

Calculate the total wattage in your LED lighting system design

Steps

- Using the chart below, determine the watts used in each leg of lighting. A straight run is considered one leg. A center feed is two equal lengths of lighting. An array can have many legs. As a best practice, use the next longer length on the chart to determine the approximate wattage per leg. Include only the lengths of the LED tape in your calculation, not the connecting wires.
- Add together the watts used for each leg of lighting to get total watts used in your lighting layout. Note that watts shown in the chart represent the approximate watts used when your color RGB LEDs are set at full bright white.

RibbonFlex Pro Series 30/270, Model RF3528030, 30 LEDs per meter										
Approximate watts used per foot (and meter) at full brightness										
Feet	3.3	6.6	9.8	13	16.4	19.7	26.2	32.8	39.3	46
Meters	1	2	3	4	5	6	8	10	12	14
Watts used	3	6	8	10	12	14	15	17	18	19
Maximum recommended tape length										
Straight run configuration	46 ft. (14 meters) – will use approximately 19 watts									
Center feed / loop back configuration	92 ft. (28 meters) – will use approximately 38 watts									

RibbonFlex Pro Series 30/400, Model RF2835030, 30 LEDs per meter														
Approximate watts used per foot (and meter) at full brightness														
Feet	1.6	3.3	4.9	6.6	8.2	9.8	11.5	13.1	16.4	19.7	23.0	26.2	29.5	32.8
Meters	0.5	1	1.5	2	2.5	3	3.5	4	5	6	7	8	9	10
Watts used	2.3	4.5	6.5	8.5	10.3	12.0	13.5	15.0	17.3	19.2	20.5	21.6	22.3	23.0
Maximum recommended tape length														
Straight run configuration	32.8 ft. (10 meters) – will use approximately 23 watts													
Center feed / loop back configuration	65.6 ft. (20 meters) – will use approximately 46 watts													

RibbonFlex Pro Series 60/525, Model RF3528060, 60 LEDs per meter										
Approximate watts used per foot (and meter) at full brightness										
Feet	1.6	3.3	4.9	6.6	8.2	9.8	13	16.4	19.7	23
Meters	0.5	1	1.5	2	2.5	3	4	5	6	7
Watts used	3	6	9	12	14	16	19	22	24	26
Maximum recommended tape length										
Straight run configuration	23 ft. (7 meters) – will use approximately 26 watts									
Center feed / loop back configuration	46 ft. (14 meters) – will use approximately 52 watts									

RibbonFlex Pro Series 60/800, Model RF2835060, 60 LEDs per meter										
Approximate watts used per foot (and meter) at full brightness										
Feet	1.6	3.3	4.9	6.6	8.2	9.8	11.5	13	14.8	16.4
Meters	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Watts used	5	9	13	16	19	22	24	25	27	28
Maximum recommended tape length										
Straight run configuration	16.4 ft. (5 meters) – will use approximately 28 watts									
Center feed / loop back configuration	32.8 ft. (10 meters) – will use approximately 56 watts									

RibbonFlex Pro Series 120/950, Model RF3528120, 120 LEDs per meter										
Approximate watts used per foot (and meter) at full brightness										
Feet	1.6	3.3	4.9	6.6	8.2	9.8	11.5	13	14.8	16.4
Meters	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5
Watts used	6	11	16	20	23	26	29	31	34	36
Maximum recommended tape length										
Straight run configuration	16.4 ft. (5 meters) – will use approximately 36 watts									
Center feed / loop back configuration	32.8 ft. (10 meters) – will use approximately 72 watts									

Notes

- Watts used is the power consumed by your LED lighting system, not the watt rating of a power supply. Always choose a power supply rated greater than your needs.
- The watts used, as shown, are based on 100% full brightness white light. Color changing or dimming of LED lighting will use less power and extend the life of LEDs.
- Due to voltage drop, longer lengths of LED tape will use fewer watts per meter than shorter lengths. To accurately measure watts used by your LED lighting system, use a multimeter. Watts are calculated by multiplying volts by amps used in your LED system.

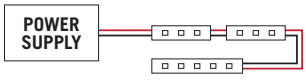
Model RF5050030-V2RGB, 30 LEDs per meter										
Approximate watts used per foot (and meter) at 100% bright white										
Feet	1.6	3.3	6.6	9.8	13	16.4	19.7	23	26.2	32.8
Meters	0.5	1	2	3	4	5	6	7	8	10
Watts used	4	8	15	21	25	29	32	35	38	40
Maximum recommended tape length										
Straight run configuration	32.8 ft. (10 meters) – will use approximately 40 watts									
Center feed / loop back configuration	65.6 ft. (20 meters) – will use approximately 80 watts									

Model RF5050060-V2RGB, 60 LEDs per meter												
Approximate watts used per foot (and meter) at 100% bright white												
Feet	1.6	3.3	4.9	6.6	8.2	9.8	11.5	13	14.8	16.4		
Meters	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5		
Watts used	8	15	22	28	33	37	41	44	46	48		
Maximum recommended tape length												
Straight run configuration	16.4 ft. (5 meters) – will use approximately 48 watts											
Center feed / loop back configuration	32.8 ft. (10 meters) – will use approximately 96 watts											

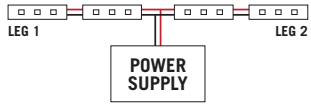
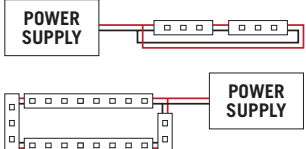
Typical Design Configurations

Straight Run

Only one end of the LED strip is powered. Multiple strips can be connected in a series for a continuous run. LEDs farther away from the power supply may appear dimmer due to voltage drop, especially if longer wires are used in between to connect strips.



Center Feed / Loop Back

Either power two equal legs of tape lighting from the center or loop back and power both ends of the LED tape. These configurations will produce more consistent brightness and color over the length of the strip. A loop back is excellent for room perimeter tray ceiling or cove lighting.

Array

An array uses two or more legs of various lengths wired to a power supply in a parallel connection. You will need to calculate total wattage used in an array to guard against overloading the power supply.

