

# Voltage Drop

## Voltage Drop Charts

For best performance and lumen output, ensure proper wire gauge is installed to compensate for voltage drop of low voltage circuits.

12V Voltage Drop & Wire Length Distance Chart

	5W 0.42A	10W 0.83A	20W 1.67A	30W 2.5A	40W 3.33A	50W 4.17A	60W 5A
18 AWG	65 ft.	32 ft.	16 ft.	10 ft.	8 ft.	6 ft.	5 ft.
16 AWG	100 ft.	50 ft.	25 ft.	16 ft.	12 ft.	10 ft.	8 ft.
14 AWG	160 ft.	79 ft.	39 ft.	26 ft.	20 ft.	16 ft.	13 ft.
12 AWG	240 ft.	120 ft.	59 ft.	39 ft.	30 ft.	24 ft.	20 ft.
10 AWG	392 ft.	196 ft.	98 ft.	65 ft.	49 ft.	39 ft.	32 ft.

- Determine load size.** Lets assume the load is 55W. Round up to the nearest load.
- Determine distance from power supply to load.** Let's assume the distance is 32 ft. Round up to the nearest distance.
- See the recommended wire gauge** to install to eliminate excess voltage drop. Recommended wire gauge is 10AWG.

24V Voltage Drop & Wire Length Distance Chart

	5W 0.21A	10W 0.42A	20W 0.83A	30W 1.25A	40W 1.67A	50W 2.08A	60W 2.5A	70W 2.92A	80W 3.33A	90W 3.75A	100W 4.17A
18 AWG	261 ft.	130 ft.	65 ft.	43 ft.	32 ft.	26 ft.	21 ft.	18 ft.	16 ft.	14 ft.	13 ft.
16 AWG	401 ft.	200 ft.	100 ft.	66 ft.	50 ft.	40 ft.	33 ft.	28 ft.	25 ft.	22 ft.	20 ft.
14 AWG	639 ft.	319 ft.	160 ft.	106 ft.	79 ft.	63 ft.	53 ft.	45 ft.	39 ft.	35 ft.	31 ft.
12 AWG	959 ft.	479 ft.	240 ft.	160 ft.	120 ft.	95 ft.	79 ft.	68 ft.	59 ft.	53 ft.	47 ft.
10 AWG	1570 ft.	785 ft.	392 ft.	261 ft.	196 ft.	157 ft.	130 ft.	112 ft.	98 ft.	87 ft.	78 ft.