

# PD Adapter Brick Series



## Single Output 140W Data Sheet

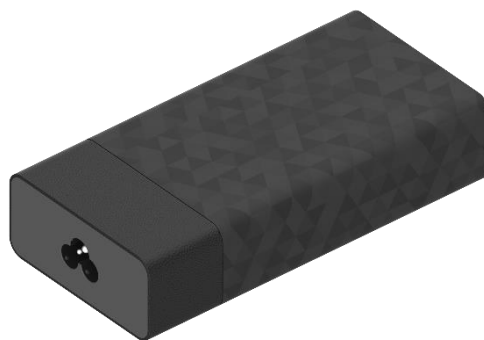
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### Description

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 VI efficiency requirement
- \* Integrated 3<sup>rd</sup> 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 : 0~5000 meters



### Electrical Specification

Model Name	PA-1141-50VN				
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"> <li>● 5V : <math>\geq</math> 81.835%</li> <li>● 9V : <math>\geq</math> 87.295%</li> <li>● 15V : <math>\geq</math> 88.852%</li> <li>● 20V : <math>\geq</math> 89.000%</li> <li>● 28V : <math>\geq</math> 89.000%</li> </ul> <p>Average Efficiency can meet DoE Level VII and CoC tier II specifications requirement.</p>
<b>Protection Function</b>	
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
<b>Others</b>	
MTBF (min.) (note#2)	50K hours at 25C, 100Vac/240Vac, 100% load condition.
<b>Environment</b>	
Temperature	(operating) 0~40°C / (storage) -20~60°C
Humidity	(operating) 10~90% RH non-condensing / (storage) 0~95% RH
Altitude (max.)	3000 meters
<b>Mechanical</b>	
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.)	500g
<b>Safety</b>	
Standard	CB/IEC62368-1,TUV62368-1,UL62368-1,EN62368-1, CCC GB4943.1,PSE J62368-1
Withstand voltage	Primary to secondary : 3.3kVac, 5mA max, 60 sec.
Isolation resistance(min.)	Input-Output: 4Mohm @ 500VDC, 25°C, 70%RH
<b>EMC</b>	
EN55032	Conducted EMI: class B / Radiated EMI: class B
FCC	Conducted EMI: class B / Radiated EMI: class B
EN61000-3-2	Harmonic distortion: Class D
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: $3\text{V/m}$
EN61000-4-8	Magnetic field immunity: $1\text{A/m}$
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**

