

## KEY FEATURES

- IP66/67 Design for Indoor or LED Outdoor Installations
- Universal Input: 90-305 VAC
- Three In One Dimming Function (Just For IP67 Design)  
(1~10VDC & PWM Signal or resistance)
- <0.5W No Load Input Power
- Built-in Active PFC Function
- Free Air Convection
- High Reliability
- Output Voltage and Constant Current Level can Be  
Adjusted Through Internal Potentiometer
- LED Power Application
- 3-Years Product Warranty



**IP66/67** 

## ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.	ALF80-24S	ALF80-36S	ALF80-48S	ALF80-54S	
Max Output Wattage (W)	80W				
Input	Voltage	90-305 VAC or 127-430 VDC			
	Frequency (Hz)	47-63 Hz			
	Current (Full load)	0.85 A max. (115 VAC) / 0.425 A max. (230 VAC) / 0.4 A max. (277 VAC)			
	Inrush Current (<2ms) (Cold Start)	40 A max. (115 VAC) / 70 A max. (230 VAC)			
	Leakage Current	<0.75 mA max.			
	Power Factor	PF>0.97 (115 VAC) / PF>0.9 (230 VAC) at Full Load			
Output	Voltage (V.DC.)	24V	36V	48V	54V
	Constant Current Range (V.DC.)	15.5 ~ 24V	21.6 ~ 36V	28.8 ~ 48V	32.4 ~ 54V
	Voltage Accuracy	±2%			
	Current Accuracy	±10%			
	Current (Convection) (mA) max	3333	2222	1666	1500
	Current ADJ Range (mA)	1999 ~ 3333	1333 ~ 2222	999 ~ 1666	900 ~ 1500
	Voltage ADJ Range (V.DC.) (10-100% Load) (for IP66 Design)	23.5 ~ 26V	34.5 ~ 37.5V	46 ~ 48.5V	53 ~ 55.5V
	Line Regulation (10-100%)	±1%			
	Load Regulation (10-100%)	±1%			
	Minimum Load	3%			
	Ripple & Noise (max.)	200mVp-p		250mVp-p	
	Efficiency (typ.)	89%	90%	90%	90%
	Hold-up Time	25 ms min.			
	Protection	Over Power Protection	Auto recovery, 105 ~ 160% rated output power		
Over Voltage Protection(for C.C Mode)		Auto recovery			
Short Circuit Protection		Auto recovery			
Isolation	Input-Output (V.AC)	3750V			
	Input-FG (V.AC)	1880V			
	Output-FG (V.AC)	500V			
Environment	Operating Temperature	-40°C...+70°C (with derating)			
	Storage Temperature	-40°C...+85°C			
	Temperature Coefficient	±0.02%/°C ( 0~50°C )			
	Humidity	95% RH			
	MTBF	>100,000 h @ 25°C (MIL-HDBK-217F)			
Vibration	10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes.				

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Model No.	ALF80-24S	ALF80-36S	ALF80-48S	ALF80-54S
Physical	Dimension (L x W x H) 4.72 x 2.36 x 1.38 Inches ( 120.0 x 60.0 x 35.0 mm ) Tolerance ±2mm			
	Weight 500 g ±15%			
	Cooling Method Free air convection			
Safety	Agency Approvals EN61347-1:2008 、 EN61347-2-13:2006			
EMC	EMI (Conducted & Radiated Emission) EN 55015 、 Class B			
	EMS (Noise Immunity) EN 61547			
	Surge 2KV L-L, 4KV L-E			

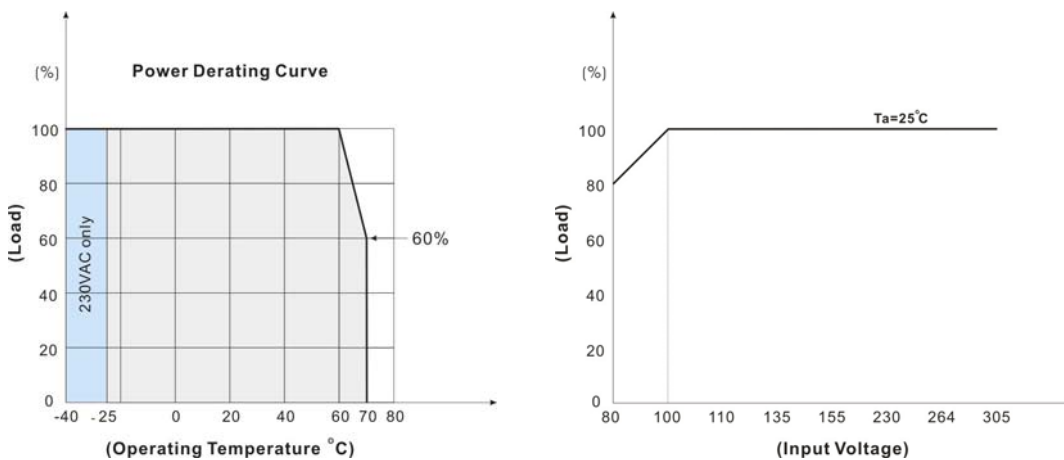
### NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's recommended to add Varistor 14S561K at L / N input side in parallel.

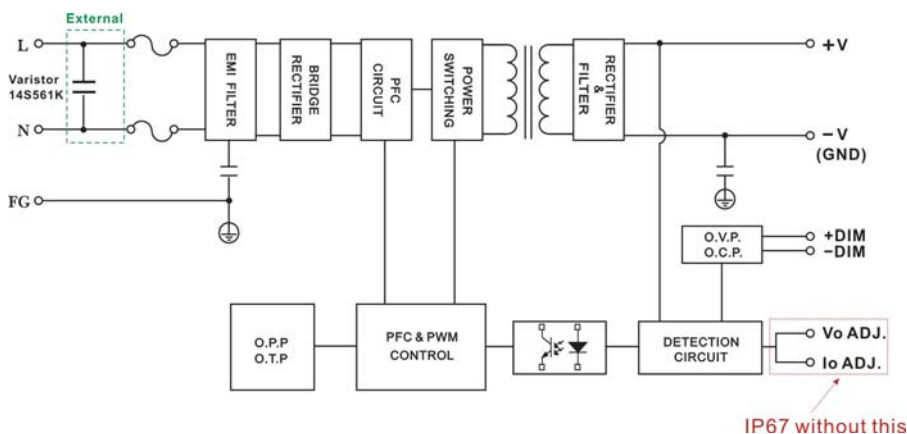
This series has IP66 and IP67, when you place order, please be noted as ordering Part No.

Model No.	ALF80-24S	ALF80-36S	ALF80-48S	ALF80-54S	
Ordering Part No	IP66	ALF80-24S-IP66	ALF80-36S-IP66	ALF80-48S-IP66	ALF80-54S-IP66
	IP67	ALF80-24S-IP67	ALF80-36S-IP67	ALF80-48S-IP67	ALF80-54S-IP67

### DERATING

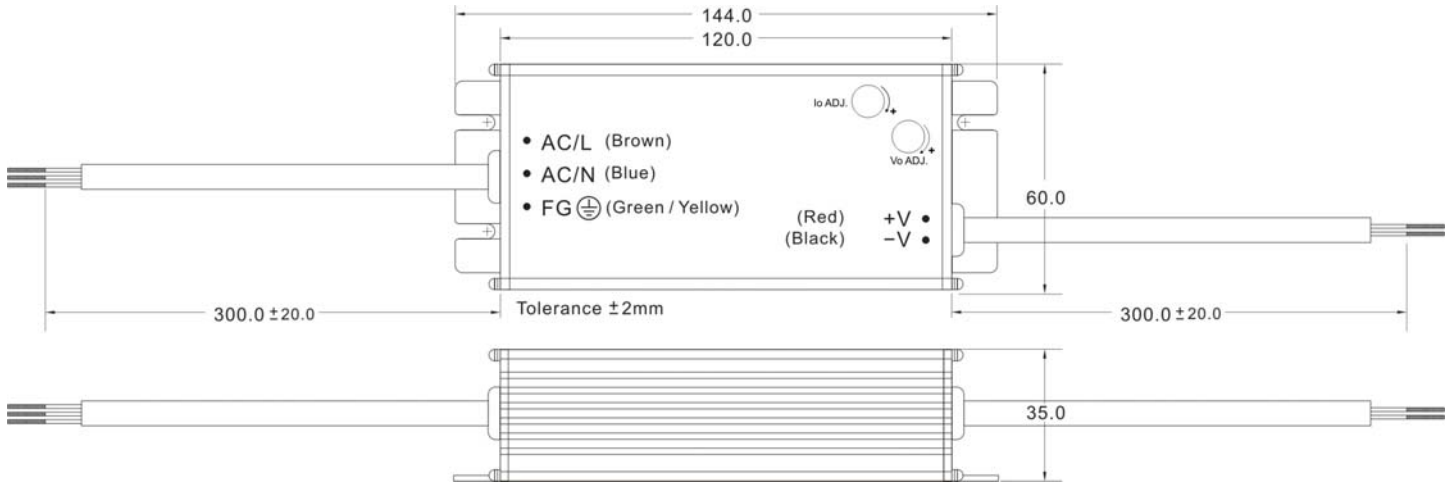


### BLOCK DIAGRAM

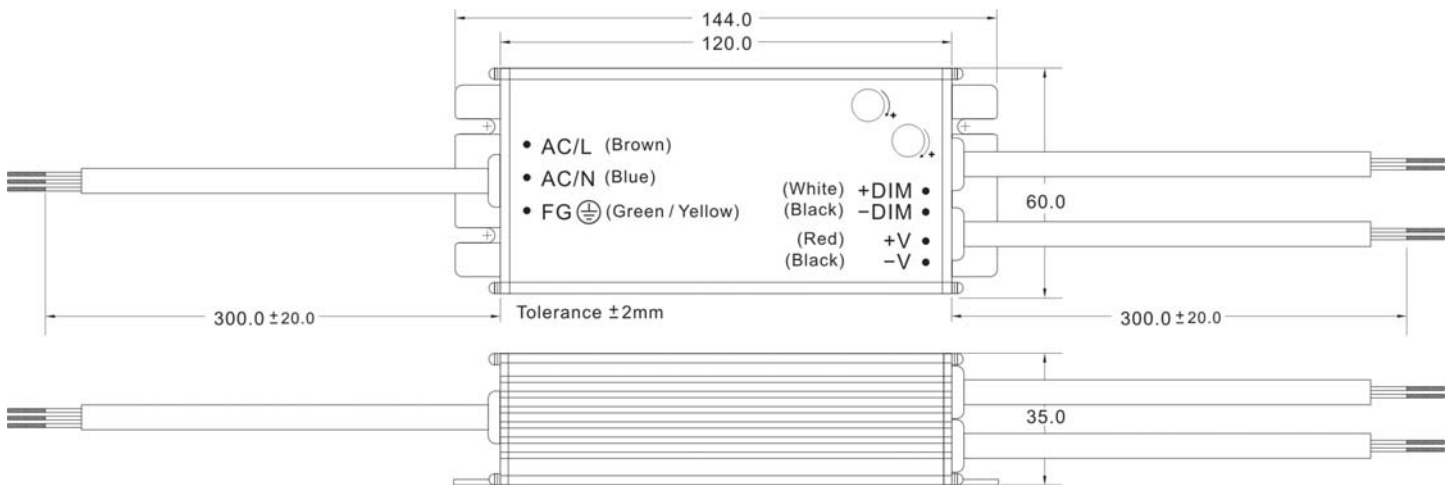


**MECHANICAL DIMENSION ( Top View )**

**IP66 Design**



**IP67 Design**



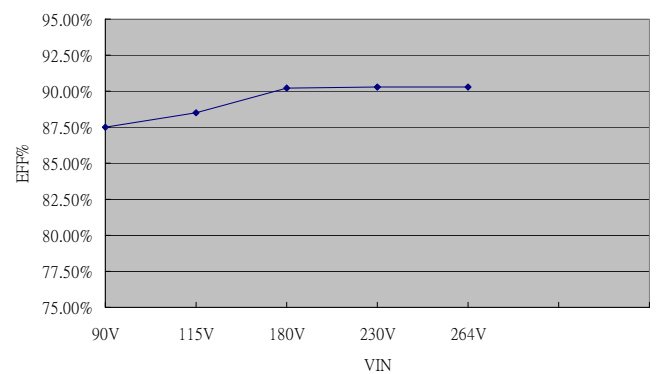
**ASSEMBLY INSTRUCTIONS**

\*U Case T=2.5mm

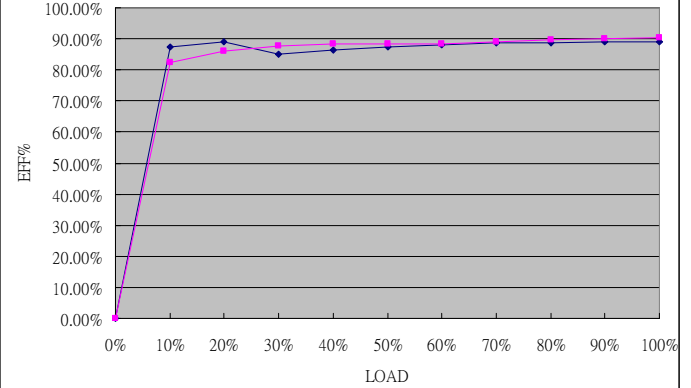
Customer screws into the length of the case no higher than 0.5mm  
 (Namely screw length for load plate thickness plus 3.0mm)

**EFFICIENCY VERSUS LOAD**
**ALF80-24S**
**VIN VS Efficiency**

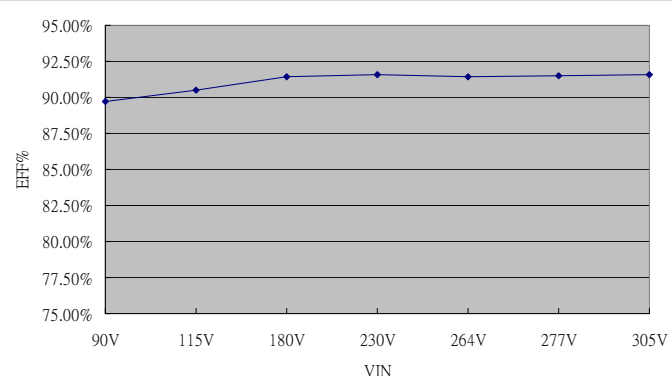
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.50	88.50	90.20	90.30	90.27
Input Voltage (V)	277	305			
Efficiency (%)	90.40	90.50			


**LOAD VS Efficiency**

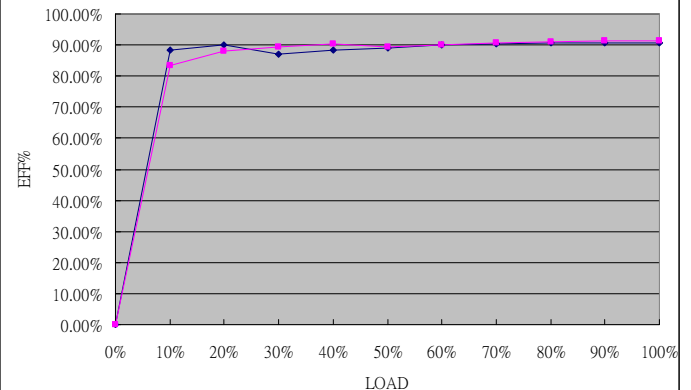
Load (%)	0	10	20	30	40	50
115V (%)	0.00	87.30	89.00	85.00	86.40	87.50
230V (%)	0.00	82.50	86.10	87.80	88.30	88.50
Load (%)	60	70	80	90	100	
115V (%)	88.20	88.70	88.80	89.00	89.00	
230V (%)	88.50	89.20	89.70	90.00	90.25	


**ALF80-36S**
**VIN VS Efficiency**

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	89.70	90.50	91.40	91.60	91.40
Input Voltage (V)	277	305			
Efficiency (%)	91.50	91.60			

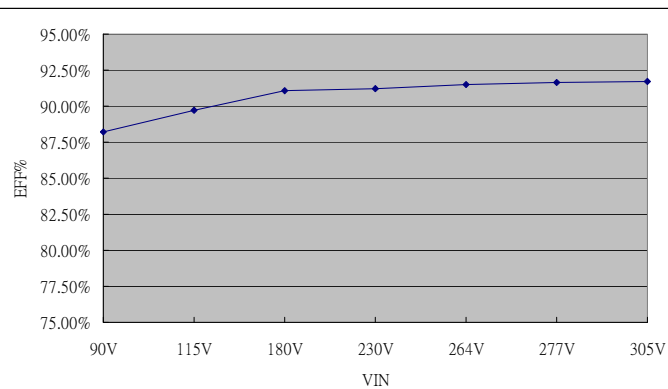

**LOAD VS Efficiency**

Load (%)	0	10	20	30	40	50
115V (%)	0.00	88.30	90.00	87.00	88.40	89.20
230V (%)	0.00	83.30	88.20	89.40	90.40	89.30
Load (%)	60	70	80	90	100	
115V (%)	90.00	90.50	90.60	90.80	90.70	
230V (%)	90.03	90.70	91.00	91.30	91.50	

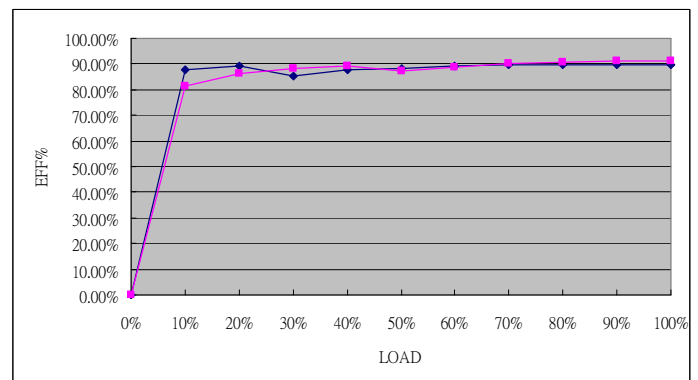


**EFFICIENCY VERSUS LOAD**
**ALF80-48S**
**VIN VS Efficiency**

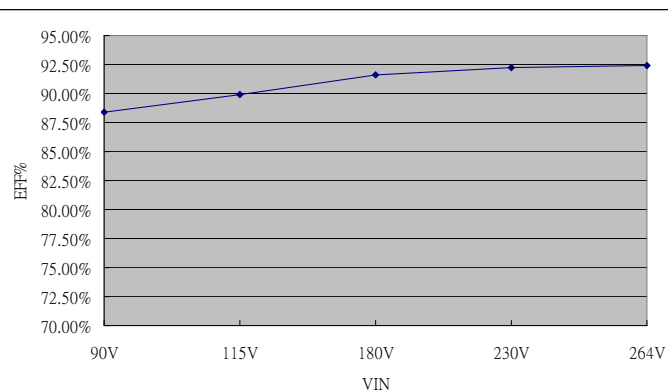
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	88.18	89.72	91.05	91.21	91.52
Input Voltage (V)	277	305			
Efficiency (%)	91.62	91.72			


**LOAD VS Efficiency**

Load (%)	0	10	20	30	40	50
115V (%)	0.00	87.66	89.31	85.24	87.80	88.13
230V (%)	0.00	81.61	86.41	88.35	89.13	87.36
Load (%)	60	70	80	90	100	
115V (%)	89.01	89.48	89.65	89.83	89.90	
230V (%)	88.91	90.27	90.92	91.26	91.31	


**ALF80-54S**
**VIN VS Efficiency**

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	88.40	89.92	91.59	92.24	92.45
Input Voltage (V)	277	305			
Efficiency (%)	92.55	92.65			


**LOAD VS Efficiency**

Load (%)	0	10	20	30	40	50
115V (%)	0	88.23	89.72	86.11	87.79	88.74
230V (%)	0	88.25	90.18	90.81	91.40	89.05
Load (%)	60	70	80	90	100	
115V (%)	89.58	90.14	90.49	90.50	89.92	
230V (%)	90.34	91.15	91.49	91.88	92.21	

