

# PCD-16-A Series

## 16W Single Output AC Dimmable LED Power Supply



### Features

- AC Phase-cut dimming
- Suitable for leading edge and trailing edge TRIAC dimmers
- IP30 design
- 115VAC or 230VAC models available
- Built-in active PFC function
- Constant current design
- Protections: Short circuit/Over temperature
- Cooling by free air convection
- Passes LPS
- Suitable for LED lighting and moving sign applications



Case: 8015FW  
84 x 57 x 29.5 mm

### Specification

INPUT	<b>Voltage</b>	90~135VAC			
	<b>Frequency</b>	47 ----- 63 Hz			
	<b>Current</b>	0.4A@115VAC 0.2A@230VAC 0.15A@277VAC			
	<b>Inrush Current</b>	40A@230VAC, Cold start			
	<b>Power Factor</b>	PF>0.9@115~277VAC at full load (Please refer to "power factor characteristics")			
	<b>Leakage Current</b>	0.5mA@240VAC input			
OUTPUT	<b>MODEL No.</b>	<b>PCD-16-350A</b>	<b>PCD-16-700A</b>	<b>PCD-16-1050A</b>	<b>PCD-16-1400A</b>
	<b>Rated Current</b>	350mA	700mA	1050mA	1400mA
	<b>Operating Vol. Range</b>	24~48V	16~24V	12~16V	8~12V
	<b>Current Range</b>	0~350mA	0~700mA	0~1050mA	0~1400mA
	<b>Current Accuracy</b>	±5.0%			
	<b>Power</b>	16.8W			
	<b>Ripple &amp; Noise</b>	4.6Vp-p	2.7Vp-p	2.2Vp-p	2Vp-p
	<b>No Load Output Vol</b>	63V	35V	25V	16V
	<b>Efficiency (TYP.)</b>	82%	81%	80.5%	80%
PROTECTION	<b>Short Circuit</b>	Hiccup mode, recovers automatically after fault condition is removed			
	<b>Over Temperature</b>	Shut down o/p voltage, re-power on to recover			
ELEC. CHAR.	<b>Setup Time</b>	2Sec@115VAC; 1Sec@230VAC at full load			
	<b>Temperature</b>	Operating: -30 ~ +60°C ; Storage: -40~ +80°C			
ENVIRONMENT	<b>Humidity</b>	Operating: 20% ~ 95% RH; Storage: 10% ~ 95% RH (non condensing)			
	<b>Temp. Coefficient</b>	±0.03%/°C (0~50°C)			
	<b>Vibration</b>	10 ~ 500Hz, 2G 12min./1cycle, period for 72min. each along X, Y, Z axes			
SAFETY	<b>Withstand voltage</b>	I/P-O/P:3.75KVAC			
	<b>Isolation resistance</b>	I/P-O/P:>100M Ohms / 500VDC / 25°C / 70% RH			
	<b>Safety standard</b>	UL8750, CSA C22.2 No. 250.0-08 (except for PCD-16-350), ENEC EN61347-1, EN61347-2-13 independent & EN62384, IP30 approved; design refer to UL60950-1, TUV EN60950-1, EN61347-1, EN61347-2-13			
EMC	<b>EMI</b>	Compliance to EN55015, EN61000-3-2 Class C; EN61000-3-3			
	<b>EMS</b>	Compliance to EN61000-4-2,3,4,5,6,8,11; EN55024, EN61547, Light industry level, criteria A			
OTHERS	<b>M.T.B.F.</b>	906.5K hrs min. MIL-HDBK-217F (25°C)			
	<b>Packing</b>	0.19Kg / 1pc ; 72pcs / 14.7Kgs 0.92CUFT / 1 CTN			

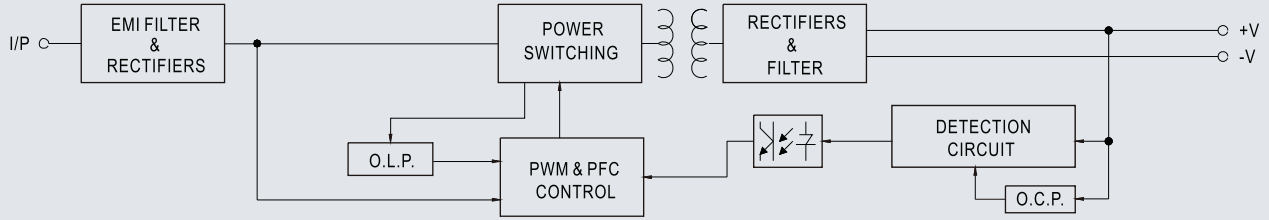
1. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
2. Direct connecting to LEDs is suggested, but is not suitable for using additional drivers

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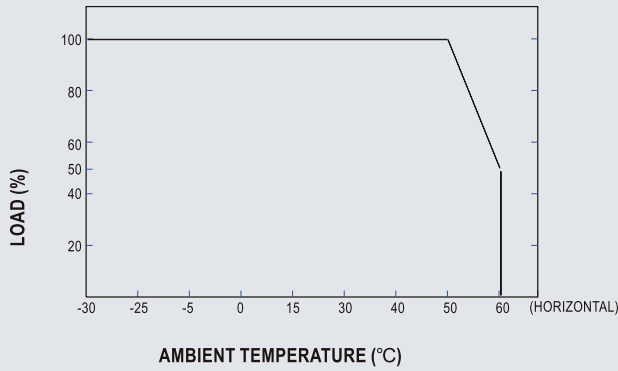
16W Single Output AC Dimmable LED Power Supply



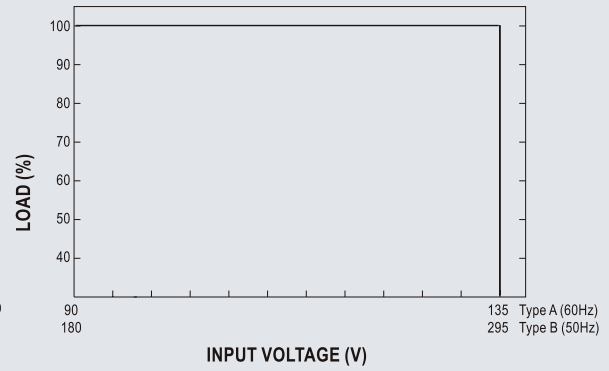
## Block Diagram



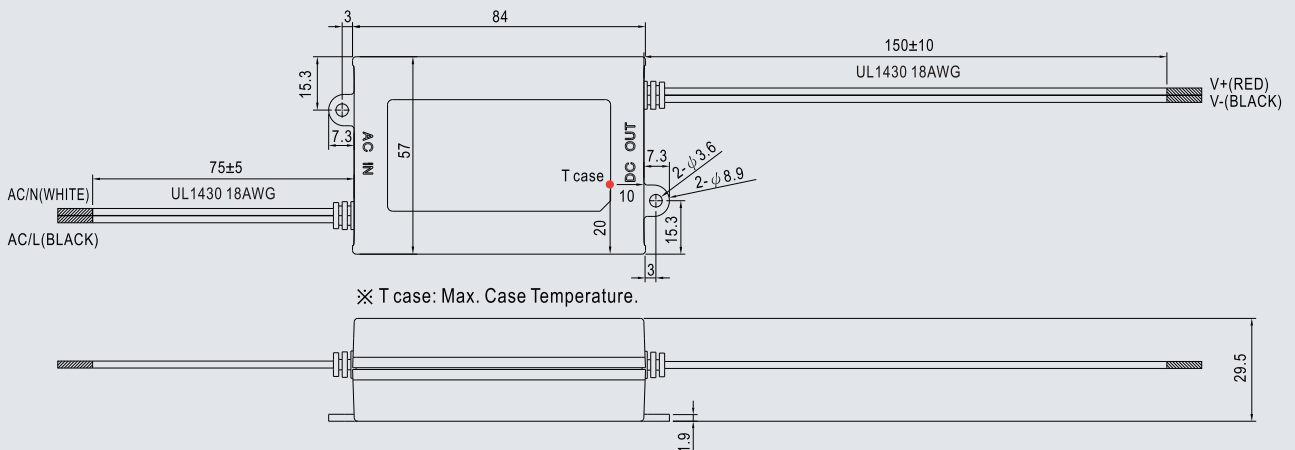
## De-Rating Curve



## Static Characteristics



## Dimensions

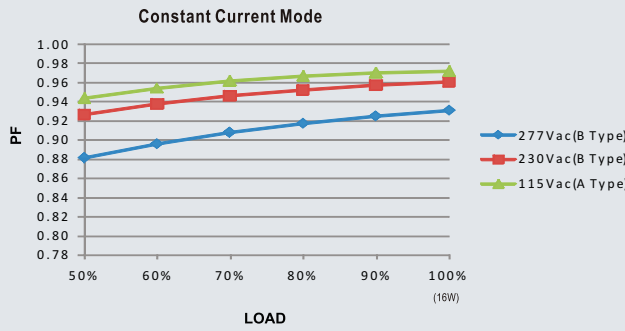


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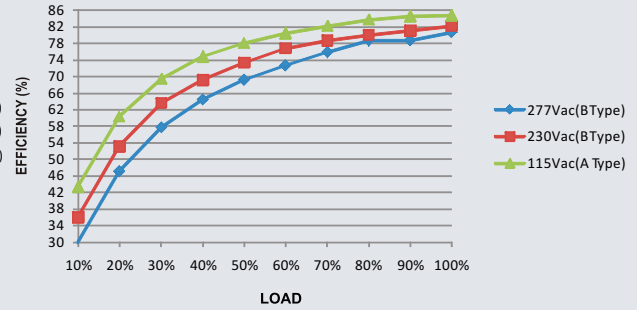
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## Power Factor Characteristics

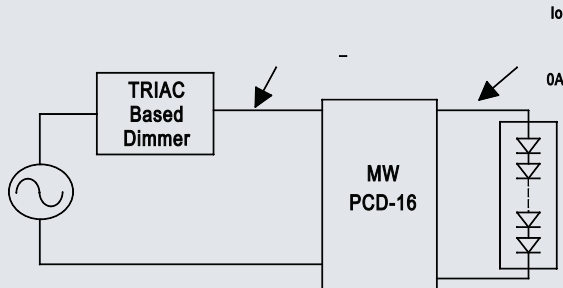


## Efficiency V.s Load (PCD-16-350)



## AC Dimming Operation

The following diagram depicts a typical installation utilizing the PCD-16:



Under direct driving, the power supply will work in "constant current mode (CC)" and output voltage of the power supply will be clamped by the sum of forward voltage ( $V_f$ ) of the LED strip