

KEY FEATURES

- IP65/67 Design for Indoor or LED Outdoor Installations
- Universal Input: 90-305 VAC or 120-430 VDC
- 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 Potentiometer
- LED Power Application
- 3-Year Product Warranty



IP65/67   **US**
E347942 LEVEL3

ELECTRICAL SPECIFICATIONS

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

Model No.	ALF100-12S	ALF100-24S	ALF100-36S	ALF100-48S	ALF100-54S
Max Output Wattage (W)	100W				
Input	Voltage				
	90-305 VAC or 120-430 VDC				
	Frequency (Hz)				
	47-63 Hz				
	Current (Full load)				
	1.5 A max. (115 VAC) / 0.7 A max. (230 VAC) / 0.6 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>0.9 (230 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					
8333					
4166					
2777					
2083					
1852					
Current ADJ Range (mA)					
833 ~ 8333					
416 ~ 4166					
277 ~ 2777					
208 ~ 2083					
185 ~ 1852					
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					
8,000 uF					
4,000 uF					
3,000 uF					
Ripple & Noise (max.)					
100mVp-p					
100mVp-p					
100mVp-p					
200mVp-p					
200mVp-p					
Efficiency (typ.)					
89%					
91.5%					
91.5%					
91.5%					
91.5%					
Hold-up Time					
25 ms min.					
Safety	Agency Approvals				
UL 8750 、 EN61347-1:2008 、 EN61347-2-13:2006					
EMC	EMI (Conducted & Radiated Emission)				
	EN 55015 、 Class B				
	EMS (Noise Immunity)				
EN 61547					
Surge					
IP65 Design :1KV L-N, 2KV L N-FG / IP67 Design :2KV L-N, 4KV L N-FG					

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.

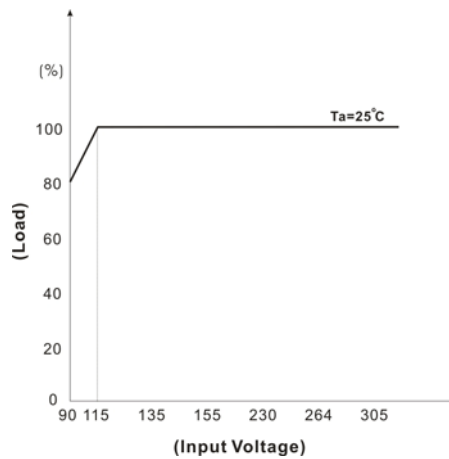
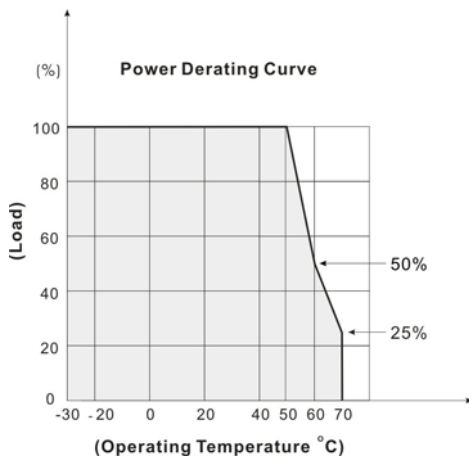
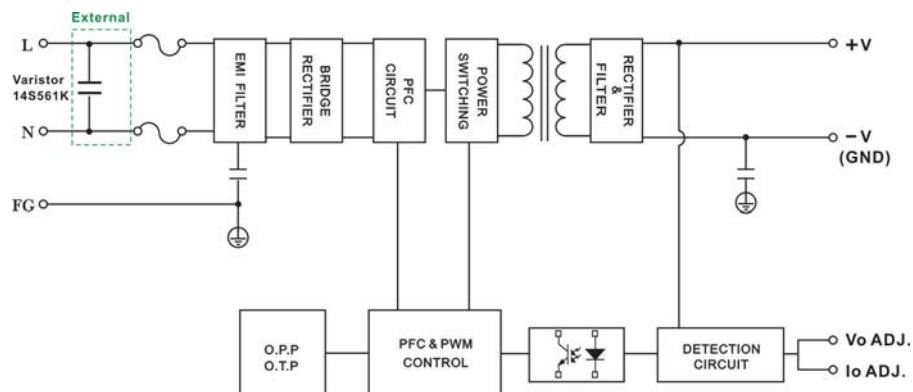
ELECTRICAL SPECIFICATIONS

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

Model No.	ALF100-12S	ALF100-24S	ALF100-36S	ALF100-48S	ALF100-54S	
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	-30°C...+70°C (with derating)				
	Storage Temperature	-40°C...+85°C				
	Temperature Coefficient	±0.02%/°C (0~50°C)				
	Humidity	95% RH				
	MTBF	>127,000 h @ 25°C (MIL-HDBK-217F)				
Physical	Vibration	10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes.				
	Dimension (L x W x H)	6.44 x 2.79 x 1.5 Inches (163.7 x 71.0 x 38.0 mm) Tolerance ±0.5 mm				
	Weight	635 g				
	Cooling Method	Free air convection				

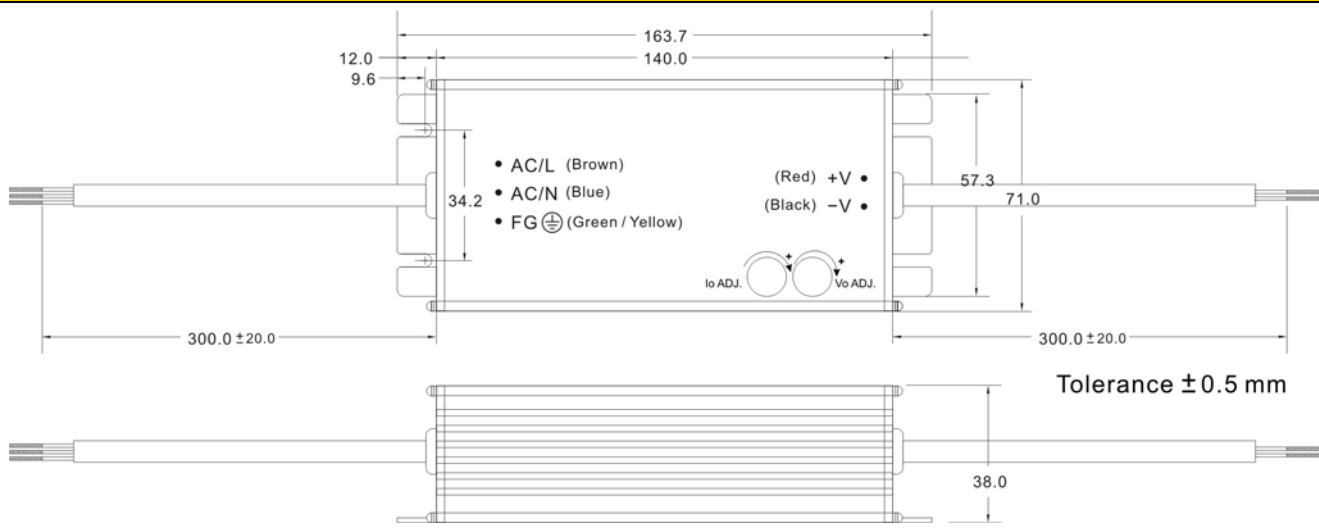
This series has IP65 and IP67, when you place order, please be noted as ordering Part No.

Model No.	ALF100-12S	ALF100-24S	ALF100-36S	ALF100-48S	ALF100-54S	
Ordering Part No	IP65	ALF100-12S-IP65	ALF100-24S-IP65	ALF100-36S-IP65	ALF100-48S-IP65	ALF100-54S-IP65
	IP67	ALF100-12S-IP67	ALF100-24S-IP67	ALF100-36S-IP67	ALF100-48S-IP67	ALF100-54S-IP67

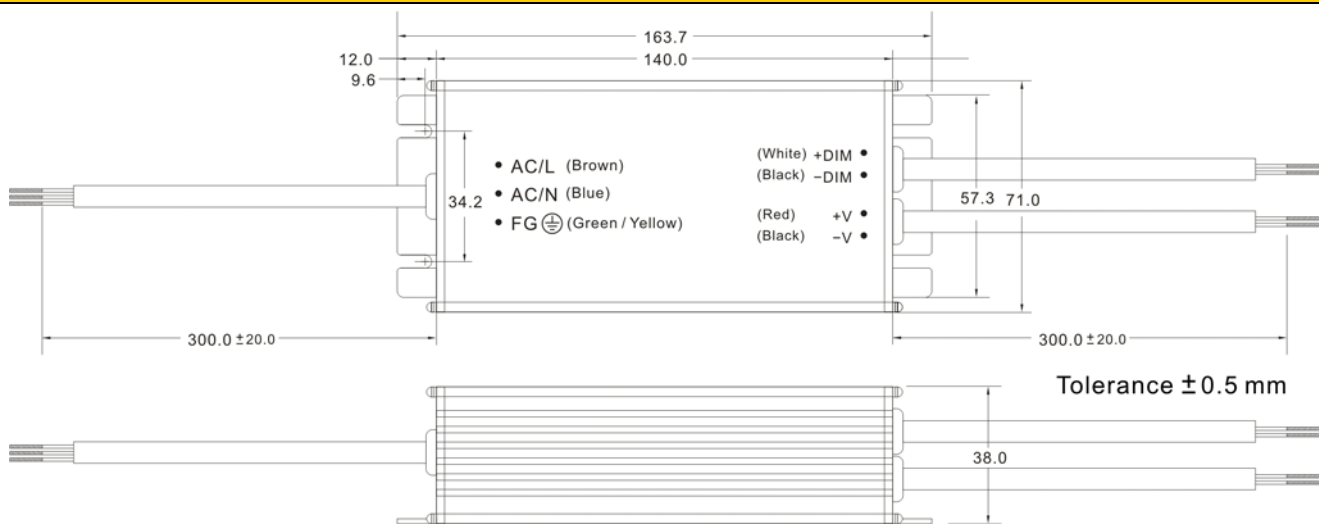
DERATING

BLOCK DIAGRAM


MECHANICAL DIMENSION (Top View)

IP65 Design



IP67 Design



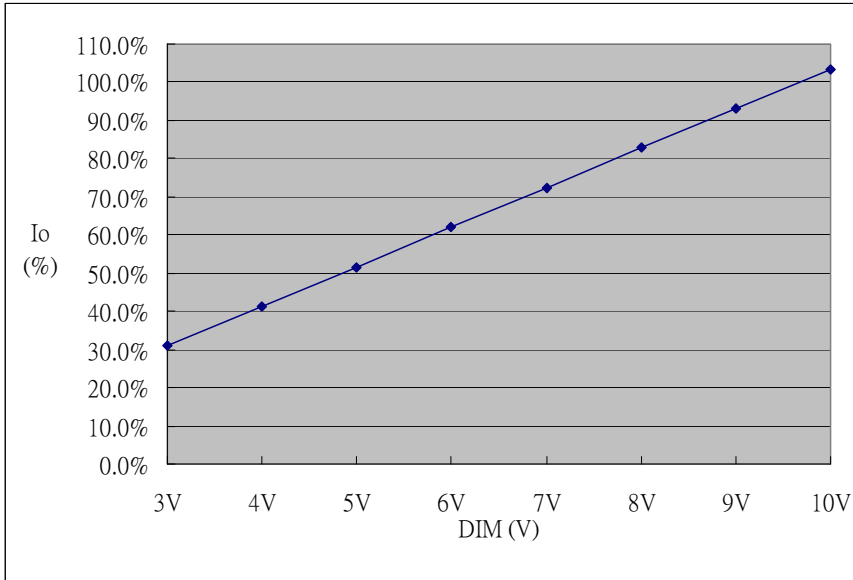
ASSEMBLY INSTRUCTIONS

*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)

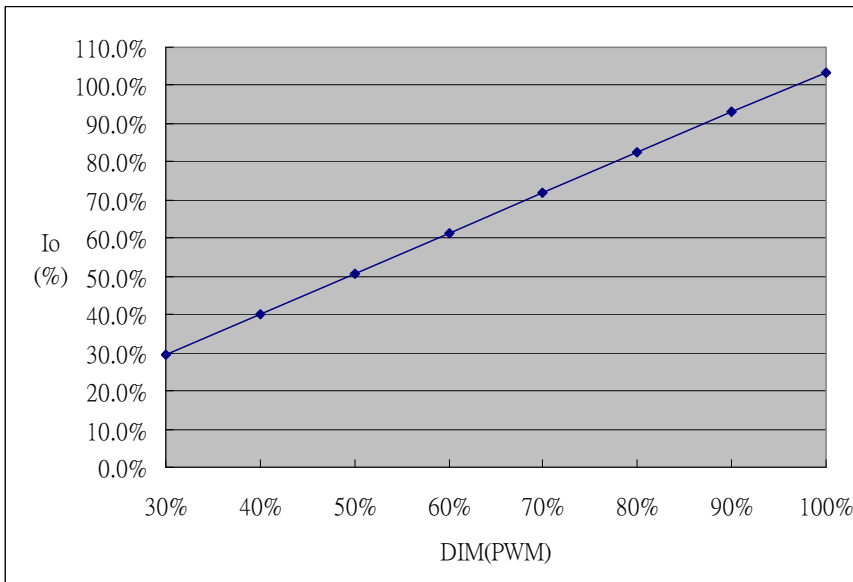
DIMMING OPERATION

Output constant current level can be adjusted through output cable by connecting a 3~10Vdc or 10V PWM signal between DIM+ and DIM-

I. 3~10V dimming function for output current adjustment (typ.)



II. 10V PWM signal for output current adjustment (typ.) : Frequency range:100Hz~3KHz

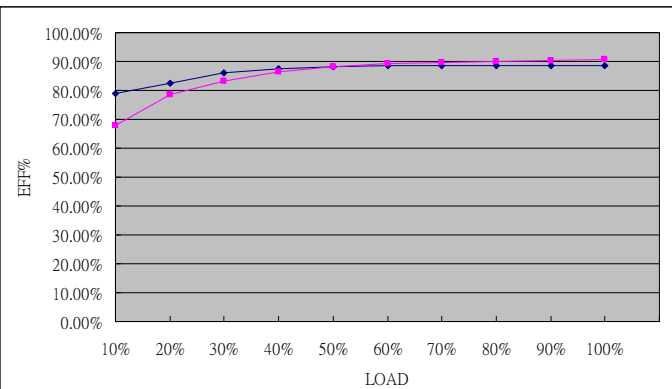
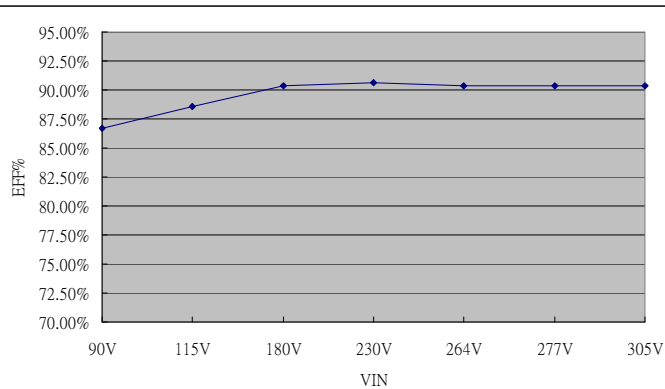


EFFICIENCY VERSUS LOAD
ALF100-12S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	86.70	88.61	90.36	90.61	90.36
Input Voltage (V)	277	305			
Efficiency (%)	90.36	90.36			

LOAD VS Efficiency

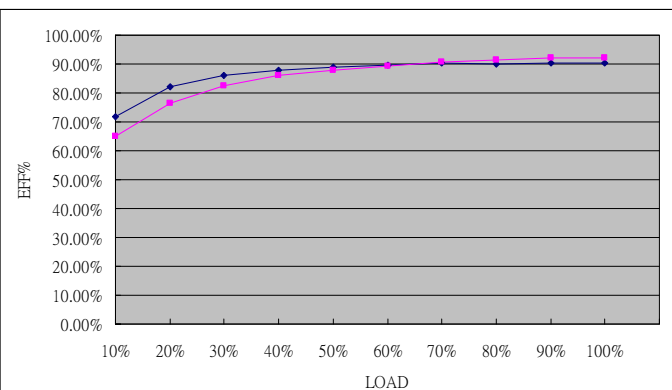
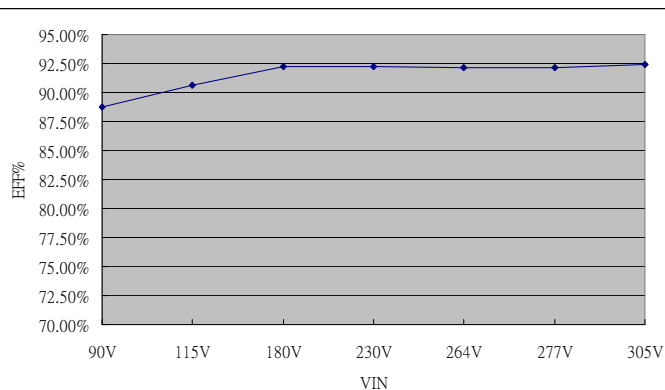
Load (%)	0	10	20	30	40	50
115V (%)	0	78.83	82.61	86.10	87.62	88.25
230V (%)	0	67.92	78.75	83.11	86.31	88.09
Load (%)	60	70	80	90	100	
115V (%)	88.58	88.54	88.62	88.57	88.51	
230V (%)	89.24	89.71	89.91	90.25	90.61	


ALF100-24S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	88.71	90.65	92.27	92.27	92.14
Input Voltage (V)	277	305			
Efficiency (%)	92.14	92.40			

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)	0	71.91	82.20	86.04	87.80	88.81
230V (%)	0	65.13	76.60	82.51	85.92	87.91
Load (%)	60	70	80	90	100	
115V (%)	89.54	90.26	90.12	90.34	90.43	
230V (%)	89.28	90.61	91.47	92.20	92.31	

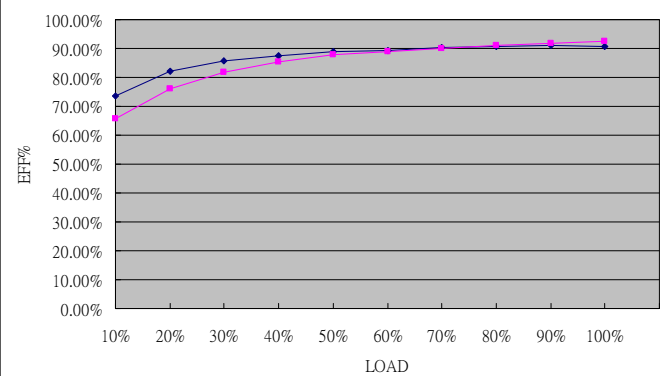
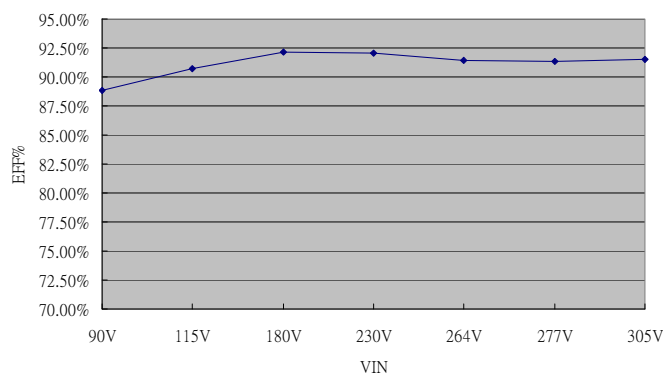


EFFICIENCY VERSUS LOAD
ALF100-36S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	88.82	90.67	92.10	92.01	91.42
Input Voltage (V)	277	305			
Efficiency (%)	91.36	91.53			

LOAD VS Efficiency

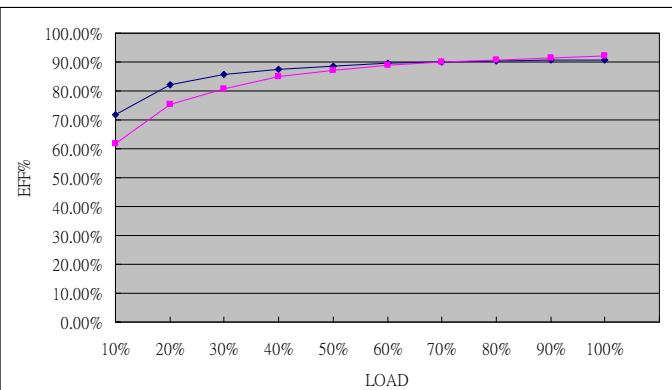
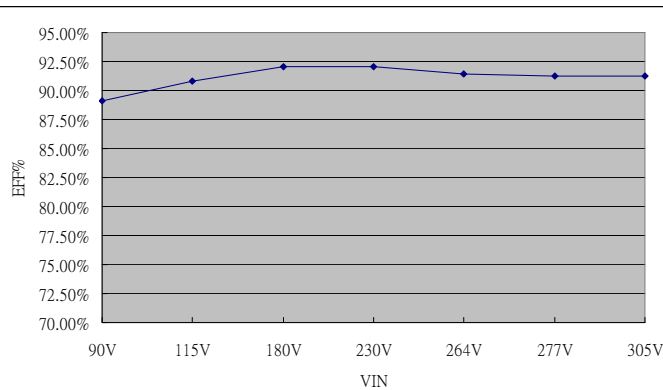
Load (%)	0	10	20	30	40	50
115V (%)	0	73.59	82.19	85.65	87.60	89.01
230V (%)	0	65.58	76.12	81.72	85.42	87.77
Load (%)	60	70	80	90	100	
115V (%)	89.29	90.38	90.80	90.97	90.89	
230V (%)	88.78	89.89	91.24	91.68	92.43	


ALF100-48S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	89.15	90.83	92.09	92.01	91.42
Input Voltage (V)	277	305			
Efficiency (%)	91.25	91.25			

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)	0	71.89	81.99	85.76	87.48	88.59
230V (%)	0	61.76	75.28	80.88	84.90	87.04
Load (%)	60	70	80	90	100	
115V (%)	89.48	90.16	90.40	90.73	90.85	
230V (%)	88.77	89.95	90.66	91.27	92.01	

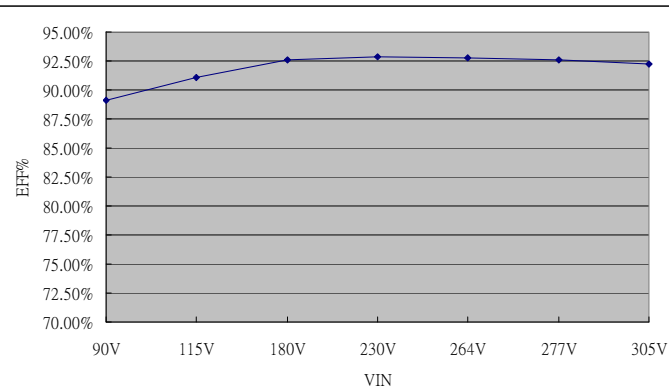


EFFICIENCY VERSUS LOAD

ALF100-54S

VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	89.11	91.04	92.56	92.82	92.73
Input Voltage (V)	277	305			
Efficiency (%)	92.58	92.22			



LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)	0	67.86	77.81	84.01	86.71	88.96
230V (%)	0	58.78	73.10	81.29	84.94	87.15
Load (%)	60	70	80	90	100	
115V (%)	89.80	90.32	90.75	91.12	91.04	
230V (%)	89.06	90.30	91.60	92.93	92.82	

