

PD Adapter Brick Series

LITEON

Single Output 140W Data Sheet

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Description

This specification defines the performance characteristics of 140 WATT, compliant with USB-PD specification revision 3.1 version 1.0 or later and support 5V, 9V, 15V, 20V, and 28V outputs. And it applicable for worldwide safety and electromagnetic compatibility requirements for the power supply.

Features

- * Ultra slim case dimension (L*W*H) : 142*70*32.2mm
- * Support worldwide AC input voltage
- * Meet CoC tier 2 and DoE VII efficiency requirement
- * Integrated 3rd generation semi-conductor GaN
- * Full Protections: OVP / OCP / OTP / SCP / OPP
- * No load power saving < 100mW
- * Compliant with USB-PD 3.1
- * Compliance with IEC60950 / IEC62368
- * Operating altitude : 0~3000 meters



Electrical Specification

Model Name	PA-1141-50				
Output					
Rated power	140W				
Rated voltage	5V	9V	15V	20V	28V
Rated current	3A	3A	3A	5A	5A
Ripple & Noise(max.) (note #1)	200mV			250mV	300mV
Line & load regulation	±5%				
Hold-up time(min.)	5ms at rated input voltage				
Turn-On time (max.)	3sec at rated input voltage				
Input Specification					
Rated voltage range	100V~240VAC				
Operated voltage range	90V~264VAC				

Current range (max.)	2.5A
Inrush current (max.)	150A at rated input voltage
Frequency range	50-60Hz
Leakage current (max.)	250uA at rated input voltage
Average Efficiency	<p>the average of 25%, 50%, 75% and 100% load at input 115Vac and 230Vac, after 15 minutes warm-up with full load at room temperature.</p> <ul style="list-style-type: none"> ● 5V : \geq 81.835% ● 9V : \geq 87.295% ● 15V : \geq 88.852% ● 20V : \geq 89.000% ● 28V : \geq 89.000% <p>Average Efficiency can meet DoE Level VII and CoC tier II specifications requirement.</p>
Protection Function	
Over voltage (max.)	120% of nominal output voltage, auto-recovery
Over current (max.)	6.3A, auto-recovery
Short circuit at O/P	No Fire, no damage, auto-recovery
Over temperature	Shutdown, no damage, auto-recovery
Others	
MTBF (min.) (note#2)	50K hours at 25C, 100Vac/240Vac, 100% load condition.
Environment	
Temperature	(operating) 0~40°C / (storage) -20~60°C
Humidity	(operating) 10~90% RH non-condensing / (storage) 0~95% RH
Altitude (max.)	3000 meters
Mechanical	
Dimension	142(L)*70(W)*32.2mm(H)
Surface temperature (max.)	85°C at 40°C ambient and max rated load for all output voltages
Weight (typ.)	g
Safety	
Standard	IEC/EN 60950-1, K60950-1, IEC/EN 62368-1, CNS14336-1
Withstand voltage	Primary to secondary : 3.3kVac, 5mA max, 60 sec.
Isolation resistance(min.)	Input-Output: 4Mohm @ 500VDC, 25°C, 70%RH
EMC	
EN55032	Conducted EMI: class B / Radiated EMI: class B
FCC	Conducted EMI: class B / Radiated EMI: class B
EN61000-3-2	Class A
EN61000-4-2	ESD: \pm 4KV contact discharge / \pm 8KV contact discharge

EN61000-4-3	Radiated RF immunity: 3V/m
EN61000-4-4	EFT: $\pm 1\text{KV}$ (AC port)
EN61000-4-5	Surge: $\pm 1\text{KV DM}$ / $\pm 2\text{KV CM}$
EN61000-4-6	Conducted RF immunity: 3V/m
EN61000-4-8	Magnetic field immunity: 1A/m
EN61000-4-11	Voltage dip immunity: Criteria B

Notes

#1: Ripple noise is measured by a 1.5m length, twisted wires with Output added 0.1uF MLCC and 10uF low ESR electrolytic aluminum capacitor.

Mechanical Specification

