

# VOLTAGE DROP CHART

Voltage drop occurs when the voltage decreases as current flows through a strip due to wire and connector resistance. This can cause reduced brightness at the end of longer strips or with inadequate power supplies. Therefore, accounting for voltage drop is essential in designing and installing LED strips to ensure even brightness and proper operation.

On the chart below, calculate the total wattage load while selecting the distance to your driver. Use this chart for 24V system including dimmer.

## Voltage drop & distance from driver chart (3% drop)

Wire Gauge Wattage	10AWG	12AWG	14AWG	16AWG	18AWG	20AWG	22AWG	24AWG
5W	1730 ft	1090 ft	680 ft	430 ft	270 ft	170 ft	107 ft	68 ft
10W	784 ft	539 ft	345 ft	215 ft	134 ft	85 ft	52 ft	34 ft
15W	576 ft	363 ft	228 ft	144 ft	91 ft	57 ft	36 ft	23 ft
20W	397 ft	272 ft	174 ft	109 ft	68 ft	43 ft	27 ft	17 ft
25W	346 ft	218 ft	137 ft	86 ft	55 ft	34 ft	22 ft	14 ft
30W	263 ft	181 ft	115 ft	72 ft	45 ft	27 ft	17 ft	12 ft
35W	247 ft	156 ft	98 ft	62 ft	39 ft	25 ft	16 ft	10 ft
40W	197 ft	135 ft	86 ft	54 ft	33 ft	21 ft	13 ft	9 ft
45W	192 ft	121 ft	76 ft	48 ft	31 ft	19 ft	12 ft	8 ft
50W	158 ft	108 ft	69 ft	43 ft	27 ft	17 ft	10.5 ft	7 ft
60W	131 ft	90 ft	57 ft	36 ft	22 ft	14 ft	9 ft	6 ft
70W	112 ft	77 ft	49 ft	31 ft	19 ft	12 ft	7.5 ft	5 ft
80W	98 ft	68 ft	43 ft	27 ft	17 ft	11 ft	6.8 ft	5 ft
90W	97 ft	61 ft	39 ft	24 ft	15 ft	9 ft	6 ft	4 ft
100W	82 ft	56 ft	36 ft	22 ft	14 ft	8 ft	5.3 ft	4 ft