12 VDC LED LIGHT STRIPS

Adhesive-backed ribbon with surface-mount ultrabright LEDs. Ideal accent lighting in auto or home. Dimmable. Can be cut every third LED or 50mm (approx. 0.2") and each segment can be lit independently. Wires can be soldered directly to solder spots on ribbon tape. 5 Meters, 100 segments per continuous strip. Can be connected end-to-end for longer strips. Can be purchased in 2" (3-led) segments.

Cool-white  CAT# LS-12-CW  $1.00 each  2 segments for $1.00
10 segments  40¢ per segment

Warm-white  CAT# LS-12-WW

Neutral-white  CAT# LS-12-NW  $1.50 per 3-led segment
10 segments  $1.30 per segment
100 segments  $1.00 per segment

ECONOMY MODULES COOL-WHITE

Very bright, but less bright than our other modules. 3.5" wires between modules. 20 modules per string. 0.72W per module

CAT# LS-200CW  $1.40 per module
20 modules for $1.10 per module
100 modules for 85¢ per module

12-24 VDC 8A DIMMER

Designed for 12-24 VDC LED strip lights like our CAT#s LS-12-CW, NW, WW. Clearly-marked screw-clamp input/output terminals. Rotary adjustment. 3.5" x 2.35" x 2.25" high.

Mounting holes on 1.6" x 3.1" centers.

CAT# DMR-8  $19.95 each

POCKET-SIZED LED TESTER

Handy device for testing LEDs (2-150mA). Simply plug your LED into the correct holes and push the button to test its brightness, illuminant color, etc. The top row is for 2 pin LEDs with currents ranging from 2mA - 30mA. The bottom row is for 4 pin LEDs (super-flux LEDs) with currents ranging from 20mA -150mA. Powered by a 9V battery (included).

CAT# LT-100  $8.95 each

12 VDC FLASH ASSEMBLY

Bright xenon strobe assembly for highway emergency signal. Approximately 80 flashes per minute. 12Vdc operation. Horseshoe flash tube (31.5 x 16 x 6mm) mounted on 65 x 75mm pc board. On/off switch. Easy to connect. See hook-up diagram on-line spec sheet.

CAT# FSH-13  $4.50 ea. • 10 for $4.00 ea.

LED FESTOON LAMPS

6 LED festoon lamps operates on 12 AC/DC 45mA.
120° radiance angle. 10.7mm dia. x 44mm L.

Cool-white - 45 lumen. 6000 CCT(K).

CAT# HFL-12CW  $4.50 each 10 for $4.35 each

Warm-white - 40 lumen. 3000 CCT(K).

CAT# HFL-12WW  $4.50 each 10 for $4.35 each

Festoon socket for 44mm lamps. Fits CAT#s HFL-12CW and HFL-12WW. Can be used with other 37-44mm festoon based lamps and LEDs.

CAT# FLS-3  75¢ each • 10 for 70¢ each

12 VAC LED LAMP

• Earthtronics # LEDX485090
• 120Vac, 60Hz, 0.062A, 3.5W
• Off-white (beige), 7.5” diameter
• 6” diameter x 1.25” depth behind bezel
• 61 LED array, cool-white 5000K
• Comparable to 50-60W incandescent lamp
• Designed to snap into 6” dia. recessed can
• Pigtail leads

CAT# LED-485  $4.75 each

120 VAC RETROFIT LED DOWNLIGHTS, 4-PACK

• 120Vac, 9W LED lamps for 5”-6” recessed cans
• Dimmable 10%-100%
• Standard medium screwbase
• Normal-white, 4000K color temp
• 650 lumens
• Energy Star, cULus, FCC.

CAT# LMP-56NW  $19.95
10 for $16.00 pack of 4 lamps

120 VAC LED LAMP

• 120Vac, 9W LED lamps for 5”-6” recessed cans
• Dimmable
• Standard medium screwbase
• Normal-white, 4000K color temp
• 650 lumens
• Energy Star, cULus, FCC.

CAT# LED-485  $4.75 each

12 VDC FUSE LAMPS

Popular lamps which are the same size as a 3AG 1/4” x 1 1/4” (AGC) fuse.

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FUSE LAMPS

Popular lamps which are the same size as a 3AG 1/4” x 1 1/4” (AGC) fuse.
1.5V BUTTON CELLS

**AG-13** 11.5mm diameter x 5.5mm. Cross to 357, AG-13, A-76, LR-44, V13GA and RW-82. Alkaline.

**CAT# BAT-7** 75¢ each • 10 for $5.00

**AG10/L1131** L1131. Cross to LR54, 189, RW89, AG10. 11.6mm diameter x 3mm high. Alkaline.

**CAT# BAT-11** 75¢ each • 10 for $5.00 each

**AG-3** Cross to AG-3, 392A, SR41, CX41, LR41W & others. 6.8mm dia. x 2.6mm. Silver oxide.

**CAT# BAT-4** 50¢ each • 10 for 40¢ each

**SG-4** replaces AG-4, 626A, 377A, CX66W & others. 6.8mm dia. x 2.6mm. Silver oxide.

**CAT# BAT-4** 50¢ each • 10 for 40¢ each

**386S** (silver oxide) replaces SG12/G12/SR43/386/548/RW24, 44 button cell. 0.45” diameter x 0.15” thick. For watches, cameras, games etc.

**CAT# BAT-8** 95¢ each • 10 for $7.00 each

3V LITHIUM BUTTON CELLS

Lithium batteries have a very long shelf life, typically 10 years or more. These are not rechargeable.

**CR1220.** 40 mAh. 12.5mm dia. x 2mm thick.

**CAT# LBAT-62** $1.50 each

**CR1616.** 50 mAh. 16mm dia. x 1.6mm thick.

**CAT# BAT-28** $1.00 each

**CR1632.** 3 volt. 16mm dia. x 3.2mm thick.

**CAT# BAT-63** $1.00 each

**CR1620.** 70 mAh. 16mm dia. x 2mm thick.

**CAT# BAT-58** 85¢ each • 10 for $7.50 each

**CR2016.** 75 mAh. 0.787” dia. x 0.06” thick.

**CAT# BAT-21** 75¢ each

10 for $6.50 • 100 for $45.00

**CR2025.** 150 mAh. 0.8” dia. x 0.1” thick.

**CAT# BAT-44** $1.00 ea. • 10 for $7.50 ea.

**CR2032.** 180 mAh. 3 volt. 180 mAh. 0.8” dia.

**CAT# BAT-20** $1.00 each

10 for $8.50 • 100 for $70.00

**BR2335.** 300 mAH. 23mm x 3.5mm.

**CAT# BAT-64** $3.50 each

**CR2450.** 560 mAH. 0.96” dia. x 0.19” thick.

**CAT# BAT-52** $3.50 each

**CR2430.** 620 mAH. 24mm dia. x 3mm high.

**CAT# BAT-2430** $1.90 each

COIN CELL HOLDERS, PC LEADS

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<th>CAT#</th>
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<td>25mm</td>
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LIPO BATTERY LEVEL METER

Prevent complete battery drain, increase battery life and preserve performance with this Li-Po battery voltage tester with low voltage buzzer alarm. Instantly outputs the voltage of individual cells and the total voltage of the battery pack to the digital LED meter by simply connecting to battery balance plug. Also onboard is a loud buzzer with flashing LED to indicate when the voltage of any individual cell drops below the adjustable threshold. For use with 1-8S Li-Po / Li-Ion / Li-Mn / Li-Fe. Board dimensions 40 x 25 x 10mm.

**CAT# LBT-79** $4.75 • Reduced Price $3.95 each
SNAPPPABLE BREADBOARD
Solderable, double-sided breadboard that can be used as a single proto board or snapped into four smaller boards for tiny projects. 2-hole strips and 4-hole strip areas. Four power rails. Centerline pads. High-quality FR4 glass epoxy PCB. Lead-free. Anti-tarnish coating. 0.042” holes drilled on 0.1” centers. Size: 2.5” x 3.8” (63.5 x 96.5mm).
CAT# SBB-4 $5.50 each

SOLDERLESS BREADBOARDS
Design and change circuits quickly & cleanly. Bread-boards accommodate all sizes of dips and discrete components with lead diameters up to 0.032”. Interconnect with solid hook-up wire (#22 AWG recommended). Wires & components can be used and re-used many times without damage to board or components.
170 Contacts. 1.80” x 1.40” x 0.375” high.
CAT# PB-170 $2.50 each 10 for $2.00 each
400 contacts. 300 contacts on main board & 50 contacts on each of two power distribution strips. Distribution strips are removable. White.
CAT# PB-400 $4.00 ea. • 10 / $3.75 ea.
Same specs as PB-400 above, but made of clear plastic.
CAT# PB-400C $3.65 each 10 for $3.40 each
470 contacts plus two 70 contact buss strips, for a total of 610 contacts. 3 binding posts mounted on aluminum back plate. 5.92” x 3.75” x 0.43” high.
CAT# PB-610 $12.50 each
840 contacts. Dual row of buss terminals on each side of terminal strip. Double-sided adhesive tape backing. Holes for screw mounting. 2.2” x 6.5” x 0.38” high.
CAT# PB-840 $8.25 each
1680 contacts. 2 terminal strips. 4 buss strips. 3 binding posts mounted on an aluminum back plate 5 1/8” x 6 7/8” x 3/8” high.
CAT# PB-1680 $18.25 each
3260 contacts. 4 terminal strips. 7 buss strips, 4 binding posts mounted on an aluminum back plate 7 7/8” x 8 3/4” x 3/8” high.
CAT# PB-3260 $36.00 each

BREADBOARD POWER SUPPLY
Module plugs into our solderless breadboards and provides 5V and/or 3V to the rails as well as other useful functions. Works with our breadboard, CAT# PB-400 (sold separately). 32 x 54 x 25mm (1.26” x 2.08” x 0.86”).
CAT# MB-PS $4.75 each

BREADBOARD ACCESSORIES
Terminated with machine pins for insertion into breadboards and sockets.
ALLIGATOR CLIP JUMPERS
6-piece set. CAT# TL-14 $6.95 per set
MINI-GRABBER JUMPERS
2-piece set. Red and black mini-grabbers. CAT# TL-15 $5.95 per set

BATTERY BOXES FOR BREADBOARDING
Completely enclosed with slide-off cover. Integrated On-Off switch. 6” leads with machined male pins for use with solderless breadboards. Holds three AAA batteries for 4.5Vdc power. 2.49” x 1.45” x 0.62”.
CAT# BH-33A $3.65 each
Holds three AA batteries for 4.5Vdc power. 2.69” x 1.90” x 0.72”.
CAT# BH-AA3 $4.50 each
Holds four AAA batteries for 6 Vdc power. 2.44” x 1.90” x 0.62”.
CAT# BH-43A $4.20 each

JUMPER WIRE SETS
Pre-formed jumper wires for use with solderless breadboards. 14 color-coded lengths. AWG 22 solid wire. Unbreakable clear plastic storage case.
140 PIECE ASSORTMENT 10 of each size CAT# JW-140 $3.75 each
350 PIECE ASSORTMENT 25 of each size CAT# JW-350 $13.50 each

24” ALLIGATOR TEST LEADS, RED / BLACK PAIR
Better-than-average quality test leads. 18AWG stranded copper wire. 2” alligator clips with insulators and strain reliefs. Pair of 24” leads, red and black.
CAT# ALG-201 $3.00 pair
**TEST CABLES & CLIPS**

**MULTIMETER TEST LEADS**
Comfort grip probes with protective cap. Needle tip test probe, for easy access of hard to reach test points. Durable PVC insulated test leads with right-angle shrouded banana plugs. Banana plugs are molded directly to the wire for superior pull strength. Compatible with most multimeters that accept shrouded banana plugs.

**CAT# TL-127** $9.95 / pair

**TWEEZER TEST LEADS**
A must for testing small, in-circuit components. Shrouded banana plugs fit most test meters. Tweezer marked with + and - symbols. 5.9” long tweezer probe. Overall length of leads, 24”.

**CAT# TL-126** $6.95 each

**ECONOMY TEST LEADS**
Red and black test probes with banana plugs.

**CAT# TL-100** $2.80 per set
10 for $2.55 per set

**TEST LEADS WITH PIN PLUGS**
Set of red and black test leads with pin plugs. 22” long cables.

**CAT# TL-112** $1.85 each

**TEST LEAD: BNC TO ALLIGATOR CLIPS**
7” Mueller test cable. BNC male plug to red and black alligator clips.

**CAT# TL-105** $6.95 each

**MINI-HOOK JUMPERS & PROBES**
Mini-hooks are great for connection to parts in high-density areas. They give a firm, insulated connection.

**SET OF TWO 1 1/2” MINI HOOK JUMPERS**
Two 18” long mini-hook patch cords. One black, one red, with 1.5” long mini-hooks on each end.

**CAT# MTC-2** $4.00 each

**MINI-GRABBER TEST CLIPS, BLACK/RED**
1.65” mini-hooks. Mini-hooks provide a firm, insulated connection to small terminals and wires in high-density areas.

**CAT# MTC-7** $1.80 per pair

**MINI JUMPERS**
10 TEST LEADS
1” CLIPS
2 each of 5 colors.

**CAT# MTL-10** $3.50 per set

**REGULAR JUMPERS**
5 TEST LEADS
2” CLIPS

**CAT# HDTL-5** $3.15 each

**TEST LEADS WITH SPRING-TYPE TEST CLIPS**
10 jumpers, 5 colors, 32” long. 1.75” clips with stronger jaws.

**CAT# HDTL-10** $5.40 each

**ALLIGATOR CLIPS**

**2” ALLIGATOR CLIP**
Solid, spring-action clip with screw. 5mm cable access hole can connect to banana plug test lead.

**CAT# ALG-M** 5 for $1.25
100 for 21¢ each • 1000 for 18¢ each

**INSULATED ALLIGATOR CLIPS**
Small, medium and large alligator clips with rubber boot. Sold in pairs, one red and one black.

1.07” alligator clips **CAT# ALG-10**
65¢ per pair • 100 for 50¢ per pair

1.4” alligator clips **CAT# ALG-15**
75¢ per pair • 100 for 60¢ per pair

1.75” alligator clips **CAT# ALG-20**
85¢ per pair • 100 for 70¢ per pair

**INSULATION-PIERCING TEST CLIPS**
JS Popper, Inc. #JP-8681
Famous “Bed-of-Nails” test clip designed for use with smaller gauge wires. Angled nose. 2.6” long. Includes rubber boots. These are new clips, removed from unused test leads. Includes two clips with one red and one black boot.

**CAT# ALG-34** $6.50 • $5.00 pair

**ORDER TOLL FREE 1-800-826-5432**

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TEST EQUIPMENT AND ACCESSORIES

POCKET-SIZE AUTO-RANGE MULTIMETER
Pro'sKit# MT-1506.
Auto-range, true RMS multimeter.
3-1/2 digit LCD readout.
Built-in test leads.
- DCV: 400mV /4 / 40 / 400V / 600V
- ACV: 400mV / 4 / 40 / 400V /600V
- Resistance: 400Ω /4k / 40k / 400k / 4MΩ / 40MΩ
- Frequency: 100 / 1000Hz / 10k / 100k / 1MHz / 10MHz
- Capacitance: 4nF / 40n / 400n / 4μ / 40μ / 200μF
- Continuity with beeper
- Diode test: Range: 0 ~ 1.5V Resolution: 1mV
- Power: 2 x AAA batteries (not included)
- Size: 4.9" x 3.1" x 0.8"
CAT# DMM-1506 $29.95 each

COMPACT 3-1/2 DIGIT MULTIMETER
Pro'sKit # 1210.
- Back-lit LCD
- display. User friendly interface is ideal for students, DIY market.
- DCV: 200mV / 2V / 20V / 200V / 500V
- ACV: 200 / 500V
- DCA: 200μA / 2mA / 20mA / 200mA /10A
- Resistance: 200Ω / 2K / 20K / 200kΩ / 2MΩ
- Extra functions: Continuity with beeper, diode test, transistor test, low battery indication
- Power: 9V battery (not included)
- Size: 5.7 x 2.8 x 1.3 in.
CAT# DMM-1210 $25.75 each

3 1/2 DIGITAL MULTIMETER
Pro's Kit # MT-1233D
Palm-size, 3-1/2 digit multimeter with lots of features including Backlight, Data-hold, Low-battery indicator and Overload protection. Ideal for students, home use, DIYers.
- DCV: 200m/2000m/20/200V/500V
- ACV: 200/500V
- DCA: 200μA / 2mA / 20mA / 200mA /10A
- Resistance: 200Ω / 2K / 20K / 200kΩ / 2MΩ
- Temperature: -40~150°C ±(1.0%+3d), 150-1000°C ±(1.5%+15d) -40~302°F ±(1.0%+4d), 302-1832°F ±(1.5%+15d)
- Continuity test with beeper
- Power: 1.5V AAA x 2 (not included)
- Size: 5.12" x 2.83" x 1.10"
CAT# DMM-1233 $19.00 each

ANALOG MULTIMETER
3.5" wide analog meter. Scales for AC, DC Volts, DC mA and resistance.
Includes test probes, one 9V and two AA batteries.
Fuse and diode protection. DC 20K Ohm/VAC 9K Ohm/V.
CAT# AMT-360 $13.95 each

CAPACITANCE / INDUCTANCE / RESISTANCE METER
GME # LCR200
Portable inductance, capacitance and resistance meter. Large four-digit LCD display, Auto zero adjustment. Over-range indicator.
Inductance ranges: 2mH, 20mH, 200mH, 2H, 20H. Capacitance ranges: 2nF, 20nF, 200nF, 2μF, 20μF, 200μF, 1000 μF. Resistance ranges: 200Ω, 2kΩ, 20kΩ, 200kΩ, 2MΩ. Includes test leads, instructions and 9 Volt battery.
CAT# LCR-200 $58.00 each

BATTERY TESTER
SE BT20. Test AAA, AA, C, D, 9V and button cell batteries. Features easy-to-read, color-coded meter. Separate scale for button cells. 4-3/8" x 2-3/8".
CAT# BC-22 $5.95 each

6-12 VOLT CIRCUIT TESTER
Allows you to check for shorts, grounds and open circuits on all 6 and 12 volt systems. Equipped metal probe and alligator clip on 23" lead wire. Test bulb illuminates inside non-conductive handle.
CAT# LVT-3 $4.95 each

LASER DIGITAL TACHOMETER
This non-contact tachometer detects light reflected off an object and reads out RPM value. Micro computer technology with laser beam gives accurate & fast, once per second, readings. Stores & recalls the last, maximum and minimum RPM readings. Readings remain in memory until the next measurement. 2.5 to 99,999 RPM range. Large 5-digit LCD display. CE certified. Operates on 4 AA cells, included. Storage case included.
CAT# TCH-4 $47.75 each