



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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## AED Series



- Low Profile
- Single Outputs from 5 V to 48 V
- Universal Input
- Optional Floating Output
- High Power Density
- Class II Insulation on 36 W Version
- 3 Year Warranty

## Specification

## Input

Input Voltage	• 90-264 VAC
Input Frequency	• 47-63 Hz
Input Current	• AED36: 1.00 A max AED45: 1.20 A max AED70: 2.00 A max
Inrush Current	• AED36: 50 A max at 230 VAC AED45: 100 A max at 230 VAC AED70: 100 A max at 240 VAC
Earth Leakage Current	• AED36: Class II AED45/70: 3.5 mA max
Power Factor	• Compliant with EN61000-3-2

## Output

Output Voltage	• See tables
Initial Set Accuracy	• $\pm 2\%$
Minimum Load	• No minimum load requirement
Hold Up Time	• AED36: 8 ms min at 115 VAC AED45: 8 ms min at 115 VAC AED70: 20 ms min at 115 VAC
Line Regulation	• $\pm 1\%$
Load Regulation	• See tables
Ripple & Noise	• 1% pk-pk max, 20 MHz BW (see note 2)
Overvoltage Protection	• Typical 125% max
Overload Protection	• 120-150% hiccup/trip & restart mode with auto recovery
Short Circuit Protection	• Continuous
Temperature Coefficient	• $\pm 0.05\%/^{\circ}\text{C}$

## General

Efficiency	• 85% typical at 230 VAC & 100% load
Isolation	• 3000 VAC Input to Output, 1500 VAC Input to Ground. Negative output is connected to ground. For optional 500 VAC output to ground isolation add suffix '-F' to model number
Switching Frequency	• 60 kHz $\pm 10$ kHz
Power Density	• AED36: 5.34 W/in <sup>3</sup> AED45: 3.20 W/in <sup>3</sup> AED70: 4.98 W/in <sup>3</sup>
MTBF	• 200 kHrs to MIL-HDBK-217F at 25 °C, GB

## Environmental

Operating Temperature	• 0 °C to +60 °C derate linearly from 100% load at +40 °C to 50% load at +60 °C
Operating Humidity	• 93% RH, non-condensing
Operating Altitude	• 2000 m
Storage Temperature	• -20 °C to +85 °C

## EMC &amp; Safety

Emissions	• EN55022 Class B conducted & radiated
Harmonic Currents	• EN61000-3-2, Class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, 8 kV air, 4 kV contact Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m Perf Criteria A
EFT/Burst	• EN61000-4-4, level 2 Perf Criteria A
Safety Approvals	• EN60950-1, UL60950-1

**Models and Ratings**

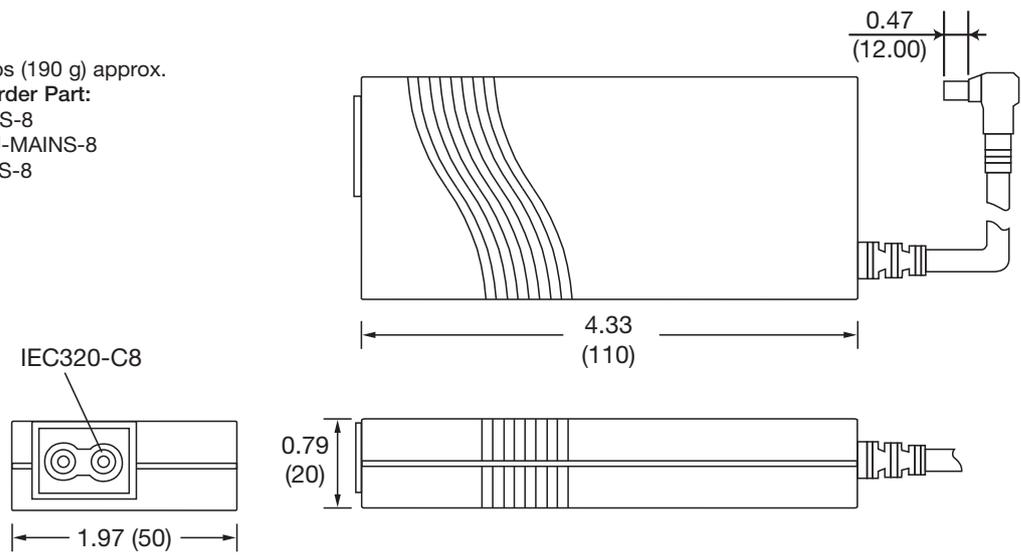
Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation <sup>(1)</sup>	Model Number
20 W	5.0 V	4.00 A	±6%	AED36US05
27 W	9.0 V	3.00 A	±5%	AED36US09
30 W	12.0 V	2.50 A	±5%	AED36US12
32 W	13.5 V	2.40 A	±5%	AED36US13
36 W	15.0 V	2.40 A	±3%	AED36US15
36 W	18.0 V	2.00 A	±2%	AED36US18
36 W	24.0 V	1.50 A	±2%	AED36US24
36 W	48.0 V	0.75 A	±2%	AED36US48

**Notes**

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 µF ceramic capacitor and a 10 µF electrolytic capacitor.

**Mechanical Details**

Weight: 0.42 lbs (190 g) approx.  
 Power Cord Order Part:  
 UK - UK-MAINS-8  
 European - EU-MAINS-8  
 US - US-MAINS-8



**Notes**

All dimensions shown in inches (mm)  
 Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.  
 Optional output connectors available.  
 Output cable is 48" (1220mm) approx.

## Models and Ratings

Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation <sup>(1)</sup>	Model Number
30 W	5.0 V	6.00 A	±6%	AED45US05
45 W	12.0 V	3.75 A	±5%	AED45US12
45 W	15.0 V	3.00 A	±3%	AED45US15
45 W	18.5 V	2.50 A	±2%	AED45US18
45 W	19.0 V	2.37 A	±2%	AED45US19
45 W	24.0 V	1.88 A	±2%	AED45US24
48 W	48.0 V	1.00 A	±2%	AED45US48

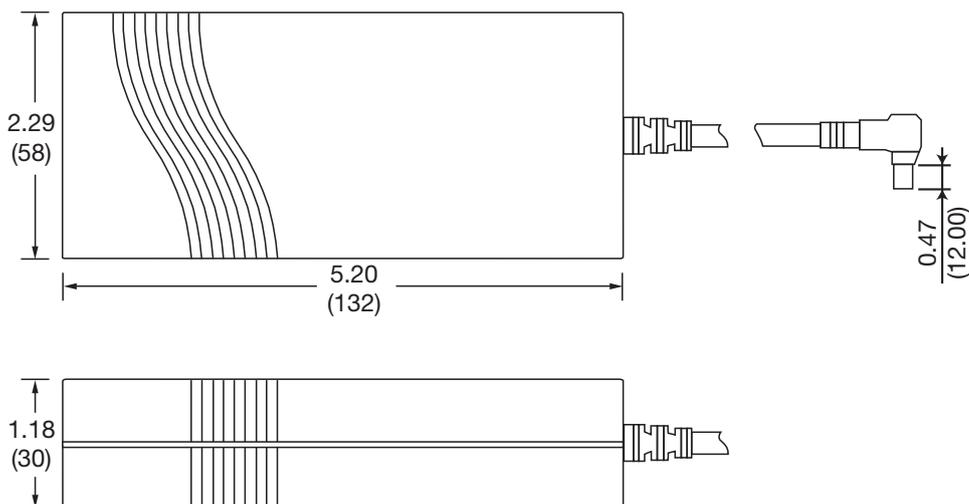
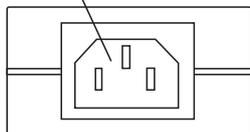
### Notes

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 μF ceramic capacitor and a 10 μF electrolytic capacitor.

## Mechanical Details

Weight: 0.73 lbs (330 g) approx.  
 Power Cord Order Part:  
 UK - UK-MAINS-IEC  
 European - EU-MAINS-IEC  
 US - US-MAINS-IEC

IEC320-C14



### Notes

- All dimensions shown in inches (mm)  
 Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.  
 Optional output connectors available.  
 Output cable is 48" (1220mm) approx.

**Models and Ratings**

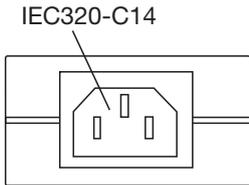
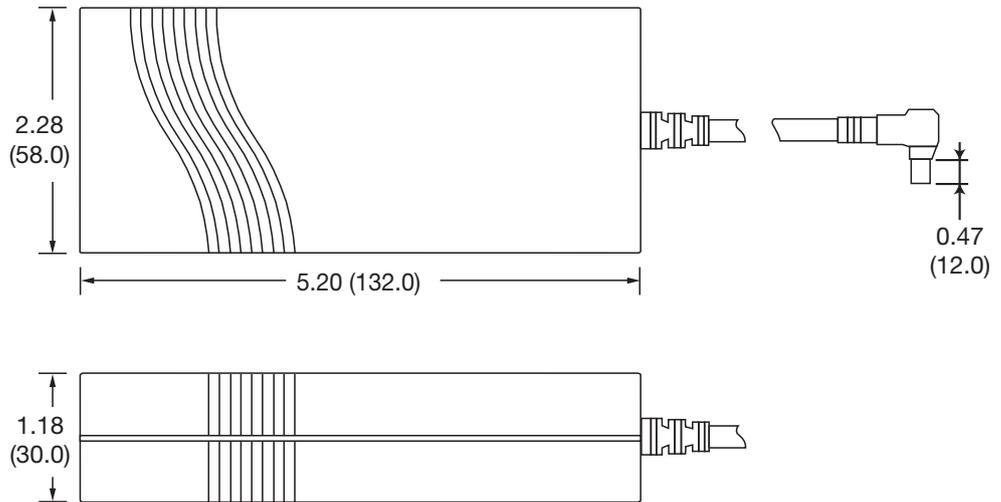
Output Power Maximum	Output Voltage Nominal	Output Current Maximum	Load Regulation <sup>(1)</sup>	Model Number
70 W	12.0 V	5.50 A	±5%	AED70US12
70 W	15.0 V	4.60 A	±3%	AED70US15
70 W	18.0 V	3.90 A	±2%	AED70US18
70 W	19.0 V	3.70 A	±2%	AED70US19
70 W	24.0 V	3.00 A	±2%	AED70US24
70 W	48.0 V	1.50 A	±2%	AED70US48

**Notes**

1. Load regulation is measured from 60% to full load and from 60% to 20% load (60% ±40% full load).
2. Measured at the output connector with a 0.1 μF ceramic capacitor and a 10 μF electrolytic capacitor.

**Mechanical Details**

Weight: 0.76 lbs (345 g) approx.  
 Power Cord Order Part:  
 UK - UK-MAINS-IEC  
 European - EU-MAINS-IEC  
 US - US-MAINS-IEC



**Notes**

- All dimensions shown in inches (mm).
1. Output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity.
  2. Optional output connectors available.
  3. Output cable is 48" (1220mm) approx.