

# ARCH APF100 LED Power Datasheet

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## 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

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**IP67** **CE** **UL** **US**  
E347942 LEVEL3

**ELECTRICAL SPECIFICATIONS**

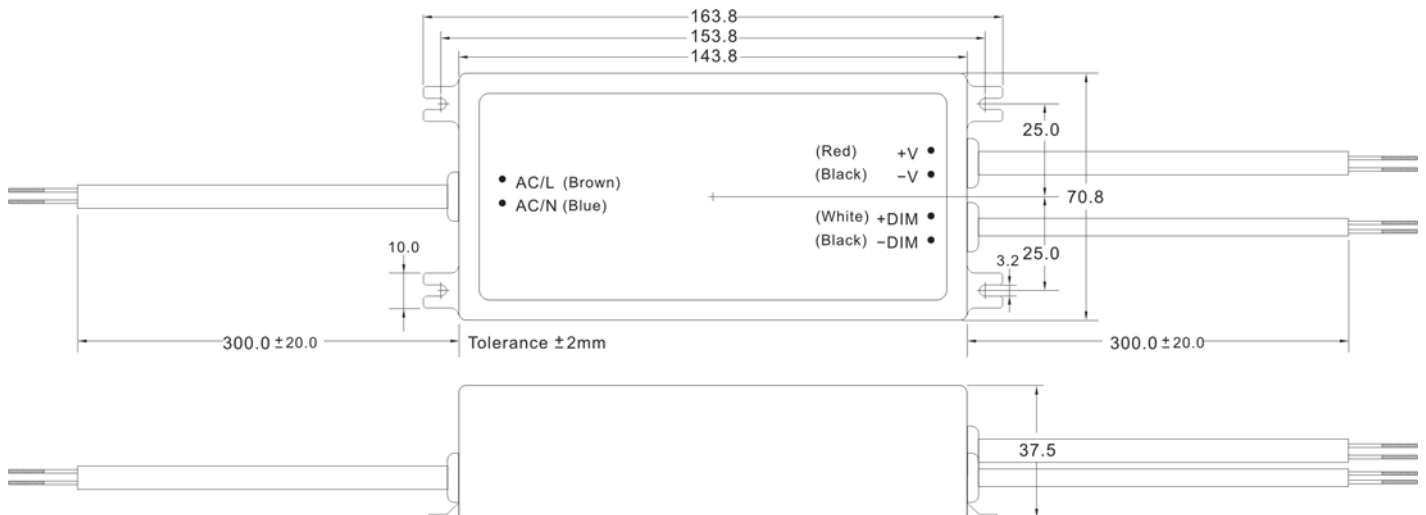
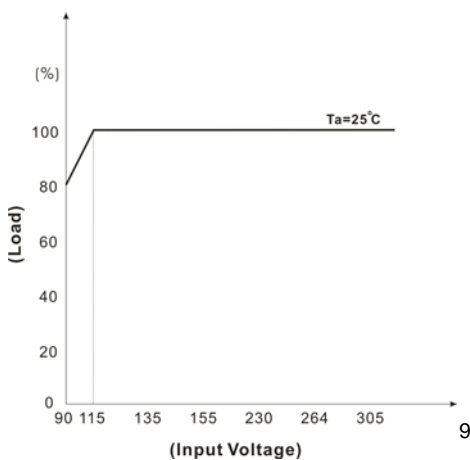
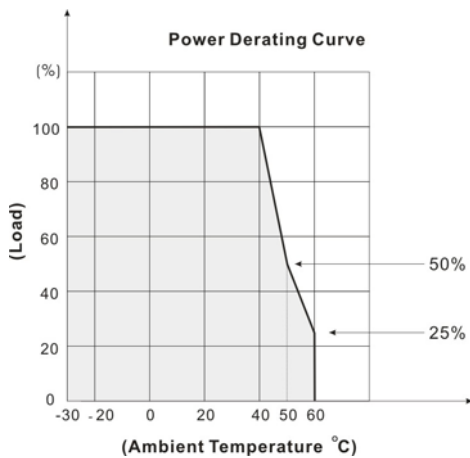
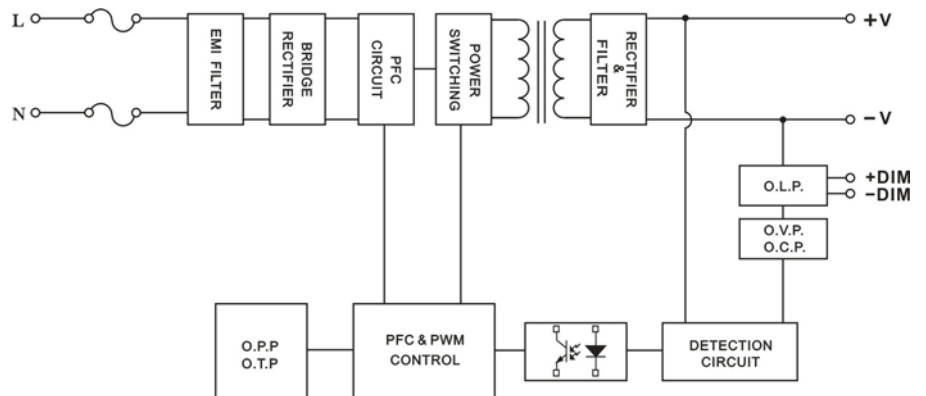
Model No.	APF100-12S	APF100-24S	APF100-36S	APF100-48S	APF100-54S	
Max Output Wattage (W)	100W					
Input	Voltage	90-305 VAC or 120-430 VDC				
	Frequency (Hz)	47-63 Hz				
	Current (Full load)	1.5 A max. (115 VAC) / 0.7 A max. (230 VAC) / 0.6 A max. (277 VAC)				
	Inrush Current (<2ms)	40 A max. (115 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				
Output	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
	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.				
	Switching Frequency	100~133KHz				
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...+60°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.		APF100-12S	APF100-24S	APF100-36S	APF100-48S	APF100-54S
Physical	Dimension (L x W x H)	5.67 x 2.76 x 1.48 Inches (144.0 x 70.0 x 37.5 mm) Tolerance $\pm 2$ mm				
	Weight	660 g $\pm 15\%$				
	Cooling Method	Free air convection				
Safety	Agency Approvals	EN61347-1:2008 、 EN61347-2-13:2006				
EMC	EMI (Conducted & Radiated Emission)	EN 55015				
	EMS (Noise Immunity)	EN 61547				
	Surge	2KV L-N				

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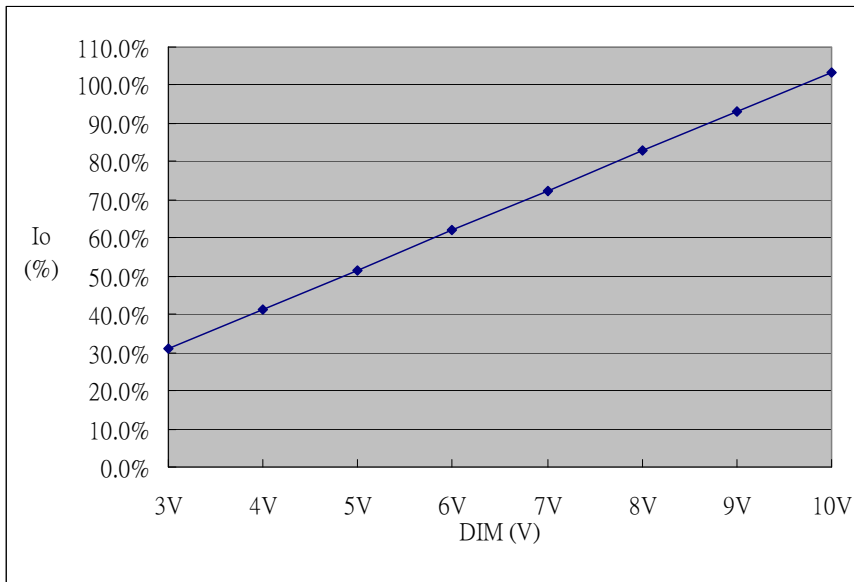
**MECHANICAL DIMENSION ( Top View )**

**DERATING**

**BLOCK DIAGRAM**


**DIMMING OPERATION**

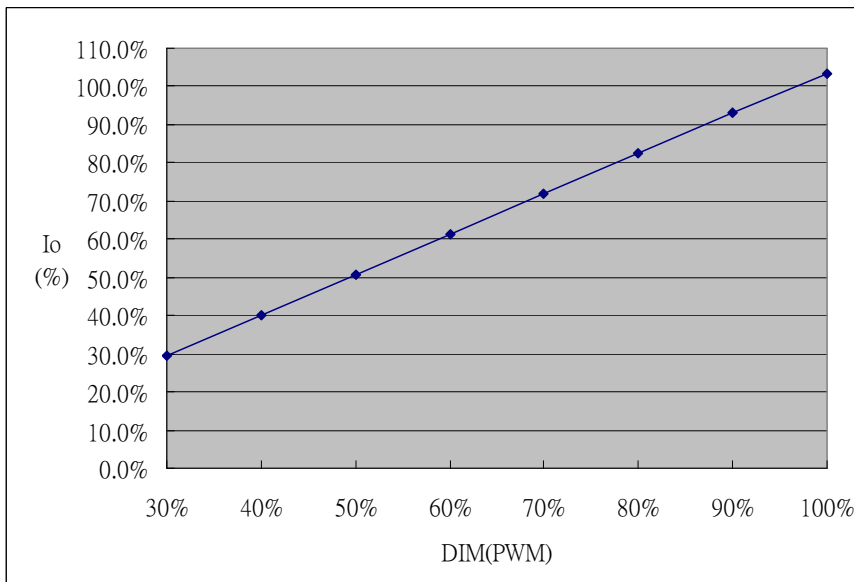
Built-in 3 in 1 dimming function, IP67 rated.

Output constant current level can be adjusted through output cable by connecting a 100K Ohm VR or 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



III. It can control 10~100% output Current but it must add 100K Ohm VR in parallel