

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
(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
ELECTRICAL SPECIFICATIONS

Model No.	ALF60-12S	ALF60-15S	ALF60-24S	ALF60-48S	ALF60-54S
Max Output Wattage (W)	60W				
Input	Voltage				
	90-305 VAC or 120-430 VDC				
	Frequency (Hz)				
	47-63 Hz				
	Current (Full load)				
	0.64 A max. (115 VAC) / 0.32 A max. (230 VAC) / 0.3 A max. (277 VAC)				
Output	Inrush Current (<2ms)				
	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				
	Voltage (V.DC.)				
	12V				
	15V				
	24V				
	48V				
	54V				
	Constant Current Range (V.DC.)				
	6 ~ 12V				
7.5 ~ 15V					
12 ~ 24V					
24 ~ 48V					
27 ~ 54V					
Voltage Accuracy					
±2%					
Current (Convection) (mA) max					
5000					
4000					
2500					
1250					
1111					
Current ADJ Range (mA)					
2500 ~ 5000					
2000 ~ 4000					
1250 ~ 2500					
625 ~ 1250					
556 ~ 1111					
Voltage ADJ Range (V.DC.) (for IP65 Design)					
10.8 ~ 13.5V					
13.5 ~ 17V					
22 ~ 27V					
43 ~ 53V					
49 ~ 58V					
Line Regulation					
±1%					
Load Regulation					
±1%					
Minimum Load					
Maximum Capacitive Load					
Ripple & Noise (max.)					
150mVp-p					
150mVp-p					
150mVp-p					
300mVp-p					
300mVp-p					
Efficiency (typ.)					
87%					
87%					
88%					
89%					
89%					
Hold-up Time					
25 ms min.					
Switching Frequency					
Protection	Over Power Protection				
	Auto recovery				
	Over Voltage Protection				
	Auto recovery				
Overt Temperature Protection					
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.					

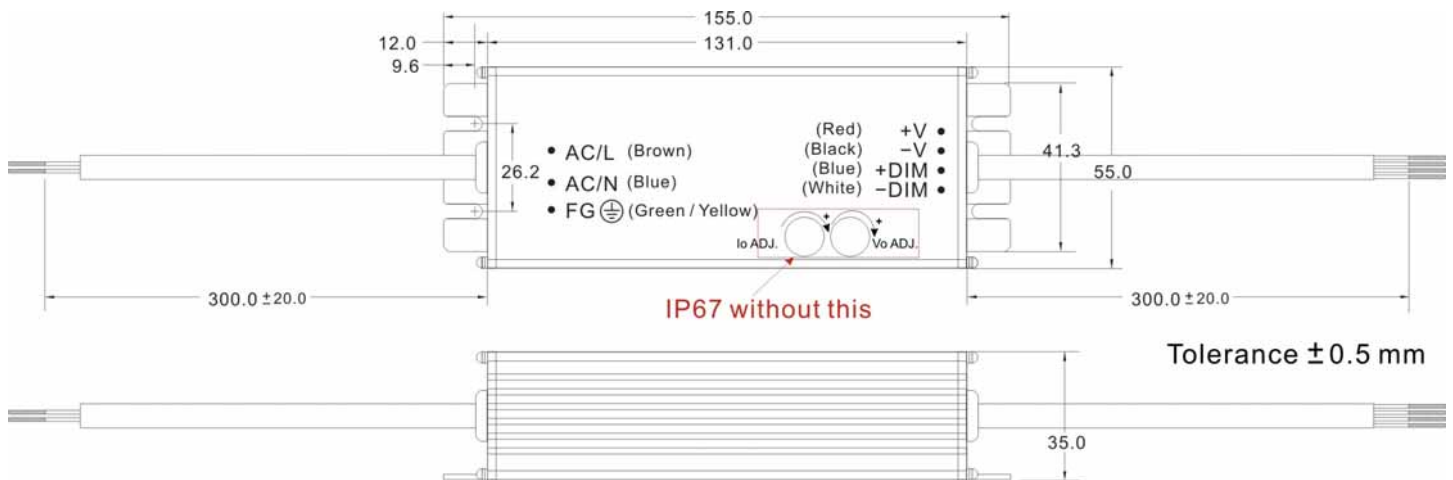
1. All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

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

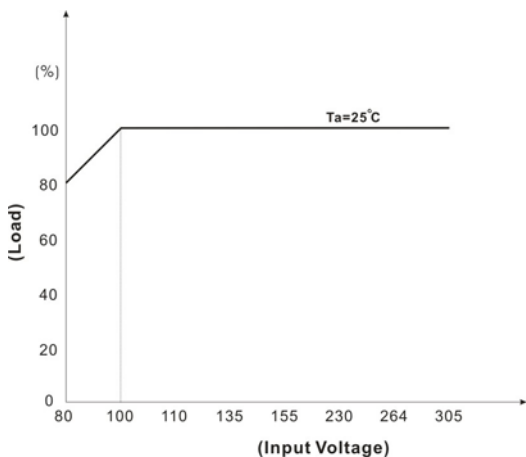
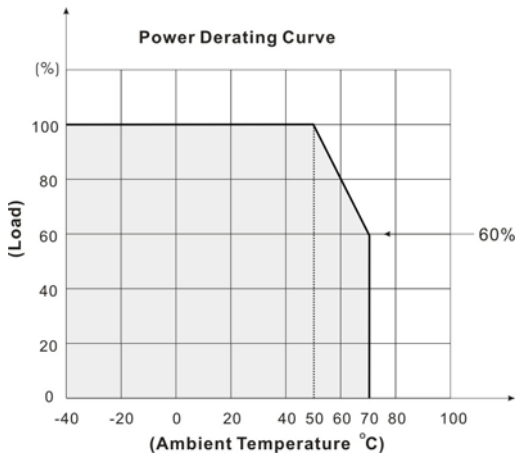
Model No.	ALF60-12S	ALF60-15S	ALF60-24S	ALF60-48S	ALF60-54S
Physical	Dimension (L x W x H) 6.1 x 2.17 x 1.38 Inches (155.0 x 55.0 x 35.0 mm) Tolerance ± 0.5 mm				
	Weight g				
	Cooling Method Free air convection				
Safety	Agency Approvals EN61347-1:2008、EN61347-2-13:2006 (Pending)				
EMC	EMI (Conducted & Radiated Emission) EN 55015、Class B (Pending)				
	EMS (Noise Immunity) EN 61547 (Pending)				
	Surge 2KV L-L, 4KV L-E				

1. All specifications valid at nominal 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.

MECHANICAL DIMENSION (Top View)



DERATING

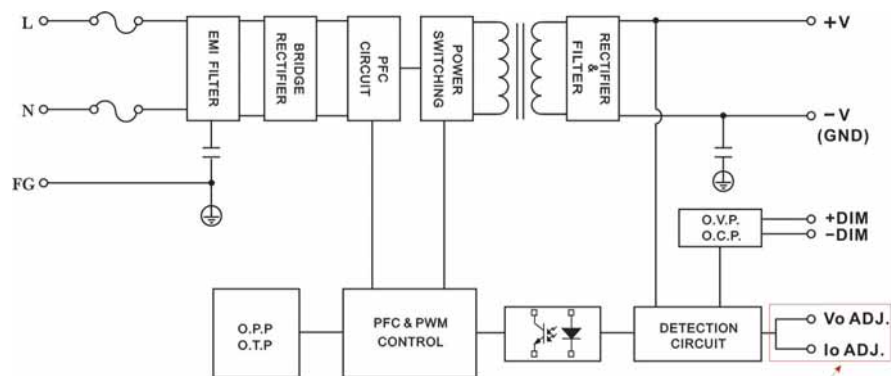


ASSEMBLY INSTRUCTIONS

*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)

BLOCK DIAGRAM



IP67 without this

EFFICIENCY VERSUS LOAD

ALF60-12S

VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)					
Input Voltage (V)	277	305			
Efficiency (%)					

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)						
230V (%)						
Load (%)	60	70	80	90	100	
115V (%)						
230V (%)						

ALF60-15S

VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)					
Input Voltage (V)	277	305			
Efficiency (%)					

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)						
230V (%)						
Load (%)	60	70	80	90	100	
115V (%)						
230V (%)						

EFFICIENCY VERSUS LOAD

ALF60-24S

VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)					
Input Voltage (V)	277	305			
Efficiency (%)					

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)						
230V (%)						
Load (%)	60	70	80	90	100	
115V (%)						
230V (%)						

ALF60-48S

VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)					
Input Voltage (V)	277	305			
Efficiency (%)					

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)						
230V (%)						
Load (%)	60	70	80	90	100	
115V (%)						
230V (%)						

EFFICIENCY VERSUS LOAD

ALF60-54S

VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)					
Input Voltage (V)	277	305			
Efficiency (%)					

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)						
230V (%)						
Load (%)	60	70	80	90	100	
115V (%)						
230V (%)						