

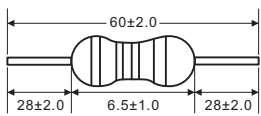
## 160pcs 3mm Standard LED with 300mm Cable assortment with LED mount and pre-resistor Item No.: 18010011

This range of experiments and practitioners with superbright standard LEDs with a diameter of 3 mm, approx. 30 cm flexible strands (stand on) and various series resistors is ideal for immediate start in experiments with semiconductor light. Through resistor combinations of parallel or series connection or varying the supply voltage, different operating currents (brightnesses) can be realized. Addition LED mounting clips for easy mount and installation onto casing or panel.

A brief description of the components contained is clearly printed on the inside of the lid.



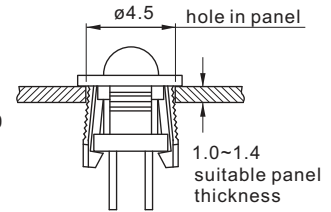
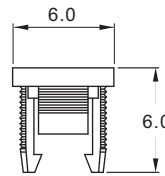
### Carbon Film Fixed Resistor



	1st digit	2nd digit	multiply	tolerance
Black	0	0	1Ω	
Brown	1	1	10Ω	1%
Red	2	2	100Ω	2%
Orange	3	3	1KΩ	
Yellow	4	4	10KΩ	
Green	5	5	100KΩ	0.50%
Blue	6	6	1MΩ	0.25%
Violet	7	7	10MΩ	0.10%
Grey	8	8		0.05%
White	9	9		
Gold				5%
Silver				10%

Resistance - 220Ω, 470Ω, 680Ω, 1KΩ  
Rated Power - 0.25W  
Maximum Working Voltage - 250V  
Maximum Overload Voltage - 500V  
Dielectric Withstanding Voltage - 350V

### LED Mounting Clips



Material: PA66, 94V-2  
Color: Black  
Operating Temperature: -10~75°C



Achtung: Leuchtdioden müssen immer durch Vorwiderstand oder Konstantstromquelle strombegrenzt werden!  
Attention: Do not drive LEDs without forward-current limitation (pre-resistor or constant current source)

Light Source	Red	Blue	Green	Yellow	Cold White	Warm White
Lens color	Diffuse	Diffuse	Diffuse	Diffuse	Water clear	Water clear
Chip material	Gap	InGaAIP	InGaAIP	Gap	InGaAIP	InGaAIP
Wavelength / color temperature	625-635nm	460-465nm	568-572nm	587-590nm	8000-9000K	3000-3200K
Max. Luminous intensity	600 mcd	1500 mcd	100 mcd	600 mcd	8000 mcd	9000 mcd
Viewing angle (typ.)	30°	30°	30°	30°	30°	25°
Forward current (max.)	20 mA	20 mA	20 mA	20 mA	20 mA	20 mA
Forward voltage (typ.)	2.0 V	3.0 V	2.0 V	2.0 V	3.0 V	3.0 V
Operating temperature	-25°C - 80°C					
Storage temperature	-30°C - 100°C					