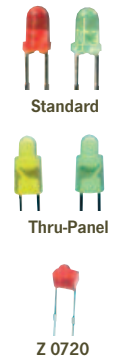


3mm



Price Each		Forward Current mA	Typical Voltage	Voltage Max	Angle	mcd	RRP	10+	100+
Z 0700	Red	15	2.3	2.6	40°	8	0.20	0.18	0.10
Z 0701	Green	30	2.2	2.6	40°	40	0.20	0.18	0.12
Z 0703	Yellow	30	2.1	2.6	40°	30	0.20	0.18	0.12
Z 0705	Orange	30	2.1	2.6	40°	40	0.25	0.20	0.15
Z 0707*	Blue	30	3.5	4	22°	1400	3.50	3.20	2.80
Z 0708*	White	30	3.5	4	22°	1600	3.50	3.20	2.80
Z 0709*	Infra Red	100	1.25	1.5	30°	12	0.90	0.80	3.25
Z 0751	Red	30	2	2.6	25°	1000	0.60	0.52	0.40
Z 0752	Green	30	3.5	4	25°	4000	2.00	1.80	1.60
Z 0754	Yellow	30	2.2	2.6	25°	2500	1.50	1.30	1.10
Z 0755	Orange	30	2.2	2.6	25°	1700	0.65	0.55	0.45
Z 0710	Red Thru-Panel	30	2	2.6	120°	6	0.42	0.38	0.25
Z 0711	Green Thru-Panel	30	2.2	2.6	120°	6	0.42	0.38	0.25
Z 0713	Yellow Thru-Panel	30	2.1	2.6	120°	5	0.42	0.38	0.25
Z 0720	Red Low Profile	15	2.2	2.6	75°	0.6	0.42	0.38	0.25
Z 0730	Red No Flange	15	2.3	2.6	35°	12	0.25	0.20	0.15
Z 0731	Green No Flange	30	2.2	2.6	35°	70	0.35	0.30	0.25
Z 0733	Yellow No Flange	30	2.1	2.6	35°	50	0.35	0.30	0.25
Z 0761	Flashing Red	20	5	12	45°	40	1.20	1.10	0.85

5mm



Price Each		Forward Current mA	Typical Voltage	Maximum Voltage	Angle	mcd	RRP	10+	100+
Z 0800	Red	15	2.3	2.6	30°	9	0.21	0.19	0.12
Z 0860*	Red	30	2.1	2.6	20°	300	0.40	0.35	0.30
Z 0863*	Red	30	2.1	2.6	18°	1500	0.60	0.52	0.45
Z 0862C*	Red	30	2	2.6	8°	6500	3.95	3.45	2.60
Z 0801	Green	30	2.2	2.6	30°	80	0.25	0.22	0.12
Z 0864*	Green	30	2	2.6	15°	1200	1.80	1.60	1.40
Z 0865B*	Green	20	3.2	4.0	15°	18000	2.50	2.25	2.00
Z 0802	Yellow	30	2.1	2.6	30°	80	0.25	0.22	0.12
Z 0867*	Yellow	30	2	2.6	20°	2000	1.15	1.05	0.80
Z 0866A	Yellow	30	2.2	2.6	15°	7500	1.45	1.25	1.15
Z 0804	Orange	30	2	2.6	30°	80	0.25	0.22	0.12
Z 0870*	Orange	30	2	2.6	20°	1800	0.90	0.85	0.75
Z 0868B*	Orange	20	2	2.4	15°	6300	3.95	3.45	2.60
Z 0869	Blue	30	2.6	3	12°	1000	1.50	1.30	1.10
Z 0806A*	Blue	30	3.5	4	12°	5600	3.30	2.95	2.40
Z 0876D*	White	30	3	3.6	15°	22500	3.95	3.45	2.75
Z 0877A*	Warm White	20	3.2	4	15°	18000	4.50	4.05	3.60
Z 0880	Infra Red	100	1.2	1.5	20°	12	1.00	0.90	0.60
Z 0885*	Bi-colour Red/Green	15/30	2/2.3	2.4/2.6	40°	8/40	1.00	0.90	0.60
Z 0890	Flashing Red	30	5	12	40°	40	1.00	0.90	0.60
Z 0891	Flashing Green	20	5	12	40°	50	1.00	0.90	0.60
Z 0980	Red	8	12	12	12°	40	0.95	0.90	0.85
Z 0982	Green	8	12	12	35°	28	0.95	0.90	0.85

10mm



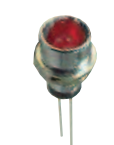
Price Each		Forward Current mA	Typical Voltage	Maximum Voltage	Angle	mcd	RRP	10+	25+
Z 0900	Red	30	2.1	2.6	50°	90	0.45	0.40	0.35
Z 0901	Green	30	2.2	2.6	50°	100	0.45	0.40	0.35
Z 0902	Yellow	30	2.1	2.6	50°	80	0.45	0.40	0.35
Z 0908*	White	30	3.5	4	25°	5500	3.10	3.00	2.80
Z 0952*	Red Hi Intensity	30	1.8	2	10°	600	0.85	0.78	0.53
Z 0945	Flashing Red	20	3-12V	12	50°	50	2.40	2.10	1.65

Rectangle



Price Each		Size	Forward Current mA	Typical Voltage	Maximum Voltage	Angle	mcd	RRP	10+	100+
Z 0780	Red	5 x 2	15	2.3	2.6	125°	1	0.26	0.24	0.16
Z 0782	Green	5 x 2	30	2.2	2.6	125°	7	0.32	0.28	0.19
Z 0784	Yellow	5 x 2	30	2.1	2.6	125°	5	0.32	0.28	0.19
Z 0785	Orange	5 x 2	30	2	2.6	125°	9	0.32	0.28	0.19

Chrome Bezel



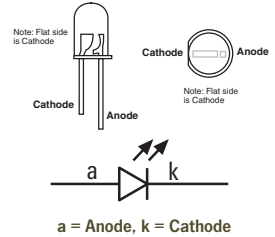
Price Each	Mounting Hole	Forward Current mA	Typical Voltage	Maximum Voltage	Angle	mcd	RRP	10+	25+	
Z 0238	3mm Red	6.2	20	2	3	50°	50	1.85	1.65	1.30
Z 0240	3mm Green	6.2	20	2	3	50°	40	1.85	1.65	1.30
Z 0242	3mm Yellow	6.2	20	2	3	50°	50	1.85	1.65	1.30
Z 0244	3mm Blue	6.2	20	2	3	50°	50	2.95	2.65	2.35
Z 0220	5mm Red	8	20	2	2.2	56°	5	1.60	1.40	1.10
Z 0222	5mm Green	8	20	2	2.2	56°	38	1.60	1.40	1.10
Z 0224	5mm Yellow	8	40	2	2.2	56°	28	1.60	1.40	1.10
Z 0226	5mm Blue	8	30	3.5	4	40°	307	2.20	1.95	1.60
Z 0230	10mm Red	14	70	2.8	3	60°	36	2.50	2.30	2.00
Z 0232	10mm Green	14	80	2.8	3	60°	36	2.50	2.30	2.00
Z 0234	10mm Yellow	14	80	2.8	3	60°	36	2.50	2.30	2.00

Plastic Bezel



Price Each	Mounting Hole	Forward Current mA	Typical Voltage	Maximum Voltage	Angle	mcd	RRP	10+	25+	
Z 0200	3mm Red	4	20	2	2.2	46°	6.5	1.00	0.90	0.60
Z 0202	3mm Green	4	20	2	2.2	46°	30	1.00	0.90	0.60
Z 0204	3mm Yellow	4	20	2	2.2	46°	25	1.00	0.90	0.60
Z 0206	3mm Blue	4	30	3.5	4	60°	80	1.40	1.30	1.10
Z 0210	5mm Red	6	10	2	2.2	46°	6.5	1.25	1.15	0.75
Z 0212	5mm Green	6	20	2	2.2	46°	30	1.25	1.15	0.75
Z 0214	5mm Yellow	6	20	2	2.2	46°	25	1.25	1.15	0.75
Z 0216	5mm Blue	6	30	3.5	4	40°	300	1.70	1.60	1.40

Light Emitting Diodes, or LEDs as they are known, are special type of diodes which emit light when correctly powered. The LED's terminals are called anode and cathode. The anode is the leg that needs to be connected to the positive of the power source. Normally a LED has different lead lengths to identify which is the positive lead. **ROHS**



Calculating Dropping Resistor Value

$$R = \frac{(V_S - V_{LED})}{I_{LED}}$$

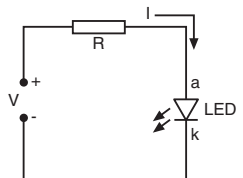
Where:

R = Value of required resistor
 V_S = Voltage source
 V_{LED} = Operating voltage of LED
 I_{LED} = Forward current of LED

- If I_{LED} = 20 mA @ 2.0V
- If V_S = 3 Volts, R = 50Ω
- If V_S = 6 Volts, R = 200Ω
- If V_S = 9 Volts, R = 350Ω
- If V_S = 12 Volts, R = 500Ω

These values can be substituted for the closest 5% resistor values.	
For 3 Volts	R = 56 Ohms
6 Volts	R = 220 Ohms
9 Volts	R = 390 Ohms
12 Volts	R = 560 Ohms

Connecting A Dropping Resistor



*Denotes "Water Clear" Style

Pocket LED Tester



This nifty LED tester allows quick and easy checking of LED operation before soldering into circuits. Five output currents are available, 2, 5, 10, 20 and 50mA. Dual test slots provided allow easy comparison of LED brightness and colour. Great for service technicians, designers and enthusiasts alike! Requires a 9V battery.

Price Each	RRP	2+	4+
Q 2010	19.95	17.95	15.95