

## KEY FEATURES

- IP65/67 Design for Indoor or LED Outdoor Installations
- Universal Input: 90-305 VAC or 120-430 VDC
- Three in one dimming function (Just For IP67 Design)  
(1~10VDC & PWM Signal or resistance)
- Built-in Active PFC Function
- Free Air Convection
- High Reliability
- With Constant Current & Constant Voltage
- Output Voltage and Constant Current Level can Be Adjusted Through Internal Potential Meter
- LED Power Application
- 3-Years Product Warranty



**IP65/67 CE**  
Preliminary

## ELECTRICAL SPECIFICATIONS

Model No.	ALF150-12S	ALF150-24S	ALF150-36S	ALF150-48S	ALF150-54S
Max Output Wattage (W)	150W				
Input	Voltage				
	90-305 VAC or 120-430 VDC				
	Frequency (Hz)				
	47-63 Hz				
	Current (Full load)				
	2 A max. (115 VAC) / 1 A max. (230 VAC) / 0.9 A max. (277 VAC)				
Output	Inrush Current (<2ms)				
	40 A max. (115 VAC) / 60 A max. (230 VAC)				
	Leakage Current				
	<0.75 mA max.				
	Power Factor				
	PF>0.97 (115 VAC) / PF>0.95 (230 VAC) / PF>0.9 (277 VAC) at Full Load				
	Voltage (V.DC.)				
	12V				
	24V				
	36V				
	48V				
	54V				
	Constant Current Range (V.DC.)				
	6 ~ 12V				
12 ~ 24V					
18 ~ 36V					
24 ~ 48V					
27 ~ 54V					
Voltage Accuracy					
±2%					
Current (Convection) (mA) max					
12500					
6250					
4166					
3125					
2777					
Current ADJ Range (mA)					
6250 ~ 12500					
3125 ~ 6250					
2083 ~ 4166					
1560 ~ 3125					
1388 ~ 2777					
Voltage ADJ Range (V.DC.) (for IP65 Design)					
10.8 ~ 13.2V					
21.6 ~ 26.4V					
32.4 ~ 38.5V					
43.2 ~ 50.4V					
48.6 ~ 55.5V					
Line Regulation					
±1%					
Load Regulation					
±1%					
Minimum Load					
1%					
Maximum Capacitive Load					
100,000 uF					
50,000 uF					
33,000 uF					
6,000 uF					
6,000 uF					
Ripple & Noise (max.)					
100mVp-p					
100mVp-p					
100mVp-p					
200mVp-p					
200mVp-p					
Efficiency (typ.)					
90.5%					
92.5%					
93.5%					
92.5%					
92.5%					
Hold-up Time					
25 ms min.					
Switching Frequency					
100 kHz					
Protection	Over Power Protection				
	Auto recovery				
	Over Voltage Protection				
	Auto recovery				
Isolation	Overt Temperature Protection				
	Auto recovery				
Isolation	Short Circuit Protection				
	Auto recovery				
	Input-Output (V.AC)				
3750V					
Input-FG (V.AC)					
1880V					
Output-FG (V.AC)					
500V					
Environment	Operating Temperature				
	-30°C...+70°C (with derating)				
	Storage Temperature				
	-40°C...+85°C				
	Temperature Coefficient				
	±0.02%/°C ( 0~50°C )				
Humidity					
95% RH					
MTBF					
>75,000 h @ 25°C (MIL-HDBK-217F)					
Vibration					
10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes.					

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

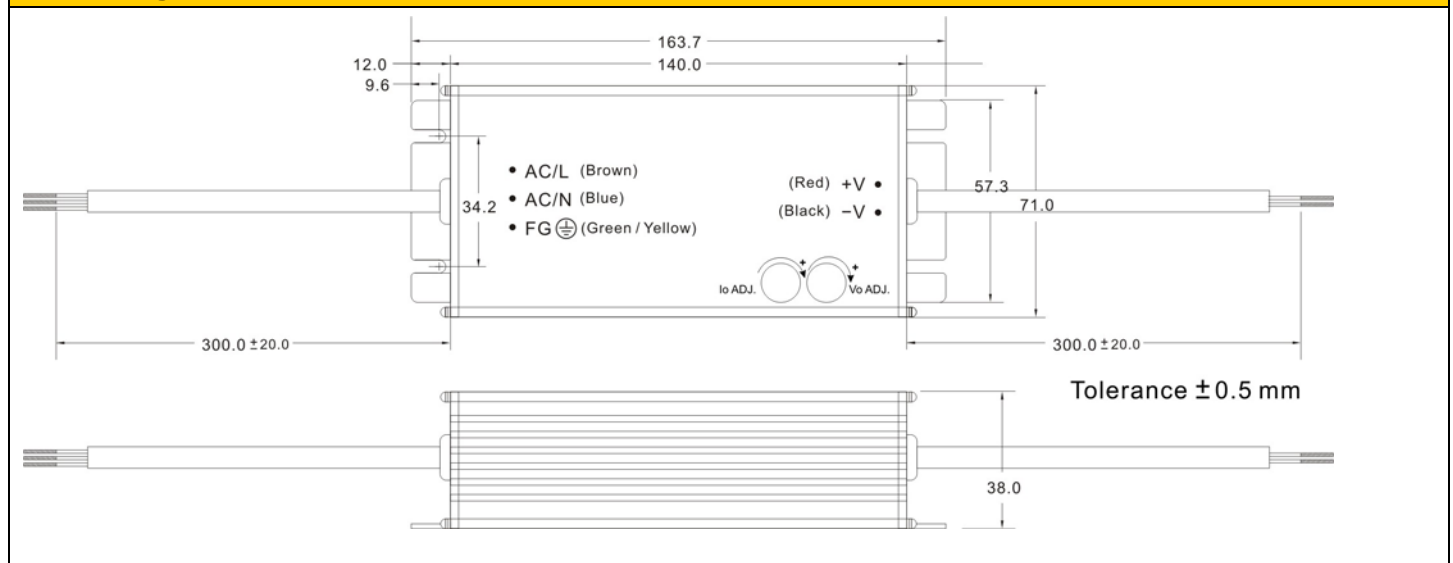
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

Model No.		ALF150-12S	ALF150-24S	ALF150-36S	ALF150-48S	ALF150-54S
Physical	Dimension (L x W x H)	6.44 x 2.79 x 1.50 Inches (163.7 x 71.0 x 38.0 mm) Tolerance $\pm 0.5$ mm				
	Weight	750 g				
	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				

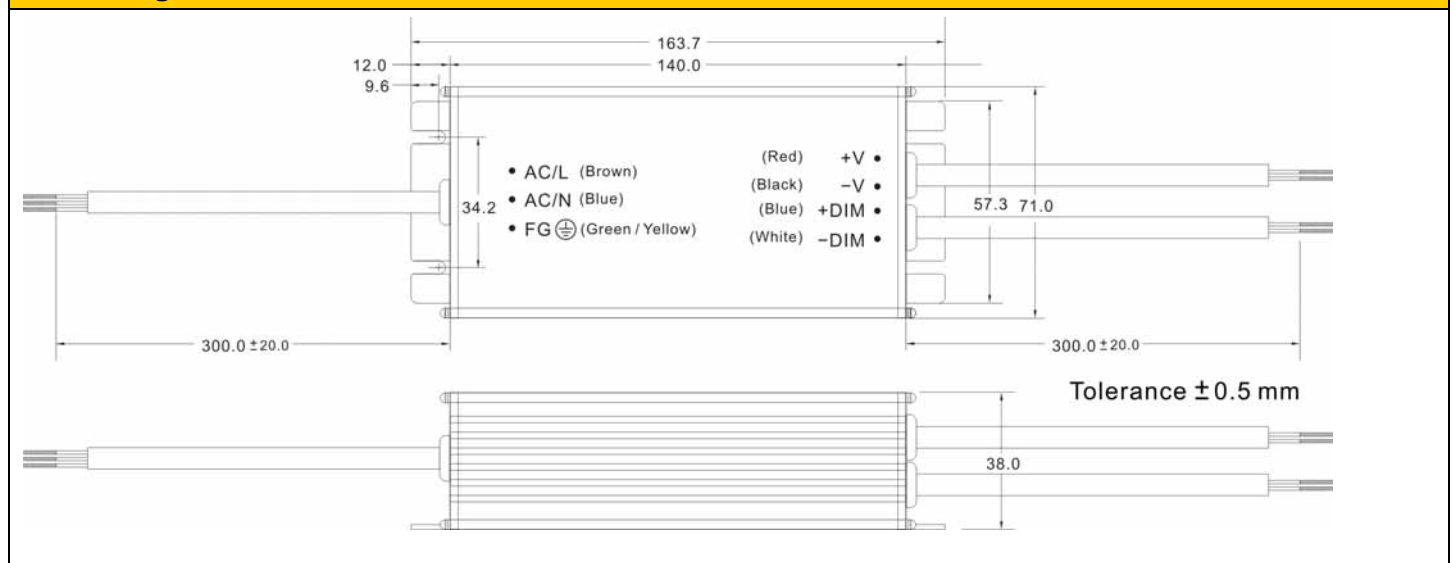
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## MECHANICAL DIMENSION ( Top View )

### IP65 Design



### IP67 Design

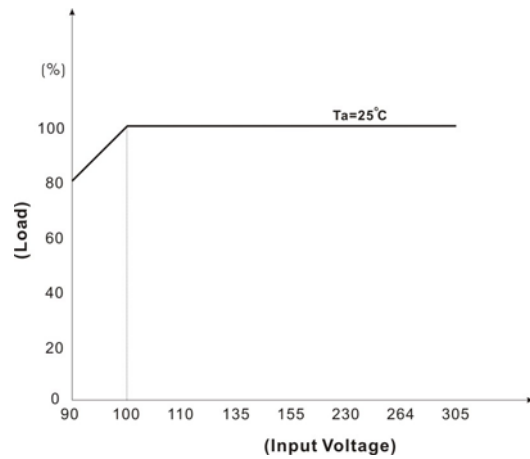
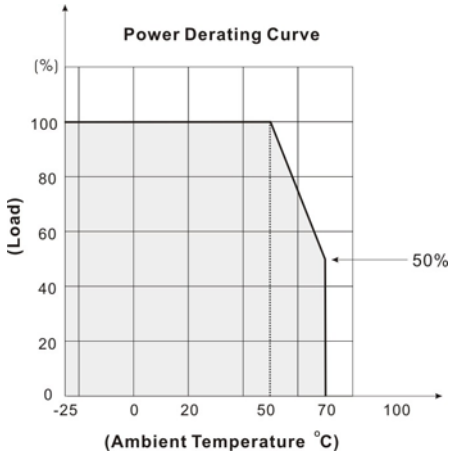


## ASSEMBLY INSTRUCTIONS

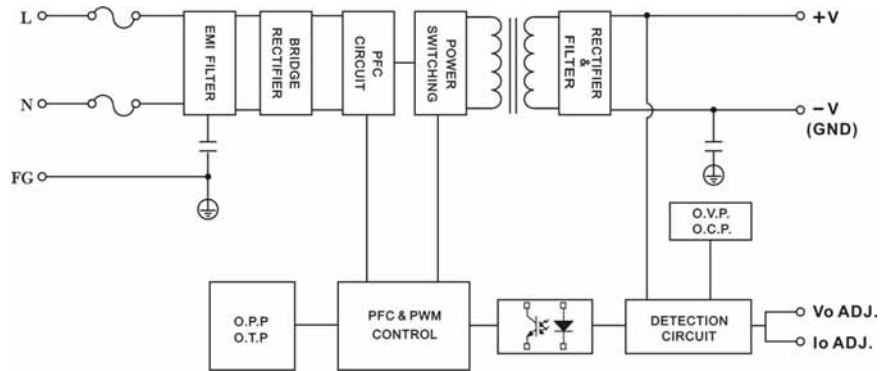
\*U Case T=2.5mm

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

**DERATING**



**BLOCK DIAGRAM**



**EFFICIENCY VERSUS LOAD**

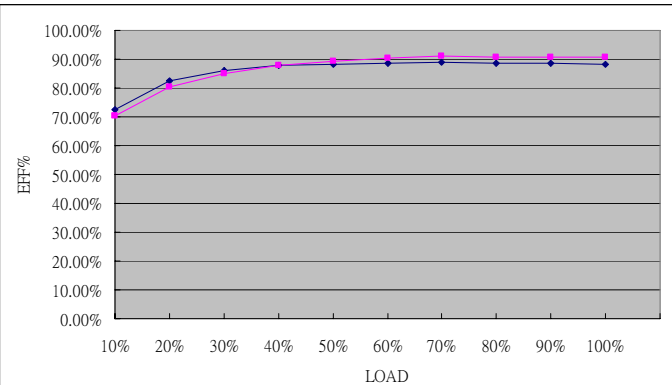
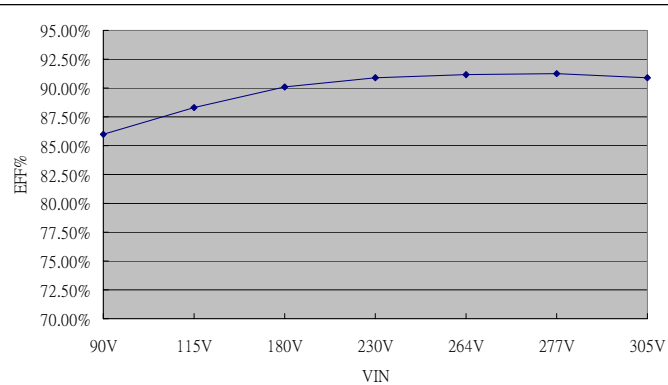
**ALF150-12S**

**VIN VS Efficiency**

Input Voltage (V)	90	115	180	230
Efficiency (%)	85.94	88.27	90.12	90.89
Input Voltage (V)	264	277	305	
Efficiency (%)	91.16	91.23	90.91	

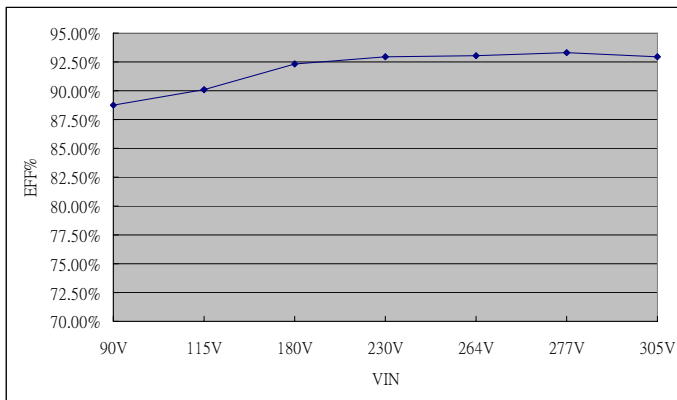
**LOAD VS Efficiency**

Load (%)	10	20	30	40	50
115V (%)	72.53	82.66	86.12	87.97	88.32
230V (%)	70.26	80.45	85.15	87.96	89.37
Load (%)	60	70	80	90	100
115V (%)	88.53	88.83	88.75	88.51	88.33
230V (%)	90.30	90.96	90.82	90.83	90.89

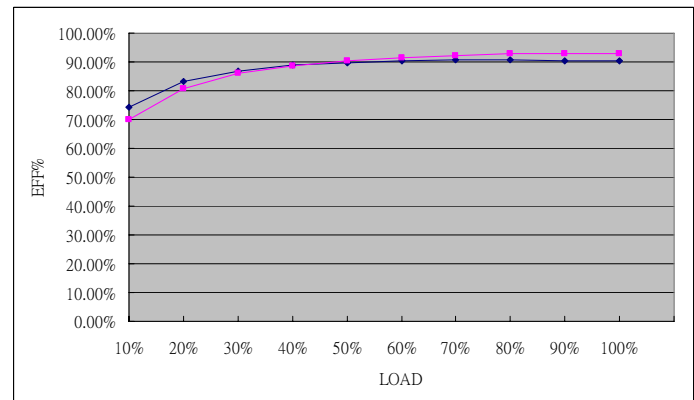


**EFFICIENCY VERSUS LOAD**
**ALF150-24S**
**VIN VS Efficiency**

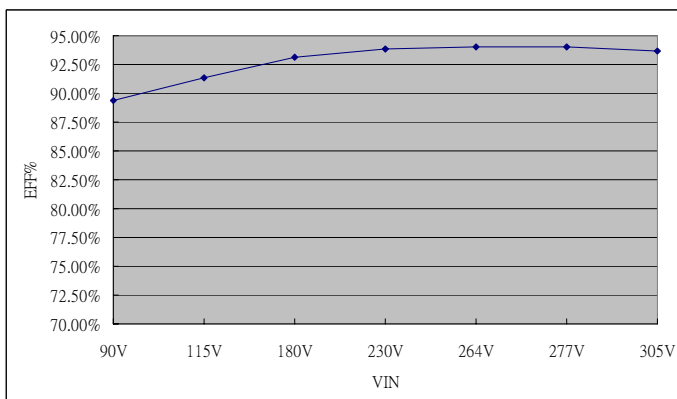
Input Voltage (V)	90	115	180	230
Efficiency (%)	88.71	90.09	92.28	92.93
Input Voltage (V)	264	277	305	
Efficiency (%)	93.06	93.26	92.92	


**LOAD VS Efficiency**

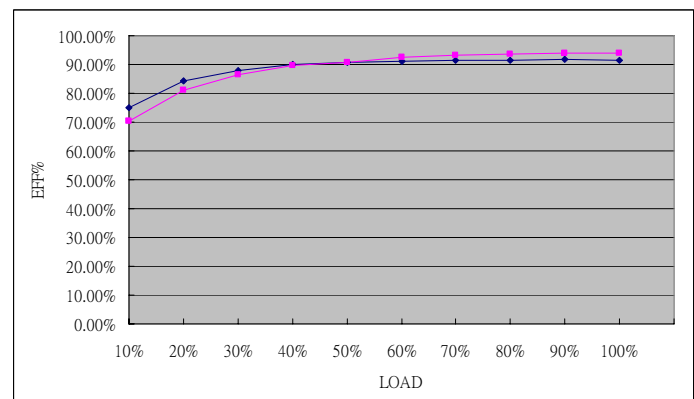
Load (%)	10	20	30	40	50
115V (%)	74.25	83.07	86.82	88.81	89.81
230V (%)	70.03	80.72	86.00	88.67	90.25
Load (%)	60	70	80	90	100
115V (%)	90.29	90.62	90.58	90.53	90.38
230V (%)	91.48	92.28	92.90	92.92	92.96


**ALF150-36S**
**VIN VS Efficiency**

Input Voltage (V)	90	115	180	230
Efficiency (%)	89.36	91.37	93.09	93.81
Input Voltage (V)	264	277	305	
Efficiency (%)	94.05	94.03	93.70	


**LOAD VS Efficiency**

Load (%)	10	20	30	40	50
115V (%)	74.93	84.24	87.87	89.92	90.59
230V (%)	70.39	81.09	86.34	89.78	90.89
Load (%)	60	70	80	90	100
115V (%)	91.10	91.60	91.28	91.65	91.58
230V (%)	92.38	93.15	93.64	93.89	93.99

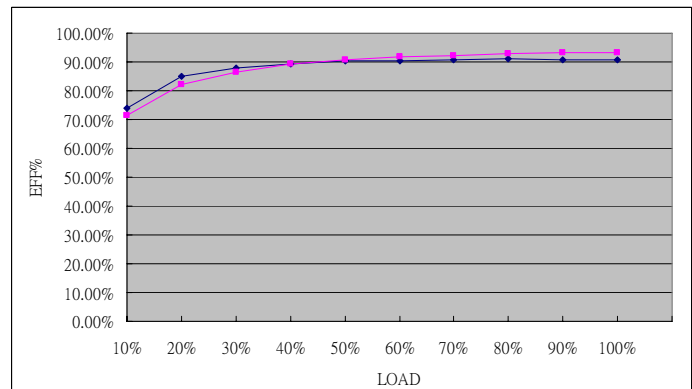
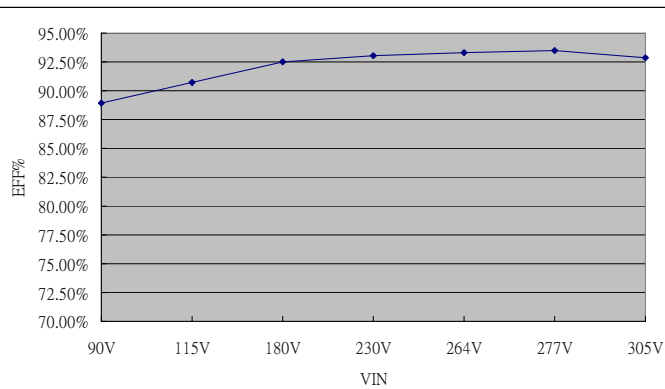


**EFFICIENCY VERSUS LOAD**
**ALF150-48S**
**VIN VS Efficiency**

Input Voltage (V)	90	115	180	230
Efficiency (%)	88.95	90.68	92.49	93.08
Input Voltage (V)	264	277	305	
Efficiency (%)	93.27	93.51	92.84	

**LOAD VS Efficiency**

Load (%)	10	20	30	40	50
115V (%)	73.99	84.83	87.68	89.39	90.33
230V (%)	71.55	82.11	86.34	89.34	90.57
Load (%)	60	70	80	90	100
115V (%)	90.53	90.68	91.01	90.80	90.87
230V (%)	91.92	92.31	92.91	93.05	93.37


**ALF150-54S**
**VIN VS Efficiency**

Input Voltage (V)	90	115	180	230
Efficiency (%)	89.02	90.85	92.17	93.14
Input Voltage (V)	264	277	305	
Efficiency (%)	93.30	93.34	93.11	

**LOAD VS Efficiency**

Load (%)	10	20	30	40	50
115V (%)	74.16	84.61	87.29	88.34	89.87
230V (%)	71.15	81.60	85.97	88.40	90.29
Load (%)	60	70	80	90	100
115V (%)	90.51	90.34	90.44	90.71	90.82
230V (%)	91.09	91.83	92.76	93.02	93.28

