

# SPECIFICATION

## High Quality Switching Desktop Adapter

**200W 24VDC Output  
Universal AC Input  
Efficiency Level VI**

**P/N: A240083EDL RGH**

### Specification Approval

This specification (including cover page) is approved in it's entirety by:

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Company Name

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## 1.0 General Description

The purpose of the document is to specify a single phase AC input , single output switching power supply. Top Micro P/N: A240083EDL. This product is an AC to DC switching power transfer device, and can provide a 24V 8.33A 200W max DC output. This specification defines the input, output, performance characteristics, environment, noise and safety requirements for the power supply.

## 2.0 Input Requirements

### 2.1 Input Voltage

Rated voltage 100-240 Vac +/- 10% full range. Nominal line input 110Vac/220Vac

### 2.2 Input Frequency

47~63 Hz

### 2.3 Input Current

3.5A Max.@110V, 2.5A Max.@230V input

### 2.4 Efficiency

>88% typical at nominal line input and full load output. Meets DOE Level VI regulations.

### 2.5 Configuration

3-prong AC inlet (Line, Neutral, FG)

### 2.6 Input Fuse

The hot line side of the input shall have a fuse rating (T3.15A/250V).

### 2.7 Inrush Current

$\leq 70A$  at 110 Vac

$\leq 140A$  at 220 Vac at cold start, maximum load

### 2.8 Line Regulation

This line regulation is less than 2% of rated output voltage @ full load.

### 2.9 Hold-up Time

$\geq 10$  mSec, @ nominal line, full load

**2.10 Rise Time**

$\leq 50$  mSec, @ rated AC input, with full load  
10% to 90% of output voltage

**2.11 Turn-on Time**

The output voltage should rise to 90% of rated output voltage  
in less than 3 seconds from AC application.

**3.0 Output Requirements****3.1 Output Voltage and Current**

Output Voltage (Vdc)	Current Min.(A)	Current Max.(A)
+24V	0	8.3A

**3.2 Load Regulation**

Voltage (Vdc)	Tolerance (%)
+24V	+/-5

**3.3 Dynamic Load Regulation**

5% excursion for 50% - 100% or 100% - 50% load change of DC output at  
any frequency up to 1KHz (duty 50%)

**3.4 Ripple & Noise**

The power supply shall not exceed following limits on indicated voltage for 60Hz  
or 50Hz ripple, switching frequency ripple and noise and dynamic load variations  
are measured with a 20MHz bandwidth oscilloscope.

Output	Ripple/Noise
+24V	2% Max. of rated output

Ripple/Noise: 60Hz ripple + switching ripple and noise

Ripple/Noise are measured at the end of output cable with a 0.1uF ceramic  
capacitor and 47uF electrolytic capacitor.

### **3.5 Over Voltage Protection**

175% Max. rated voltage

The output voltage shall shutdown and latch-off when OVP occurs.

### **3.6 Short Circuit Protection**

The adapter can withstand continuous DC short without sustaining damage.

It will re-enter normal operating condition after fault condition is removed.

### **3.7 Over Current Protection**

10.5A~13.7A. Unit shall auto-recover.

### **3.8 Drop-out (Power Line Disturbance)**

Output voltage shall remain within the specified regulation range, through the absence of a line input during 1/2 cycle at full load and nominal AC line input.

## **4.0 Environmental**

### **4.1 Temperature**

- a. Operating: 0°C to 40°C
- b. Storage: -20°C to 85°C

### **4.2 Humidity**

- a. Operating: 10 to 90%
- b. Storage: 5 to 90%

### **4.3 Altitude**

From sea level to 5,000m (operation)

## 5.0 Safety

### 5.1 Hi-Pot Test

1800Vac, 5mA 2 seconds LN to FG

### 5.2 Leakage Current

$\leq 0.7\text{mA}$  at 240Vac/50 Hz

### 5.3 EMS

Items	Specification	Reference
ESD	Contact: $\pm 4\text{KV}$	IEC 61000-4-2
	Air: $\pm 8\text{KV}$	
RS	Frequency: 1000MHz Field Strength: 3V/M	IEC 61000-4-3
EFT	1.0 KV on input AC power ports	IEC 61000-4-4
SURGE	Line to Line: $\pm 1\text{KV}$ (peak)	IEC 61000-4-5
	Line to FG: $\pm 2\text{KV}$ (peak)	

### 5.4 EMI

CISPR 22, FCC Part 15 Subpart B Class B, EN55024:2010

### 5.5 UL

UL60950-1, 2nd Ed., CSA C22.2 No. 60950-1-07 2nd Ed.

IEC60950-1 Ed 2., A1+A2

EN60950-1:2006/A2:2013; AfPS GS 2014:01 PAK

GB4943.1-2011, GB9254-2008, GB7625 1-2012

## 6.0 Mechanical Characteristics

**6.1 Physical Size:** 182 (L) \* 84.5 (W) \* 46mm (H)

**6.2 Enclosure Material:** 94V-1 Min.

**6.3 Output Cable:** UL1866#14

#### **6.4 Vibration Test**

The vibration frequencies are set at 20Hz with total amplitude of 1.5mm along the X-Y-Z axes. Each direction should be tested for 60 minutes.

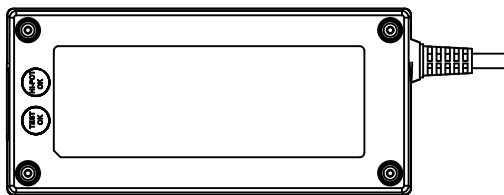
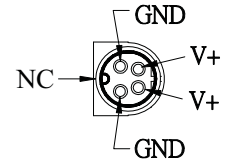
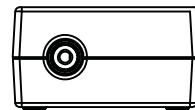
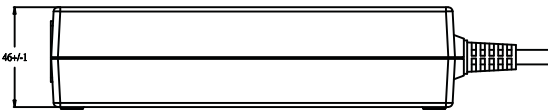
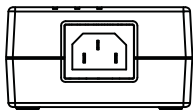
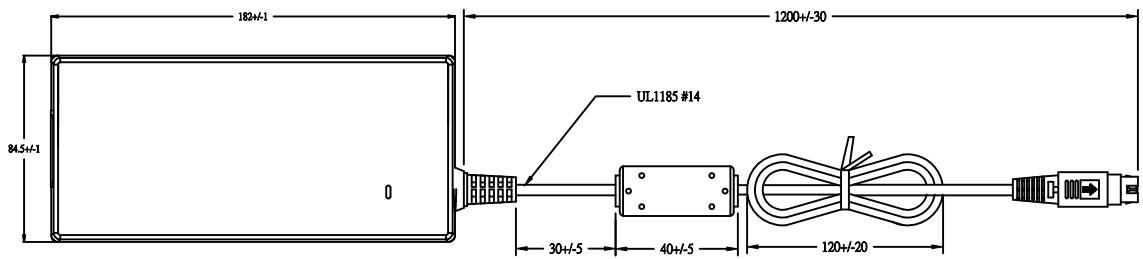
#### **6.5 Drop Test**

(Referencing to CSA C22.2 No.950/UL1950/UL1310/EN60950)

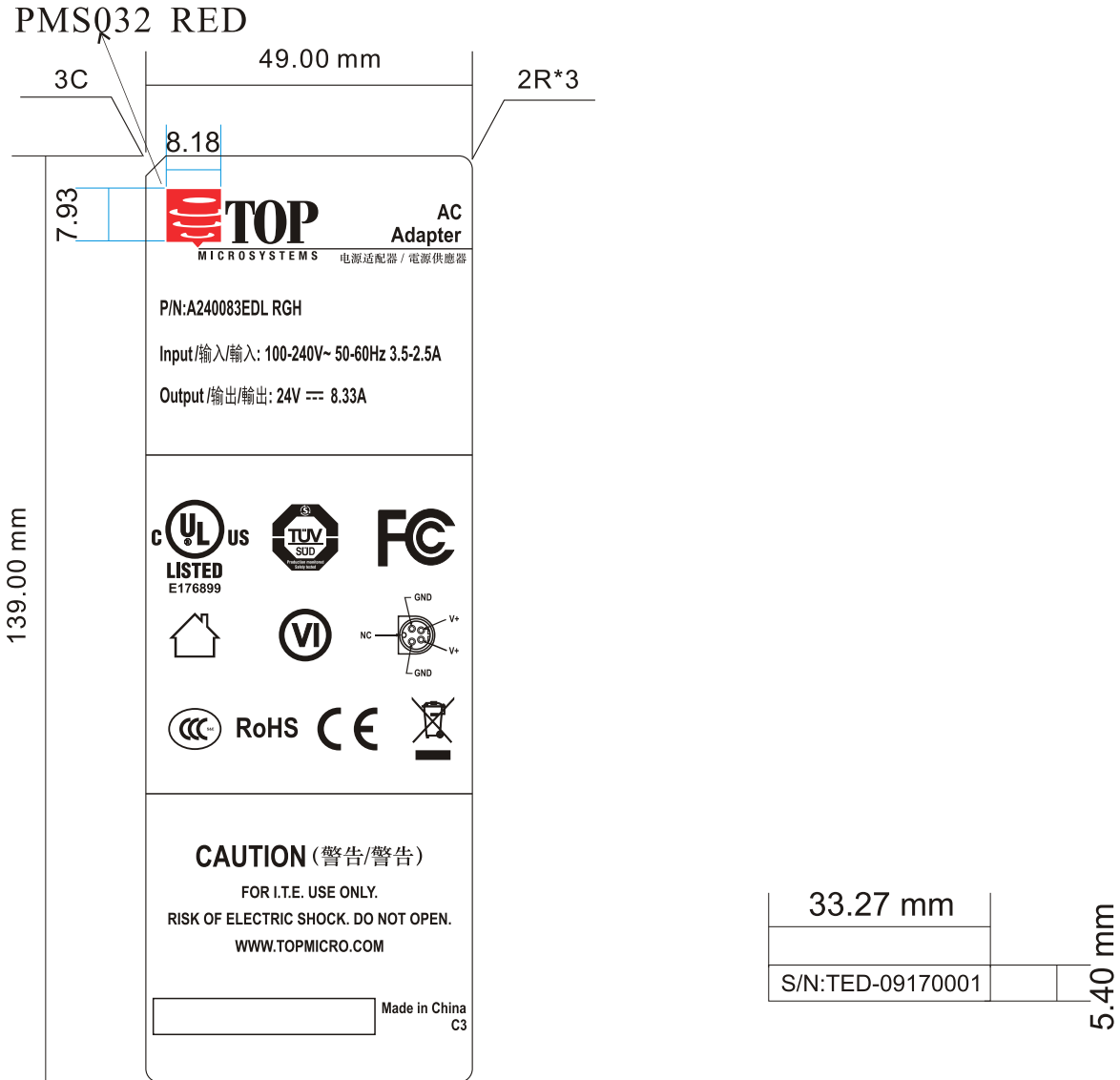
Products shall be dropped from a height of 900 mm onto a horizontal surface consisting of 13mm thick hardwood, mounted on two layers of plywood each 19mm to 20mm thick, all supported on a concrete or equivalent non-resilient floor.

**6.6 Net Weight:** 1000g (+/- 50g)

### 7.0 Mechanical



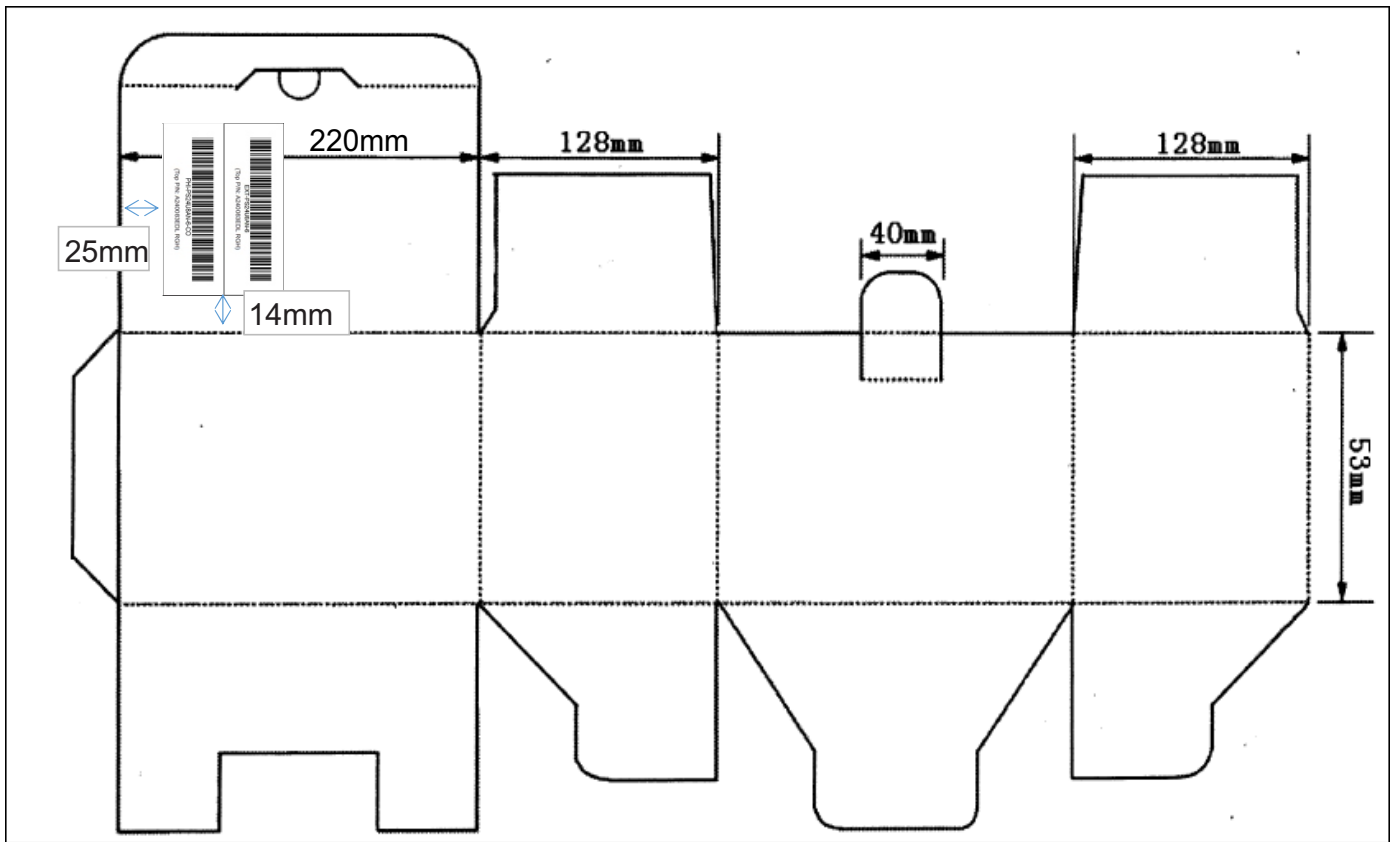
8.0 Label



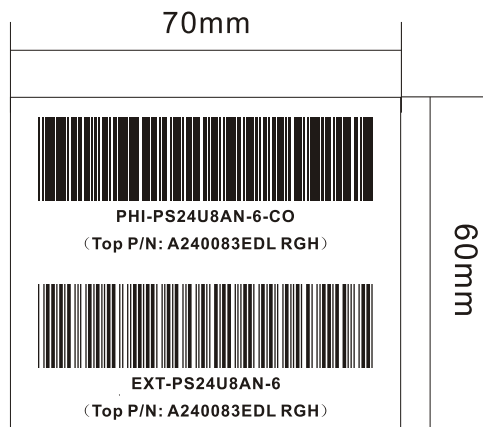
S/N: TED-YYWWXXXX 編號原則:  
 yy=09 for 2009 year, ww= week of the year,  
 xxxx= serial number from the same batch



### 9.0 Inner Box

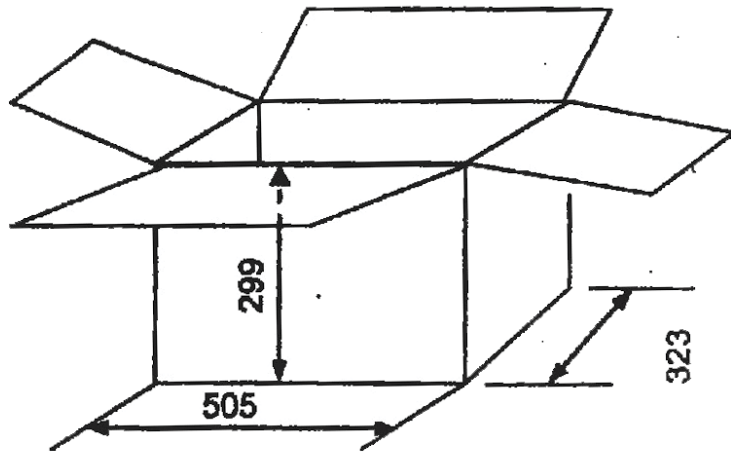


### 9.1 Barcode (Code 39 type)



### 10.0 Master Carton

Unit: mm



### Markings:



Packing: 16pcs/carton  
N.W.: 15.56kgs  
G.W.: 16.98kgs