

Sparkfun SMD LED String Tests, 10M, 100 LEDs

These interesting 10 meter (33') long thin-wire strings have a tiny LED mounted every 10cm (~4"). And they're cool. Very nifty. But there's been questions about how bright they really are, and what power they consume? So, over we go to the lab bench!

Tests were done using a calibrated Phidgets lux sensor, on the *last* LED of the 100-LED chain, which should be the dimmest. The LED was positioned on the sensor to achieve the highest

illumination reading, and the voltages varied to generate the results table below.

The RGB values were most difficult due to their built-in blinking pattern, so the 3 values listed for each voltage are approximate readings as best gathered by observation.

For all tests, the 7.5V rating generated substantial heat in the current-limiting resistor, and should generally be avoided.

RGB 50901		
V	I (mA)	Lux
3V	37	380/0/0
4.5V	73	550/10/0
6.0V	120	1400/300/40
7.5V	171	2200/800/200

Red 50902		
V	I (mA)	Lux
3V	25	266
4.5V	46	546
6.0V	80	746
7.5V	115	948

Yellow 50904		
V	I (mA)	Lux
3V	25	120
4.5V	44	272
6.0V	79	400
7.5V	115	496

Green 50906		
V	I (mA)	Lux
3V	20	1531
4.5V	48	4955
6.0V	89	8003
7.5V	132	10670

Blue 50908		
V	I (mA)	Lux
3V	14	1018
4.5V	38	3716
6.0V	80	5721
7.5V	123	7629

White 50910		
V	I (mA)	Lux
3V	14	1424
4.5V	40	5454
6.0V	82	8600
7.5V	131	11466

Warm White 50912		
V	I (mA)	Lux
3V	12	630
4.5V	40	2301
6.0V	80	3716
7.5V	125	5075

Orange 50914		
V	I (mA)	Lux
3V	23	764
4.5V	44	1685
6.0V	78	2141
7.5V	113	2532

Pink 50916		
V	I (mA)	Lux
3V	25	419
4.5V	46	840
6.0V	80	1148
7.5V	115	1391

Purple 50918		
V	I (mA)	Lux
3V	4	882
4.5V	40	3142
6.0V	84	4723
7.5V	129	6000