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.

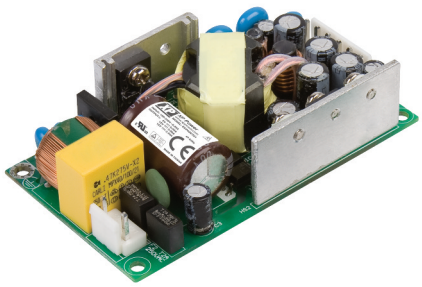
With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC 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!

Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832
Email & Skype: info@chipsmall.com Web: www.chipsmall.com
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

60 Watts
ECP Series



GREEN XP POWER

- Low Profile Design
- Compact Size, 4”x 2”
- IT & Medical Approvals
- Single, Dual and Triple Output
- <0.5 W No Load Input Power
- Peak Load Capability
- 3 Year Warranty

Specification

Input

Input Voltage	• 85-264 VAC, derate from 100% load at 90 VAC to 90% load at 85 VAC
Input Frequency	• 47-63 Hz
Input Current	• 0.85 A max at 115 VAC
Inrush Current	• 100 A max at 230 VAC, cold start at 25 °C
Power Factor	• EN61000-3-2, class A
No Load Input Power	• <0.5 W
Earth Leakage Current	• <250 µA at 264 VAC, 60 Hz
Input Protection	• Internal T2 A/250 V fuse in both line and neutral

Output

Output Voltage	• See table
Output Voltage Trim	• ±10% on V1 only, output 2 on multi output models will track by the same percentage
Minimum Load	• 10% minimum load required on all outputs of multi output models
Start Up Delay	• 1.3 s max
Start Up Rise Time	• 15 ms typical
Hold Up Time	• 16 ms min at full load at 115 VAC
Total Regulation	• Output 1: 2% from 0% load to 100% load Output 2: 5% from 20% load to 100% load Output 3: 5% from 10% load to 100% load
Remote Sense	• Fitted to US05 version, compensates for 0.5 V drop
Transient Response	• 4% max deviation, recovering to less than 1% within 500 µs for 50% step load change at 1 A/µs
Ripple & Noise	• 1% pk-pk (2% for US05 version), measured with 20 MHz bandwidth
Overvoltage Protection	• 115-140% of nominal output voltage on V1 only, recycle input to reset
Overload Protection	• 120-160% of nominal power
Short Circuit Protection	• Trip and restart (hiccup mode)
Temperature Coefficient	• ±0.02%/°C max

General

Efficiency	• 88% typical at 230 VAC and full load
Isolation	• 4000 VAC Input to Output 1500 VAC Input to Ground 500 VDC Output to Ground
Switching Frequency	• 30-130 kHz variable
MTBF	• >400 kHrs to MIL-HDBK-217F at 25 °C, GB

Environmental

Operating Temperature	• -20 °C to +70 °C, derate from 100% load at 50 °C to 50% load at 70 °C
Cooling	• Natural convection
Operating Humidity	• 5% to 95% RH, non condensing
Operating Altitude	• 3000 m max
Storage Temperature	• -40 °C to +85 °C
Shock	• 30 g pk, half sine, 6 axes
Vibration	• 2 g rms, 5 Hz to 500 Hz, 3 axes

EMC & Safety

Emissions	• EN55011/22, level B conducted & level A radiated
Harmonic Currents	• EN61000-3-2, class A
Voltage Flicker	• EN61000-3-3
ESD Immunity	• EN61000-4-2, ±4 kV indirect contact, Perf Criteria A
Radiated Immunity	• EN61000-4-3, 3 V/m, Perf Criteria A
EFT / Burst	• EN61000-4-4, level 3 Perf Criteria A
Surge	• EN61000-4-5, installation class 3, Perf Criteria A
Conducted Immunity	• EN61000-4-6, 3 V Perf Criteria A
Dips & Interruptions	• EN61000-4-11, 30% 10 ms, 60% 100 ms, 100% 5000 ms, Perf Criteria A, B, B EN60601-1-2, 30% 500 ms, 60% 100 ms, 100% 10 ms, 100% 5000 ms, Perf Criteria A, A, A, B
Safety Approvals	• EN60950-1, cUL60950-1, IEC60950-1, EN60601-1, ANSI/AAMI ES60601-1, CSA22.2 No.60601-1 Including Risk Management, IEC60601-1

Models and Ratings

Output Power	Output 1			Output 2			Output 3		Model Number
	Voltage	Current	Peak[1]	Voltage	Current	Peak[1]	Voltage	Current	
55 W	+5.0 VDC	11.0 A	14.3 A						ECP60US05
60 W	+5.0 VDC	7.0 A	9.1 A	+12.0 VDC	3.0 A	3.90 A			ECP60UD01
60 W	+5.0 VDC	7.0 A	9.1 A	+15.0 VDC	2.0 A	2.60 A			ECP60UD02
60 W	+5.0 VDC	7.0 A	9.1 A	+24.0 VDC	1.5 A	1.95 A			ECP60UD03
60 W	+5.0 VDC	7.0 A	9.1 A	+12.0 VDC	3.0 A	3.90 A	-12.0 V	0.30 A	ECP60UT01
60 W	+5.0 VDC	7.0 A	9.1 A	+15.0 VDC	2.0 A	2.60 A	-15.0 V	0.30 A	ECP60UT02
60 W	+5.0 VDC	7.0 A	9.1 A	+24.0 VDC	1.5 A	1.95 A	+12.0 V	0.30 A	ECP60UT03
60 W	+5.0 VDC	7.0 A	9.1 A	+24.0 VDC	1.5 A	1.95 A	-12.0 V	0.30 A	ECP60UT04

Notes

1. Peak load lasting <30 s with a maximum duty cycle of 10%, average output power not to exceed nominal.

Mechanical Details

CN1 - Input Connector	
Pin 1	Neutral
Pin 2	Not Fitted
Pin 3	Line

Mates with JST housing
VHR-3N and JST Series
SVH-21T-P1.1 crimp terminals

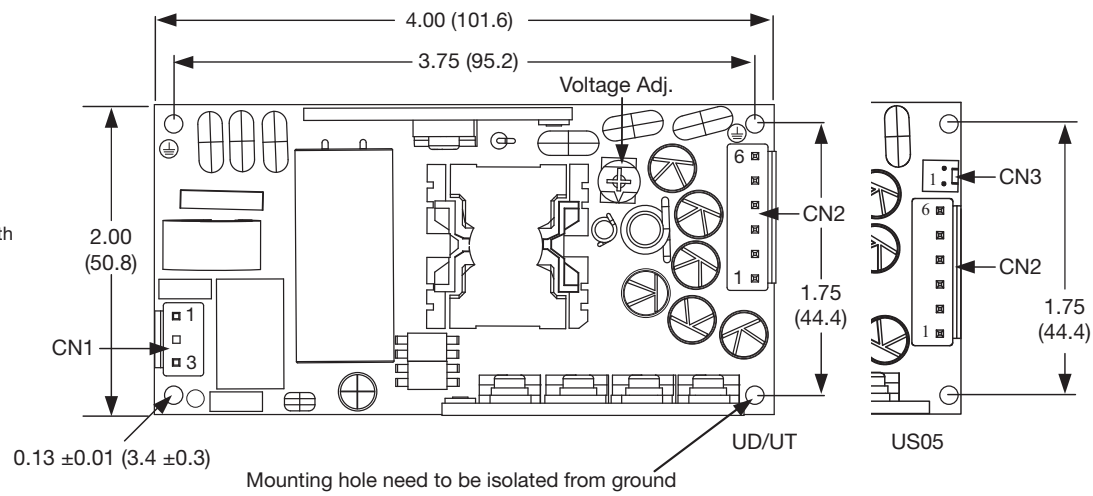
Mounting holes marked with
⏚ must be connected to safety earth

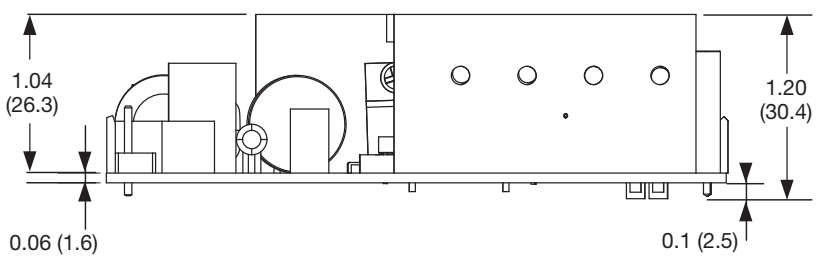
CN2 Output Connector		
	UD/UT	US05
Pin 1	V3	RTN
Pin 2	RTN	RTN
Pin 3	RTN	RTN
Pin 4	V1	+5 V
Pin 5	V1	+5 V
Pin 6	V2	+5 V

Mates with JST housing
VHR-6N and JST Series
SVH-21T-P1.1 crimp terminals

CN3 Sense Connector	
Pin 1	-Sense
Pin 2	+Sense

Fitted to ECP60US05 only. Mates with Molex Housing 22-01-1022 and 2759 crimp terminals





Notes

1. All dimensions are in inches (mm).
2. Weight: 0.34 lbs (155 g) approx.
3. Tolerance: ±0.02 (±0.5) unless stated

Derating Curve