

ARCH AQF60C LED Power Datasheet

<http://www.manuallib.com/arch/aqf60c-led-power-datasheet.html>

KEY FEATURES

- Fully Isolated Plastic Case with IP67 Level
- Universal Input: 90-305 VAC or 120-430 VDC
- Three in one dimming function
- Built-in Active PFC Function
- Free Air Convection
- High Reliability
- Isolation Class II
- LED Power Application
- 3-Years Product Warranty

ManualLib.com collects and classifies the global product instruction manuals to help users access anytime and anywhere, helping users make better use of products.

<http://www.manuallib.com>

KEY FEATURES

- Open Frame LED Power Supply
- Universal Input: 90-305 VAC
- <0.5W No Load Input Power
- Built-in Active PFC Function
- Free Air Convection
- High Reliability
- With Constant Current & Constant Voltage
- LED Power Application
- 3-Years Product Warranty

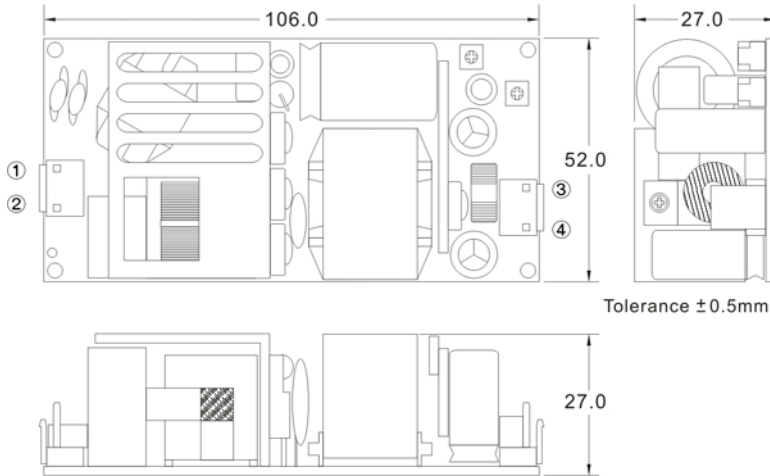

ELECTRICAL SPECIFICATIONS

Model No.	AQF60C-24S	AQF60C-36S	AQF60C-48S	AQF60C-54S
Max Output Wattage (W)	60W			
Input	Voltage			
	90-305 VAC or 127-430 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)			
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			
	2500	1666	1250	1111
	Current ADJ Range (mA)			
	1500 ~ 2500	999 ~ 1666	750 ~ 1250	666 ~ 1111
	Voltage ADJ Range (V.DC.) (10-100% Load)			
	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.)				
88%	89%	89%	89%	
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.				
Physical	Dimension (L x W x H)			
	4.17 x 2.04 x 1.06 Inches (106.0 x 52.0 x 27.0 mm) Tolerance ±0.5 mm			
	Weight			
200 g ±15%				
Cooling Method				
Free air convection				
Safety	Agency Approvals			
UL8750、IEC / EN 61347-2-13、IEC / EN 61347-1				
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 normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

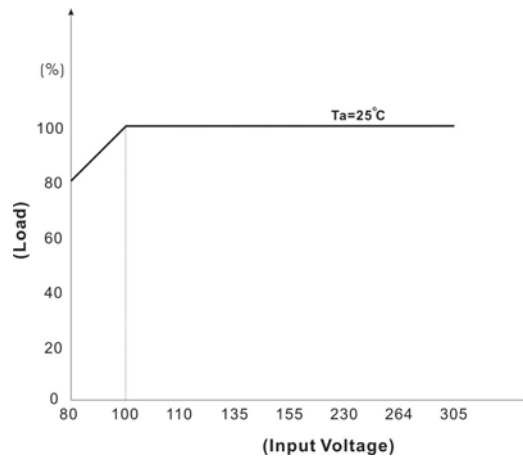
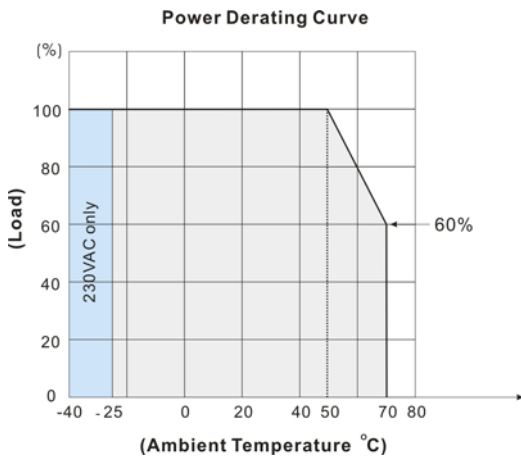
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

MECHANICAL DIMENSION (Top View)

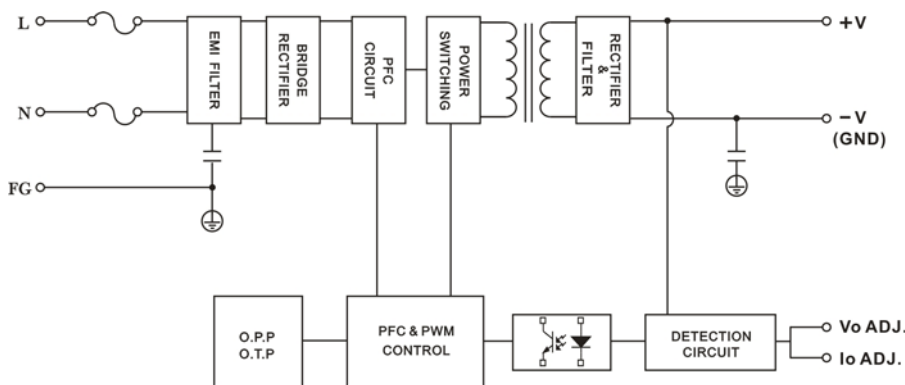


PIN#	SINGLE
1	AC IN (L)
2	AC IN (N)
3	-DC OUT
4	+DC OUT

DERATING

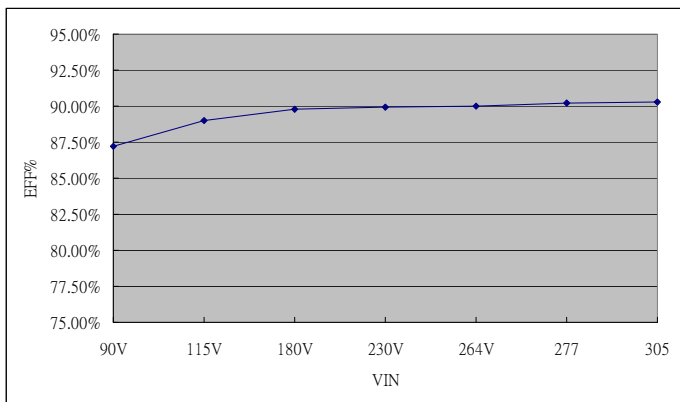


BLOCK DIAGRAM

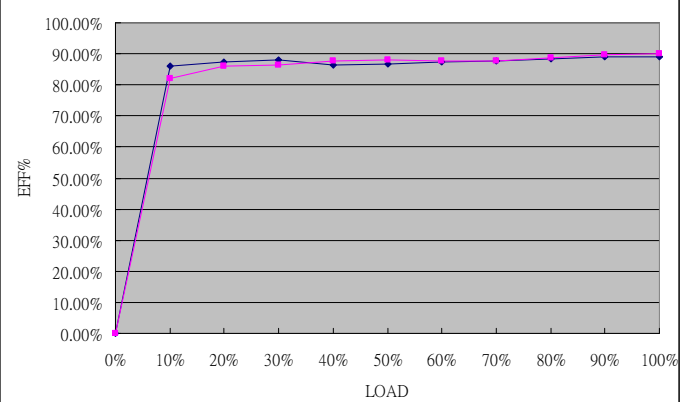


EFFICIENCY VERSUS LOAD
AQF60C-24S
VIN VS Efficiency

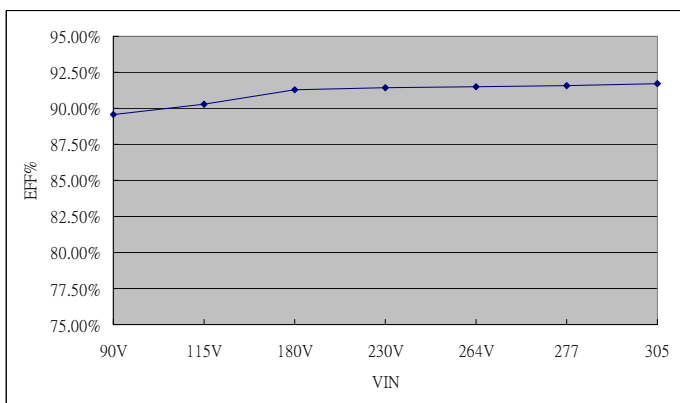
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.20	89.00	89.80	89.90	90.00
Input Voltage (V)	277	305			
Efficiency (%)	90.20	90.30			


LOAD VS Efficiency

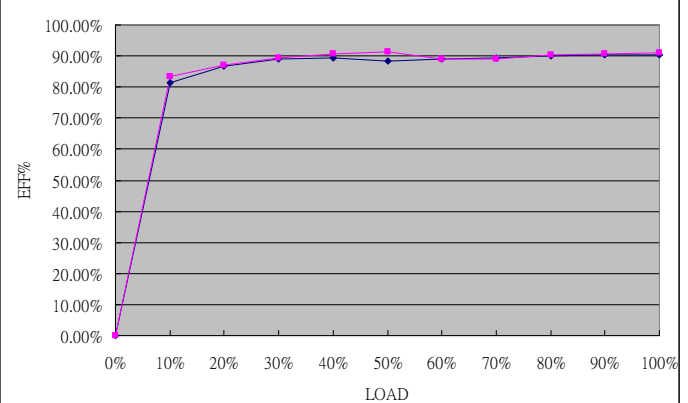
Load (%)	0	10	20	30	40	50
115V (%)	0.00	86.00	87.50	88.00	86.50	86.69
230V (%)	0.00	82.13	86.20	86.50	87.80	88.00
Load (%)	60	70	80	90	100	
115V (%)	87.50	87.70	88.30	89.00	89.07	
230V (%)	87.68	87.74	88.78	89.80	89.93	


AQF60C-36S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	89.60	90.30	91.30	91.43	91.50
Input Voltage (V)	277	305			
Efficiency (%)	91.60	91.70			

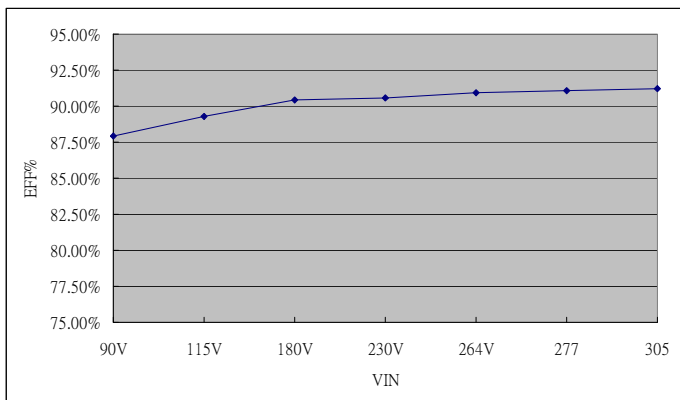

LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)	0.00	81.36	86.80	88.93	89.34	88.43
230V (%)	0.00	83.50	87.00	89.43	90.70	91.32
Load (%)	60	70	80	90	100	
115V (%)	89.00	89.42	90.00	90.30	90.50	
230V (%)	89.00	89.16	90.50	90.80	91.10	

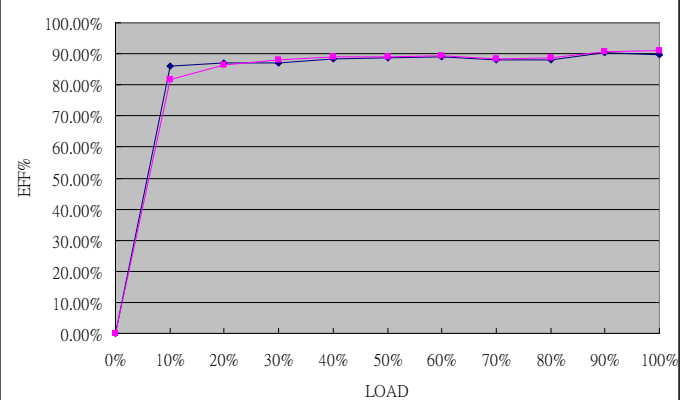


EFFICIENCY VERSUS LOAD
AQF60C-48S
VIN VS Efficiency

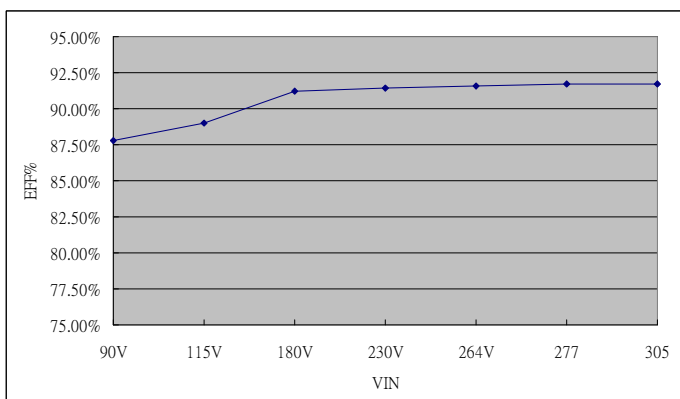
Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.90	89.30	90.45	90.60	90.90
Input Voltage (V)	277	305			
Efficiency (%)	91.10	91.22			


LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)	0.00	86.00	87.10	87.00	88.50	88.80
230V (%)	0.00	81.60	86.40	88.00	89.00	89.15
Load (%)	60	70	80	90	100	
115V (%)	89.00	88.00	88.15	90.30	89.55	
230V (%)	89.30	88.50	88.71	90.80	90.92	


AQF60C-54S
VIN VS Efficiency

Input Voltage (V)	90	115	180	230	264
Efficiency (%)	87.78	89.00	91.25	91.45	91.60
Input Voltage (V)	277	305			
Efficiency (%)	91.70	91.75			


LOAD VS Efficiency

Load (%)	0	10	20	30	40	50
115V (%)	0.00	86.00	87.10	87.00	88.50	88.80
230V (%)	0.00	81.60	86.40	88.00	89.00	89.15
Load (%)	60	70	80	90	100	
115V (%)	87.80	89.00	89.25	89.75	90.00	
230V (%)	89.30	89.70	90.20	90.75	91.39	

