

# ARCH APF150 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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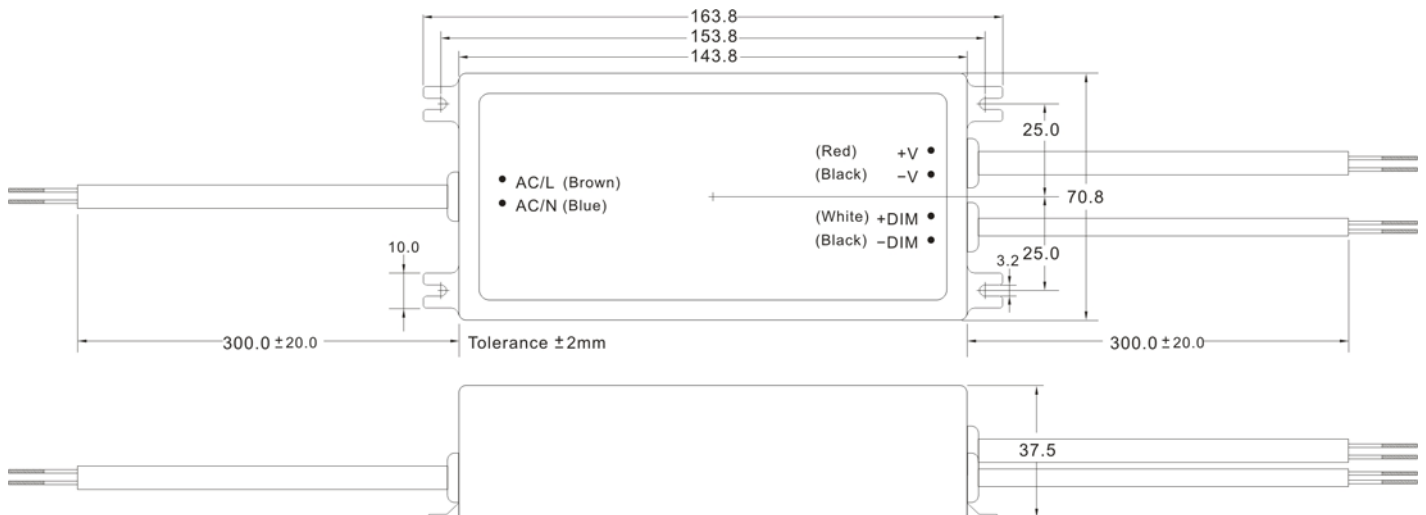
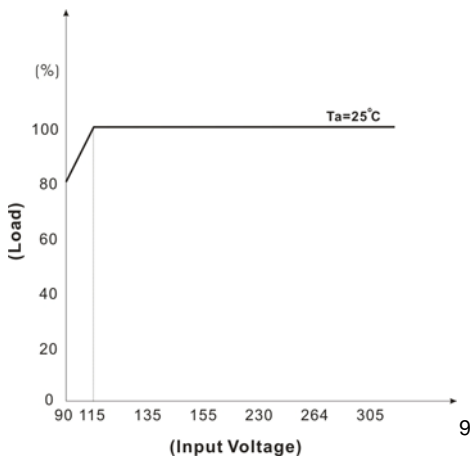
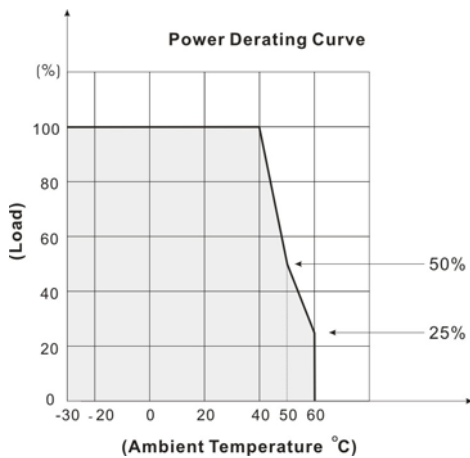
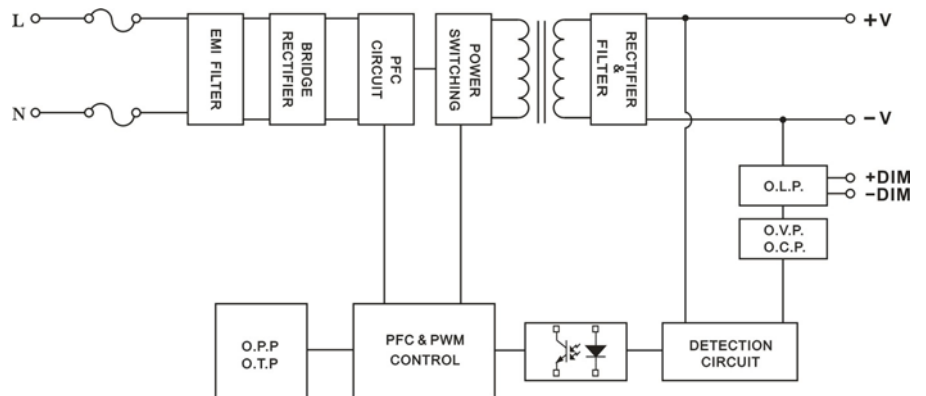
**IP67** **CE** **UL** **US**  
E347942  
LEVEL3

## ELECTRICAL SPECIFICATIONS

Model No.	APF150-12S	APF150-24S	APF150-36S	APF150-48S	APF150-54S	
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)				
	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				
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	12500	6250	4166	3125	2777
	Current ADJ Range (mA)	1250 ~ 12500	625 ~ 6250	416 ~ 4166	312 ~ 3125	377 ~ 2777
	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	100~133KHz				
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	>75,000 h @ 25°C (MIL-HDBK-217F)				
Vibration	10~500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes.					

Model No.		APF150-12S	APF150-24S	APF150-36S	APF150-48S	APF150-54S
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				

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.

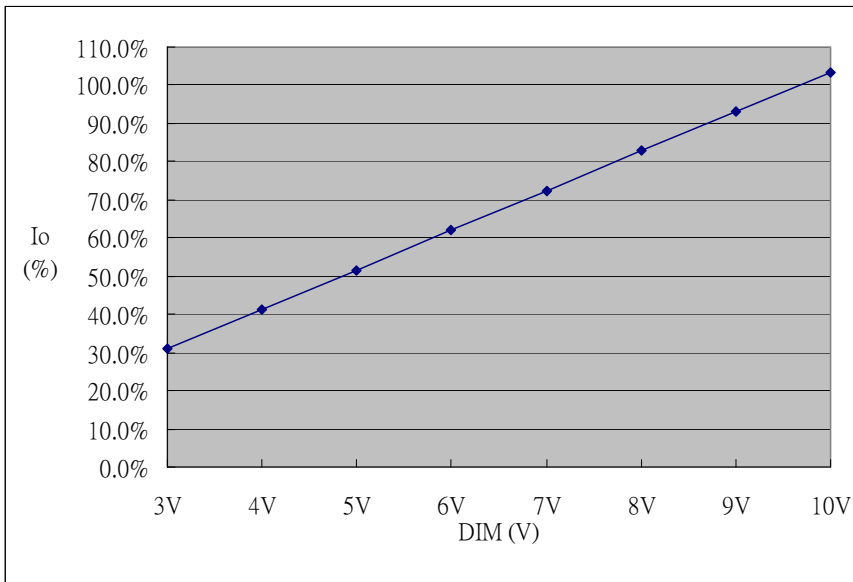
**MECHANICAL DIMENSION ( Top View )**

**DERATING**

**BLOCK DIAGRAM**


**DIMMING OPERATION**

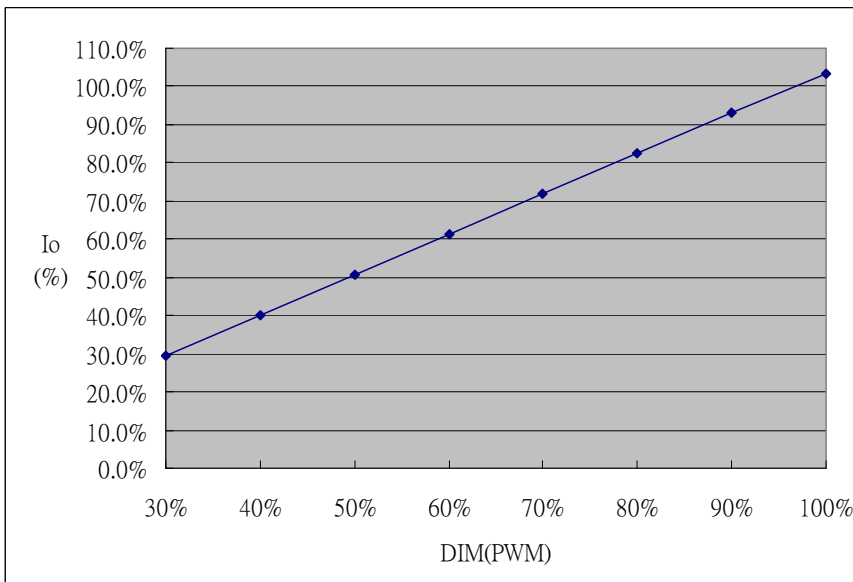
Built-in 3 in 1 dimming function, IP67 rated.

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