# imall

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

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### Survivor<sup>®</sup> **Multimeters**

2870

2860A



#### The "Survivor" name says it all!

- Heavy Duty 1500 VDC rating
- Ruggedized construction
- Includes rubber boot
- Withstands 5-foot drop
- Extra large, high contrast LCD display
- Gasket sealed against dirt and contaminants
- Water resistant
- High energy fused on all current ranges
- Auto power off saves batteries
- Built in probe holders
- Non-slip grip
- Extensive overload protection

#### Model 2870

- 0.25% DCV accuracy
- True RMS
- Autoranging
- Analog bargraph
- 3 3/4 digit, 3200 count
- Data hold, delay hold

#### Model 2860A

- 0.5% DCV accuracy
- Manual ranging
- 3 1/2 digit, 2000 count
- Large 0.8" LCD display

Specific		models
	2870	2860A
DC Volts	Auto/Manual ranging	Manual ranging
Ranges	320mV, 3.2V, 32V, 320V, 1500V	200mV, 2V, 20V, 200V, 1500V
Resolution	100µV, 1mV, 10mV, 100mV, 1V	100µV, 1mV, 10mV, 100mV, 1V
Accuracy	$\pm (0.25\% \text{ rdg} + 2 \text{ dgt})$	$\pm (0.5\% \text{ rdg} + 1 \text{ dgt})$
Overload protection	1500V peak	1500V peak
Input Impedance	10MΩ	10MΩ
AC Volts	Auto/Manual ranging	Manual ranging
	True RMS	avg. responding, rms reading
Ranges	3.2V, 32V, 320V, 750V	200mV, 2V, 20V, 200V, 1000V
Resolution	1mV, 10mV, 100mV, 1V	100µV, 1mV, 10mV, 100mV, 1V
Accuracy	$\pm$ (1.3% rdg + 3 dgt)	$\pm$ (1.25% rdg + 4 dgt)
Frequency Response	40Hz - IkHz	40Hz - 500Hz
Overload Protection	1100V peak	1500V peak
Input Impedance	10MΩ	10MΩ
Current	Auto/Manual ranging	Manual ranging
	AC True RMS	AC avg. responding, rms reading
Ranges	320µA, 3.2mA, 32mA, 300mA, 20A*	200µA, 2mA, 20mA, 200mA, 20A*
Resolution	0.1µA, 1µA, 10µA, 100µA, 10mA	0.1µA, 1µA, 10µA, 100µA, 10mA
Accuracy (DC)	$\pm (1.0\% \text{ rdg} + 2 \text{ dgt}),$	$\pm (1.0\% \text{ rdg} + 1 \text{ dgt}),$
	$\pm$ (2.0% rdg + 3 dgt) for 20A	$\pm$ (2.0% rdg + 3 dgt) for 20A
Accuracy (AC)	$\pm (2.5\% \text{ rdg} + 3 \text{ dgt})$	$\pm (1.5\% \text{ rdg} + 3 \text{ dgt}),$
	$\pm$ (2.5% rdg + 5dgt) for 20A	$\pm$ (2.5% rdg + 4 dgt) for 20A
Frequency Response	40Hz - 1kHz	40Hz-500Hz
Overload Protection	High energy 600V, 1A full for $\mu$ A/mA, High energy 600V, 15A for 20A	
Resistance	Auto/Manual ranging	Manual ranging
Ranges	320Ω, 3.2kΩ, 32kΩ, 320kΩ,	200Ω, 2kΩ, 20kΩ, 200kΩ,
	3.2MΩ, 32MΩ	2ΜΩ, 20ΜΩ
Resolution	0.1Ω, 1Ω, 10Ω, 100Ω, 1kΩ, 10kΩ	0.1Ω, 1Ω, 10Ω, 100Ω, 1kΩ, 10kΩ
Accuracy	$\pm (0.5\% \text{ rdg} + 2 \text{ dgt})$	$\pm$ (0.75% rdg + 1 dgt)
	$\pm$ (2.0% rdg + 5 dgt) for 32M $\Omega$	$\pm$ (1.5% rdg + 5 dgt) for 20M $\Omega$
Overload Protection	600V peak	600V peak
Diode Check	Tested at 1.5mA, 3.3V max typical tested at	t 1mA 3.2V max typical
Continuity	Beeper sounds below $200\Omega$ approx.	Beeper sounds below $100\Omega$ approx.
Display	0.53" LCD, 3200 count with	0.8" LCD, 1999 count
	65-segment analog bargraph	
Sampling rate	2/sec., 12/sec. for bargraph	2.5 /sec.
Operating Temperature	32° to 122°F (0°C to 50°C), <80% RH	
Power	Single 9V battery	
Battery life	200 hrs typ (alkaline)	250 hrs typ (alkaline)
Auto a success off	Annual 10 min	Ammany 20 min

#### Accessories

Auto power off

Weight

DImensions (H x W x D)

SUPPLIED: Battery, test leads, rubber holster, manual

Approx. 10 min.

18.3 oz. (519g)

OPTIONAL: TL-1 Replacement Test Leads, TL-2A Deluxe Test Leads, TL-3 Accessory Tlp Kit

6.88 x 3.19 x 1.25" (175 x 81 x 32mm)

(for TL-2A), TL-130A General Purpose DMM Kit, PR-28A High Voltage Probe,

Approx. 30 min.

12 oz. (353g)

6.88 x 3.5 x 1.5" (175 x 89 x 38mm)

Five Year Warranty

- CP-3 AC/DC Current Clamp Adapter
- Carrying Case (not included): LC-29B

\*10 A continuous, 20A for 30 seconds max.