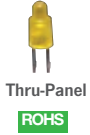


▼ Light Emitting Diodes

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	0.25	0.18	0.15
Z 0701 Green	30	2.2	2.6	40°	40	0.25	0.18	0.15
Z 0703 Yellow	30	2.1	2.6	40°	30	0.25	0.18	0.15
Z 0705 Orange	30	2.1	2.6	40°	40	0.35	0.25	0.20
Z 0707 Blue W/C	30	3.5	4	22°	1400	2.75	1.90	1.80
Z 0708 White W/C	30	3.5	4	22°	1600	3.50	3.20	2.80
Z 0709 Infra Red W/C	100	1.25	1.5	30°	12	1.30	0.95	0.90
Z 0751A Red W/C	20	2	2.2	25°	800	0.65	0.57	0.45
Z 0752 Green W/C	30	3.5	4	25°	4000	2.50	2.25	2.00
Z 0755A Orange	30	2.0	2.6	30°	2300	0.90	0.81	0.72
Z 0710 Red Thru-Panel	30	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 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



W/C "Water Clear" Style
ROHS

Price Each	Forward Current mA	Typical Voltage	Maximum Voltage	Angle	mcd	RRP	10+	100+
Z 0800 Red	15	2.3	2.6	30°	9	0.30	0.20	0.17
Z 0860 Red W/C	30	2.1	2.6	20°	300	0.50	0.40	0.35
Z 0863A Red W/C	30	2.1	2.6	30°	1500	0.85	0.60	0.55
Z 0862C Red W/C	30	2	2.6	8°	6500	1.95	1.75	1.55
Z 0801 Green	30	2.2	2.6	30°	80	0.30	0.22	0.20
Z 0864 Green W/C	30	2	2.6	15°	1200	1.80	1.60	1.40
Z 0865C Green W/C	30	3.5	4.0	12°	11000	4.25	2.95	2.75
Z 0802 Yellow	30	2.1	2.6	30°	80	0.30	0.22	0.20
Z 0867 Yellow W/C	30	2	2.6	20°	2000	1.25	0.95	0.90
Z 0866A Yellow W/C	30	2.2	2.6	15°	7500	1.95	1.80	1.60
Z 0804 Orange	30	2	2.6	30°	80	0.30	0.22	0.20
Z 0870A Orange W/C	30	2	2.6	20°	3000	1.50	1.35	1.25
Z 0868B Orange W/C	20	2	2.4	15°	6300	3.95	3.45	2.60
Z 0869 Blue	30	2.6	3	12°	1000	2.35	1.60	1.50
Z 0806A Blue W/C	30	3.5	4	12°	5600	4.45	3.00	2.90
Z 0876D White W/C	30	3	3.6	15°	22500	3.95	3.45	2.75
Z 0877B Warm White W/C	20	3.2	4	15°	25000	4.50	4.05	3.60
Z 0880A Infra Red	100	1.2	1.5	20°	12	1.30	0.95	0.90
Z 0885 Red/Green W/C	15/30	2/2.3	2.4/2.6	40°	8/40	1.20	0.90	0.80
Z 0890 Flashing Red	30	5	12	40°	40	1.30	0.95	0.90
Z 0891 Flashing Green	20	5	12	40°	50	1.30	0.95	0.90
Z 0980 Red	8	12	12	12°	40	1.10	0.90	0.85
Z 0982 Green	8	12	12	35°	28	1.10	0.90	0.85

10mm



ROHS

Price Each	Forward Current mA	Typical Voltage	Maximum Voltage	Angle	mcd	RRP	10+	25+
Z 0900 Red	30	2.1	2.6	50°	90	0.65	0.50	0.45
Z 0901 Green	30	2.2	2.6	50°	100	0.65	0.50	0.45
Z 0902 Yellow	30	2.1	2.6	50°	80	0.65	0.50	0.45
Z 0908 White W/C	30	3.5	4	25°	5500	3.90	3.45	2.75
Z 0952A Red W/C	30	2	2.6	12°	8000	1.45	1.30	0.95
Z 0945 Flashing Red	20	3-12V	12	50°	50	2.80	2.50	1.90

Rectangle



ROHS

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	0.35	0.30	0.25
Z 0782 Green	5 x 2	30	2.2	2.6	125°	7	0.40	0.35	0.30
Z 0784 Yellow	5 x 2	30	2.1	2.6	125°	5	0.40	0.35	0.30

Chrome Bezel



ROHS

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	2.75	2.45	2.20
Z 0240 3mm Green	6.2	20	2	3	50°	40	2.75	2.45	2.20
Z 0242 3mm Yellow	6.2	20	2	3	50°	50	2.75	2.45	2.20
Z 0244 3mm Blue	6.2	20	2	3	50°	50	3.75	3.35	3.00
Z 0220 5mm Red	8	20	2	2.2	56°	5	2.25	2.00	1.50
Z 0222 5mm Green	8	20	2	2.2	56°	38	2.25	2.00	1.50
Z 0224 5mm Yellow	8	40	2	2.2	56°	28	2.25	2.00	1.50
Z 0230 10mm Red	14	70	2.8	3	60°	36	3.95	3.50	2.75
Z 0232 10mm Green	14	80	2.8	3	60°	36	3.95	3.50	2.75
Z 0234 10mm Yellow	14	80	2.8	3	60°	36	3.95	3.50	2.75

Plastic Bezel

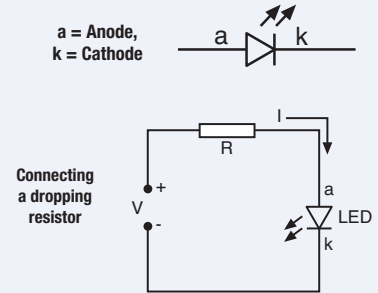
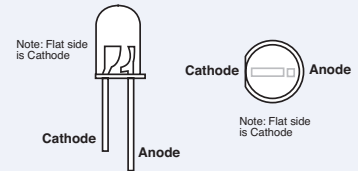


ROHS

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 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 Diode Data

LEDs are a type of diode which emits light when correctly powered. Typical voltage and current vary for each type and colour of LED. The LED's legs are called anode and cathode. Anode connects to positive power, cathode connects to the negative. Use the formulae & diagram below to determine which resistor to use with your LED for a given voltage.



Calculating Dropping Resistor Value

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

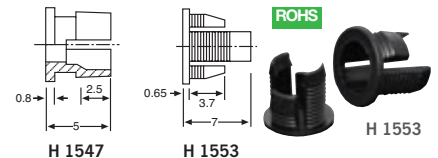
Where: R = Value of required resistor, V_S = Voltage source, V_{LED} = Operating voltage of LED, I_{LED} = Forward current of LED

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

These values can be substituted for the closest 5% resistor values.

- For 3V R = 56 Ohms
- 6V R = 220 Ohms
- 9V R = 390 Ohms
- 12V R = 560 Ohms

LED Mounts



Clip in mounts for securing LEDs in front panels of equipment.

Price Pk	Qty	OD	Hole	LED Ø	RRP	5+
H 1547	10	5.9	5	3	2.50	2.20
H 1548	100	5.9	5	3	16.50	10.95
H 1549	1000	5.9	5	3	99.00	89.00
H 1553	10	7.8	6	5	3.05	2.75
H 1554	100	7.8	6	5	16.50	10.95
H 1555	1000	7.8	6	5	103.95	93.55