic model);

- Suffix B for model with 3-in-1 Isolated dimming (1-10V, PWM, Resistor); Surge protection: L/N-PE: 6kV, L-N: 4kV

- Suffix F for model with no dimming function; Surge protection: L/N-PE: 10kV, L-N: 6kV

- Suffix BF for model with 3-in-1 Isolated dimming (1-10V, PWM, Resistor); Surge protection: L/N-PE: 10kV, L-N: 6kV

3. The XXXX in the model number indicates the optional output current of the model, for example: output 1050mA current, model SS-36L-42-1050.

# SS-36L Series LED Driver

## Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Rated AC Input Range	120Vac		277Vac	
AC Input Range	108Vac		305Vac	
Input Frequency Range	47Hz	50/60Hz	63Hz	
Max Input Current			0.5A	120Vac, Full load
Max Input Power			45W	120Vac, Full load
Max Inrush Current(120Vac)			30A	Cold start
Max Inrush Current(220Vac)			60A	Cold start
Max Inrush Current(277Vac)			60A	Cold start
No Load Power			2W	220Vac/50Hz, No load
Power Factor	0.95	0.97		220Vac/50Hz, Full load
	0.90			120-277Vac/50Hz, 70-100% load
THD		10%	15%	220Vac/50Hz, Full load
			20%	120-277Vac/50Hz, 70-100% load

# SS-36L Series LED Driver

## Output Characteristics(SS-36L-42\*-XXXX):

Parameter	Min.	Typ.	Max.	Remark
Output Voltage Range	24V		42V	
Rated Output Voltage	34V		42V	
Rated Output Current		0.86A		Po=Vo*Io=36W, Full load
		1.05A		
No Load Voltage			50V	
Efficiency @120Vac	85.5%	87.0%		Output 42V/0.86A
Efficiency @220Vac	86.5%	88.0%		Output 42V/0.86A
Efficiency @277Vac	86.5%	87.5%		Output 42V/0.86A
Output Current Tolerance	-7%		+7%	
Output Current Ripple(PK-AV)			50%	
Start-up Current Overshoot			10%	Full load
Start-up Time			0.75S	120Vac
			0.5S	220Vac
Line Regulation	-5%		+5%	Full load
Load Regulation	-5%		+5%	
Temperature Coefficient	-0.05%/°C		+0.05%/°C	Tc:0°C~90°C
Short Circuit Protection			5W	Driver will not be damaged, Hiccup mode

# SS-36L Series LED Driver

## Output Characteristics(SS-36L-54\*-XXXX):

Parameter	Min.	Typ.	Max.	Remark
Output Voltage Range	36V		54V	
Rated Output Voltage	48V		54V	
Rated Output Current		0.65A		Po=Vo*Io=36W, Full load
		0.75A		
No Load Voltage			60V	
Efficiency @120Vac	86.0%	87.5%		Output 48V/0.75A
Efficiency @220Vac	87.0%	88.5%		Output 48V/0.75A
Efficiency @277Vac	86.5%	88.0%		Output 48V/0.75A
Output Current Tolerance	-7%		+7%	
Output Current Ripple(PK-AV)			50%	
Start-up Current Overshoot			10%	Full load
Start-up Time			0.75S	120Vac
			0.5S	220Vac
Line Regulation	-5%		+5%	Full load
Load Regulation	-5%		+5%	
Temperature Coefficient	-0.05%/°C		+0.05%/°C	Tc:0°C~90°C
Short Circuit Protection			5W	Driver will not be damaged, Hiccup mode

# SS-36L Series LED Driver

## Other Characteristics:

Parameter		Min.	Typ.	Max.	Remark
1-10V Dimming (Optional)	Dim Vmax	0V		12V	
	Dim Range	10%Iomax		100%Ioset	
	Rec.Dim Range	1V		10V	
PWM Dimming (Optional)	PWM High	9.8V		10.2V	
	PWM Low	0V		0.3V	
	Frequency	1KHz		2KHz	
	PWM Duty	10%		100%	
Resistor Dimming (Optional)	Resistance	10Kohm		100Kohm	
	Dim Range	10%Iomax		100%Ioset	
Lifetime(Tc≤72°C)		≥62,000 hours			80% load
MTBF		262,000 hours			220Vac, Full load, Ta=25°C (MIL-HDBK-217F)
IP Grade		IP42			
Tc		90°C			
Warranty		5 years			Refer to life time drawing
Net Weight		330g			
Dimension		131mm*45mm*30.5mm			L x W x H

NOTE: All the parameters above are tested Ta 25°C, unless specified.

# SS-36L Series LED Driver

## Environmental Requirements

Parameter	Min.	Typ.	Max.	Remark
Operating Temperature(Tcase)	-40°C	25°C	+90°C	
Storage Temperature	-40°C	25°C	+85°C	
Operation Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
Altitude	-65m		4000m	

## Safety and EMI/EMS Standards

Certification	Standard	Status	Remark
UL/cUL	UL8750	✓	
TUV	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013 EN62493:2015		
RCM	AS/NZS61347.2.13		
CCC	GB 19510.14-2009		
CE	EN 61347-2-13:2014 EN61347-1:2008+A1:2011+A2:2013	✓	

EMI/EMS	Criterion	Remark
Conduction Emission	EN55015:2013+A1:2015	
Radiation Emission	EN55015:2013+A1:2015	
Harmonic Current Emissions	IEC/EN 61000-3-2	Class C
Surge	IEC/EN61000-4-5	Difference mode 4kV, Common mode 6kV,Criterion B
Ring Wave	IEC/EN 61000-4-12	Difference mode 6kV, Common mode 6kV,Criterion B

# SS-36L Series LED Driver

## Safety Test Items:

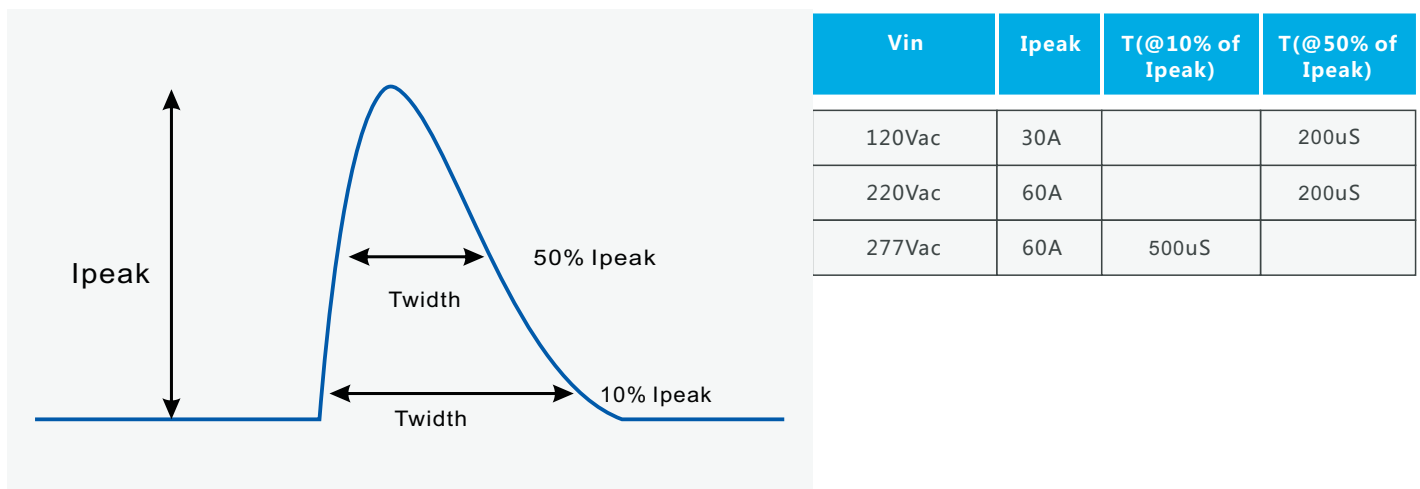
Safety test items	Technical Indicators			Remark
Insulation Requirements	UL Insulation Requirements	TUV Insulation Requirements	CCC Insulation Requirements	
Input-Output	1600Vac	3000Vac	3750Vac	Reinforced insulation
Input-Case	1600Vac	1500Vac	1875Vac	Basic insulation
Input-Dim	1600Vac	3000Vac	3750Vac	Reinforced insulation
Input-Dim	1600Vac	1000Vac	1000Vac	Additional insulation
Output-Case	500Vac	1000Vac	1000Vac	Function insulation
Dim-Case	500Vac	250Vac	250Vac	
Insulation Resistance	≥10MΩ			Input-Output, Test voltage:500Vdc
Ground Resistance	≤0.1Ω			25A/1min
Leak Current	≤0.75mA			277Vac

### NOTE:

1. SOSEN warrants the LED Driver itself meets with EMC standard. However, LED Driver's EMC should be re-checked when integrated into lighting systems due to unexpected interference as component.
2. Please short Line and Neutral, LED+ and LED-, Dim+ and Dim - when Hi-pot test.
3. The CCC withstand voltage test needs to disconnect the built-in lightning protection tube. According to the IEC 60598-1:14 standard section 10.2, the "built-in lightning protection tube" can be marked on the nameplate to disconnect the discharge tube on testing.

## Performance Curves:

### Input Inrush Current



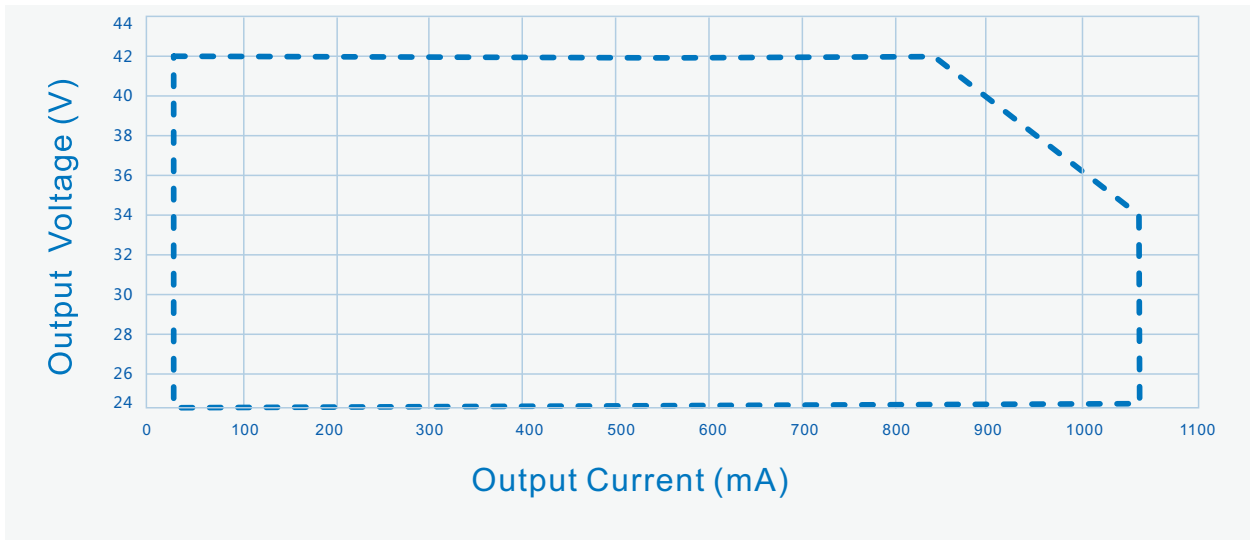


# SS-36L Series LED Driver

## Performance Curves:

Output Voltage Vs. Output Current(Dim/AOC Window)

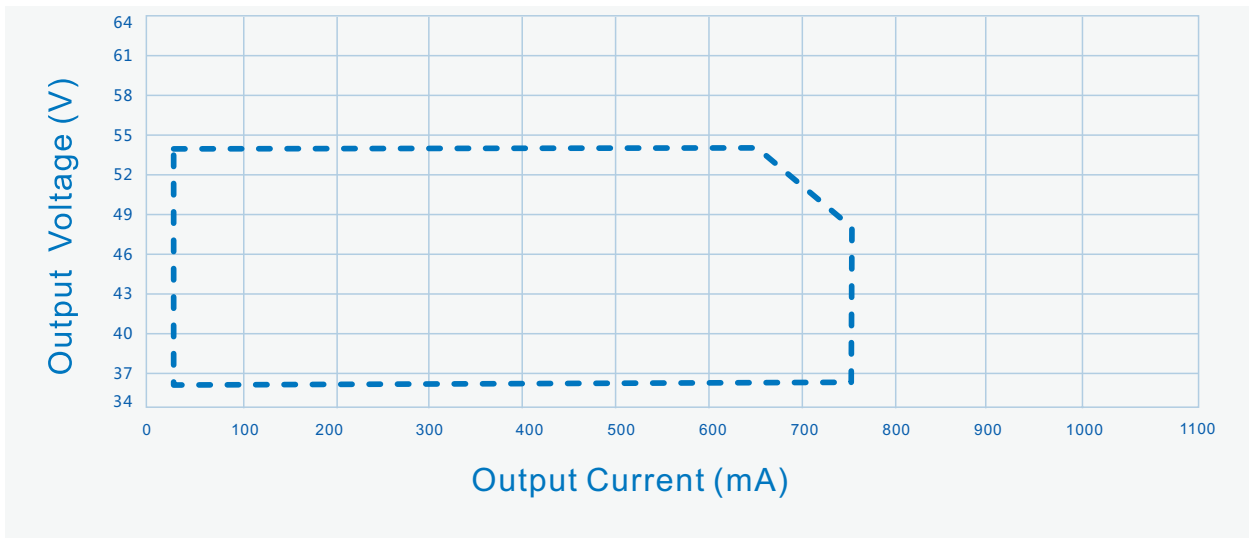
SS-36L-42\*-XXXX



----- Diming Window

Output Voltage Vs. Output Current(Dim/AOC Window)

SS-36L-54\*-XXXX



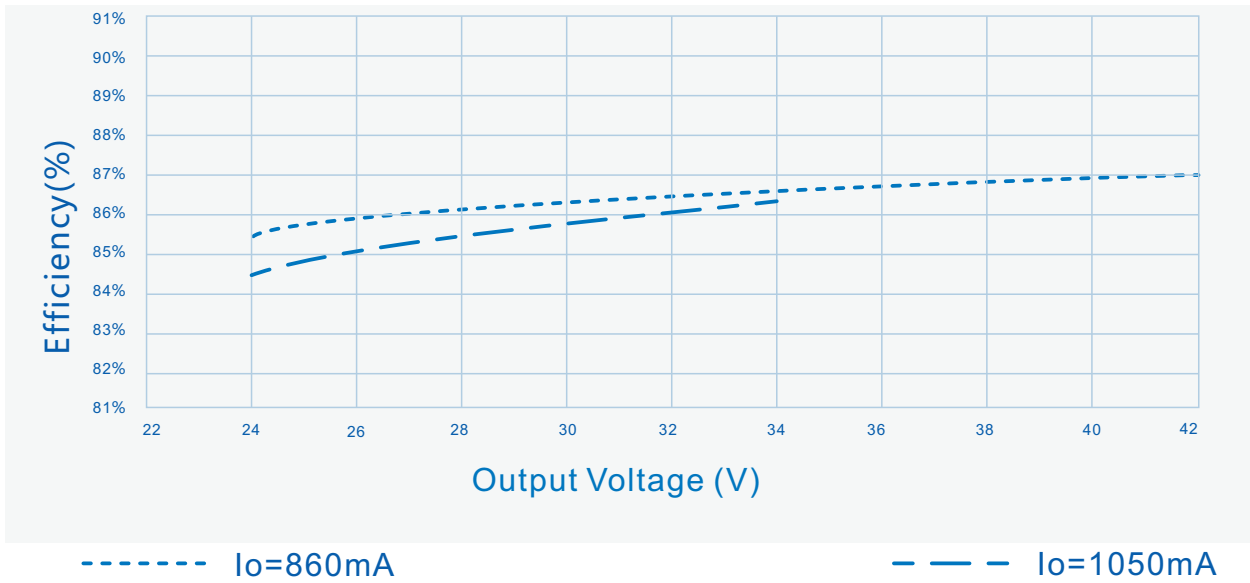
----- Diming Window

# SS-36L Series LED Driver

## Performance Curves:

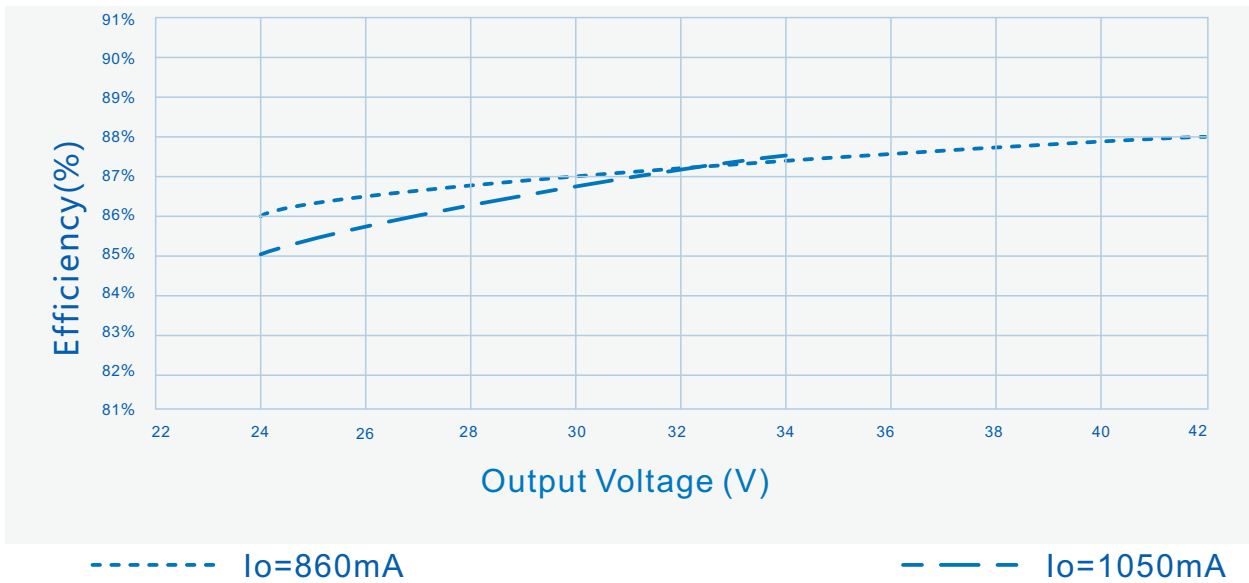
Efficiency Vs. Output Voltage ( $V_{in}=120Vac$ )

### SS-36L-42\*-XXXX



Efficiency Vs. Output Voltage ( $V_{in}=220Vac$ )

### SS-36L-42\*-XXXX

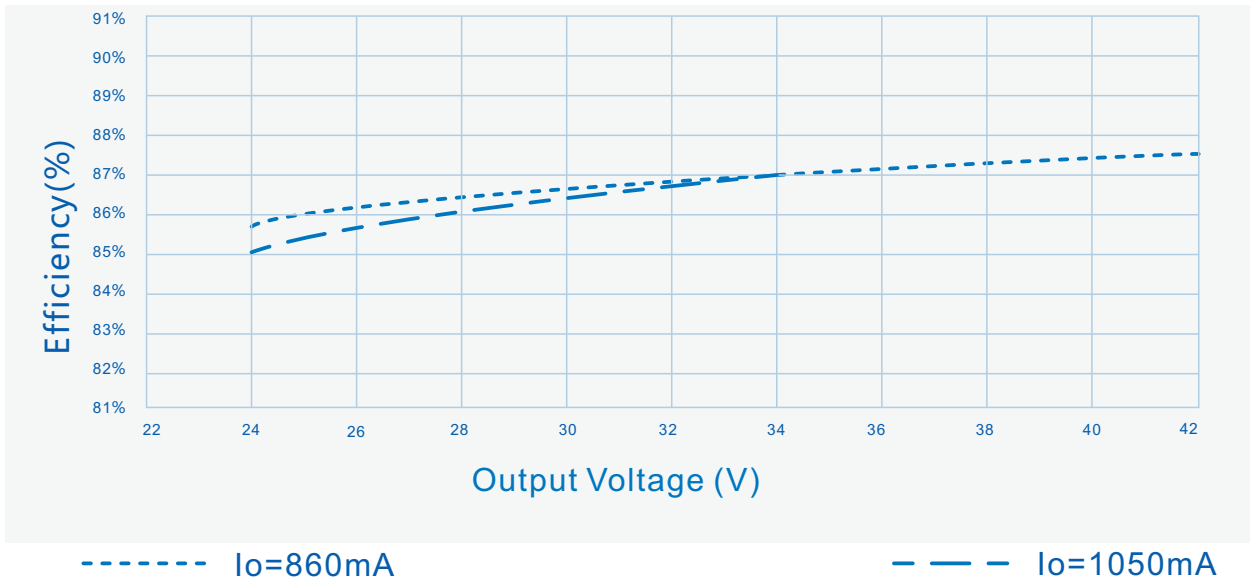


# SS-36L Series LED Driver

## Performance Curves:

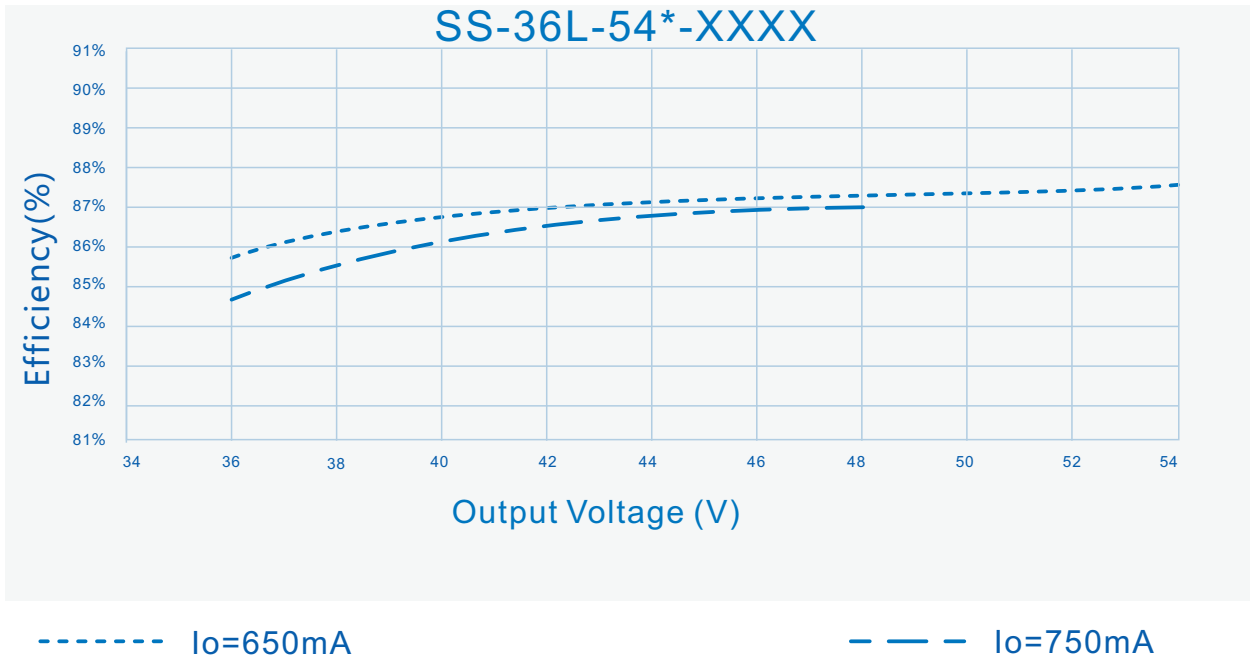
Efficiency Vs. Output Voltage ( $V_{in}=277V_{ac}$ )

### SS-36L-42\*-XXXX



Efficiency Vs. Output Voltage ( $V_{in}=120V_{ac}$ )

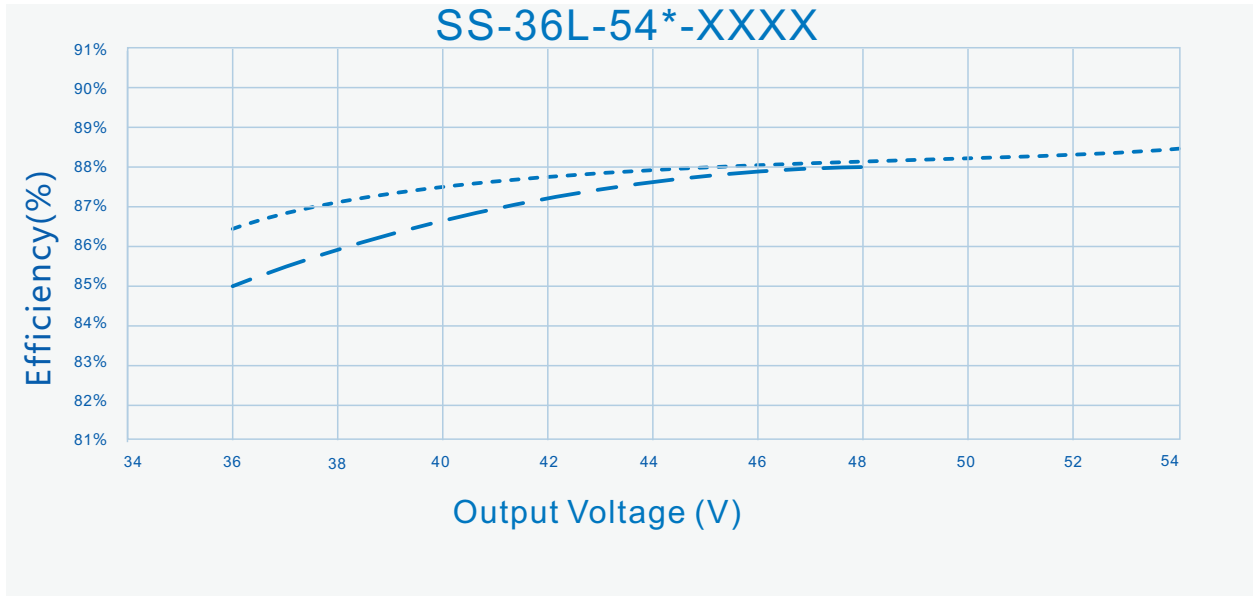
### SS-36L-54\*-XXXX



# SS-36L Series LED Driver

## Performance Curves:

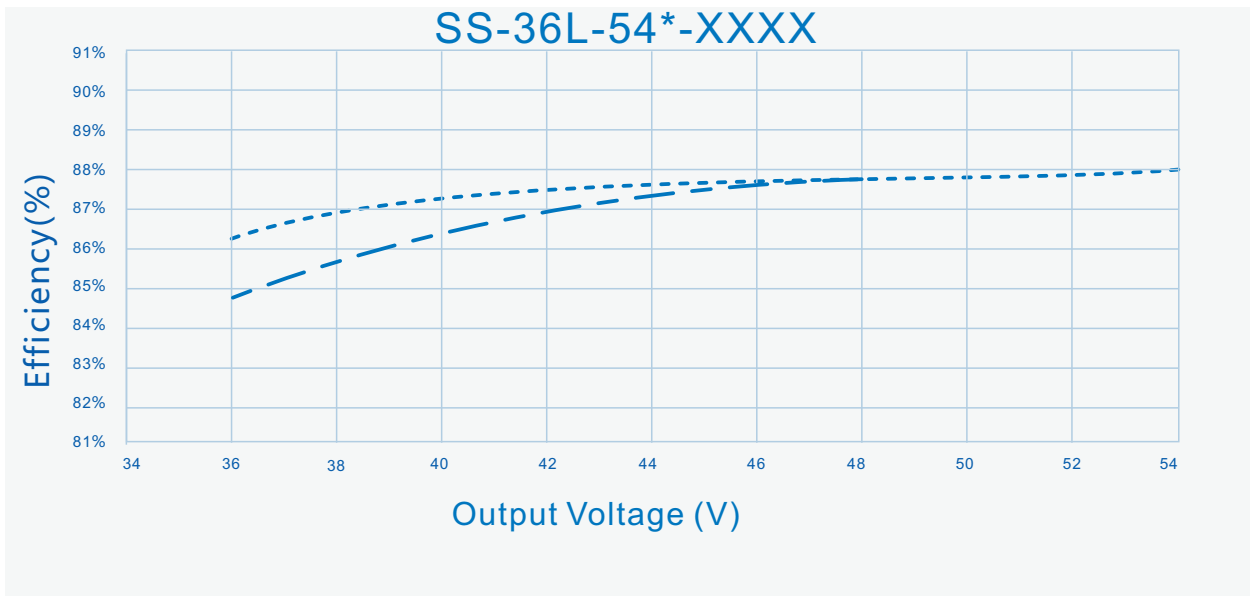
Efficiency Vs. Output Voltage ( $V_{in}=220V_{ac}$ )



-----  $I_o=650mA$

- - -  $I_o=750mA$

Efficiency Vs. Output Voltage ( $V_{in}=277V_{ac}$ )



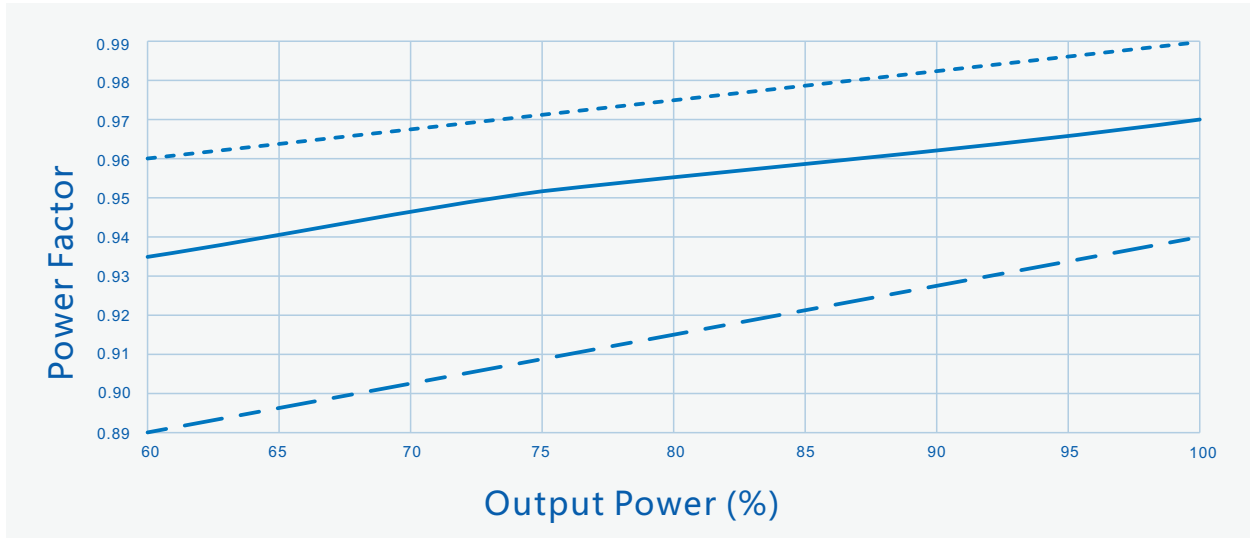
-----  $I_o=650mA$

- - -  $I_o=750mA$

# SS-36L Series LED Driver

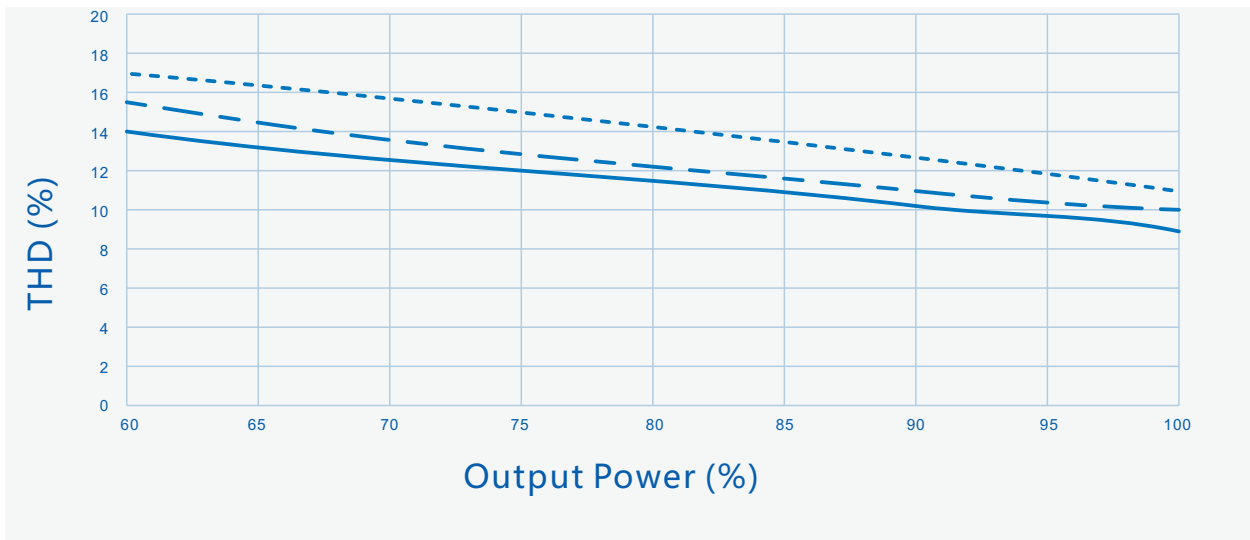
## Performance Curves:

### Power Factor Vs. Output Power



----- Vin=120Vac    ——— Vin=220Vac    - - - Vin=277Vac

### THD Vs. Output Power

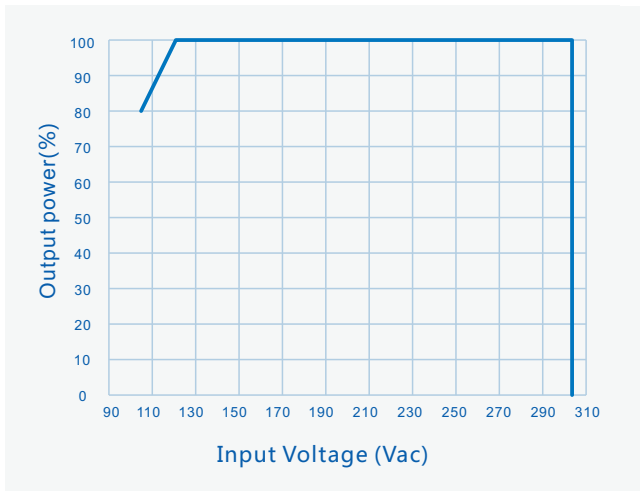


----- Vin=120Vac    ——— Vin=220Vac    - - - Vin=277Vac

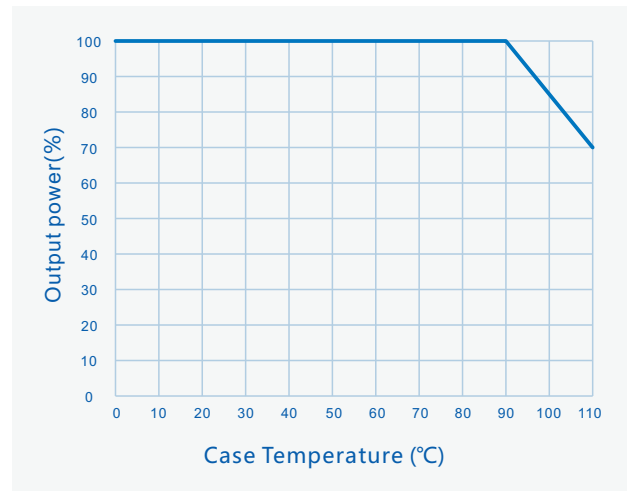
# SS-36L Series LED Driver

## Performance Curves:

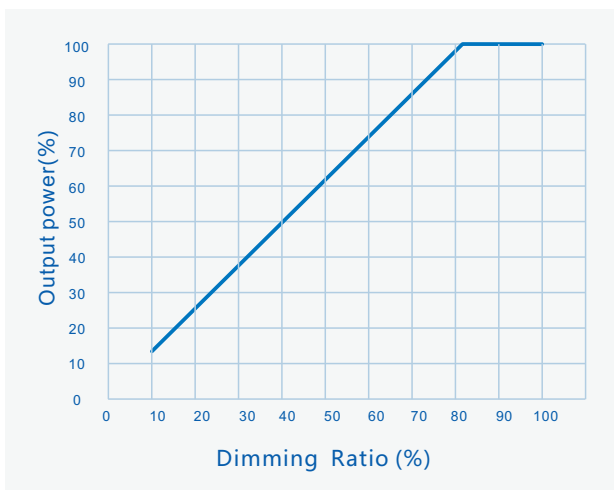
### Output power Vs. Input Voltage (Ta Max.60°C)



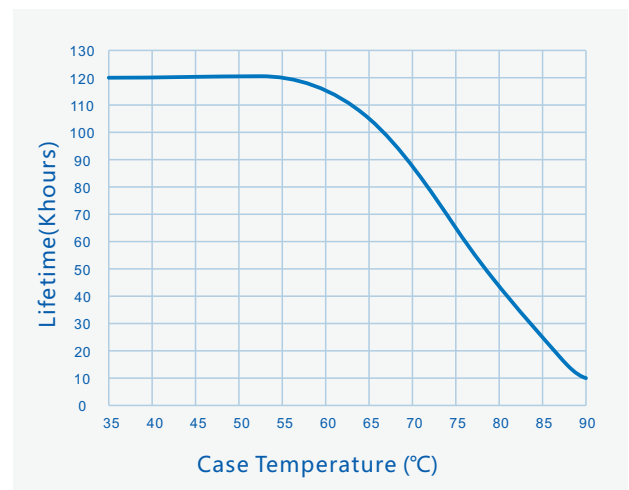
### Output power Vs. Case Temperature



### Output Power Vs. Dimming

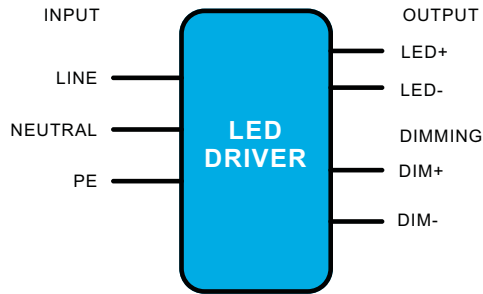


### Lifetime Vs. Case Temperature



# SS-36L Series LED Driver

## Mechanical characteristics(Unit: mm)



### AC Input Cable(Lead Length outside enclosure 350±10mm):

UL model: 18AWG 105°C 600V,I.D: 1.0mm,O.D: 2.2mm,Electronic line, Black:L, White:N,Green:PE

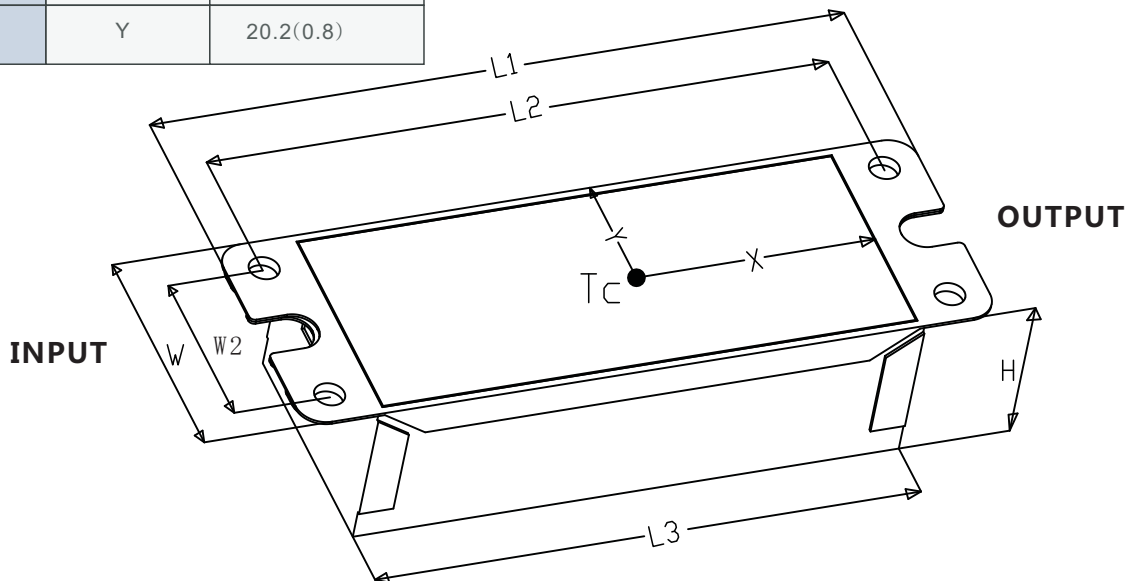
### DC Output Cable(Lead Length outside enclosure 200±10mm):

UL model: 18AWG 105°C 600V,I.D: 1.0mm,O.D: 2.2mm,Electronic line, Red:LED+, Black:LED-

### DIM Cable(Lead Length outside enclosure 150±10mm):

UL model: 18AWG 105°C 600V,I.D: 1.0mm,O.D: 2.2mm,Electronic line, Purple : DIM+, Gray: DIM-

Name Description	Standard Code	mm(In.)
Case Length	L3	103(4.06)
Case Width	W1	45(1.77)
Case Height	H	30.5(1.2)
Overall Length	L1	131(5.16)
Mounting Hole Length	L2	117(4.61)
Mounting Hole Width	W2	32(1.26)
TC point position	X	44.9(1.77)
TC point position	Y	20.2(0.8)



# SS-36L Series LED Driver



## Installation Tips

1. Highly recommended to seal the adjustable hole with silicon glue(#704 preferred) after adjusting the driver's output current. Torsion with proper strength to avoid permanent damage to the potentiometer inside.
2. Dimming leads should be capped if not in use to avoid dimming circuit damage caused by external signals.

## Package

- Outside carton dimension: L×W×H =495mm×385mm×162mm;
- 36PCS/Carton;
- Net weight/PC: 0.33kg;Gross weight/Carton: 13kg;
- Please refer to the product name, model number, manufacturer identification, quality inspection certificate, manufacturing date Etc. on the package. and LED power supply instruction manual in the package.

## Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be shielded from direct sunshine, loaded/unloaded with caution.

## Storage

The product storage meets the standard of the GB 3873 - 83.  
Products should be rechecked if stock for over 1 year before installation.

## RoHS

Products comply with European directive 2011/65/EC.



## REVISION HISTORY

Version	Description of Change	Changed Date	Remark
V00	Original release	2019/04/10	

