

Your Home. Your Holidays. Your Way.

HALO HOME LIGHTING

PERMANENT LIGHTING





Why Choose HALO?

One-Time Installation. Lifetime Enjoyment

Say goodbye to tangled cords and risky ladders and rooftop climbs. Our professional-grade LED lighting system is installed once and lasts for decades—with no need to take it down. We exclusively use best-in-class RGBW technology for superior colors and brightness.

Endless Customization

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Whether it's Christmas, Halloween, birthday, graduation, special event, or your favorite team's game day, you can instantly change the color and pattern of your lights with our easy-to-use app.

*Invisible by Day - Stunning by Night!

Our lights are designed to be discreet during the day and dazzling at night—adding style, curb appeal, and security to your home. These are premium level, the best in class for stunningly bright output and dazzling compared to most other companies' lights. We color match our light housings to match your home trim or fascia color to blend in and be nearly invisible in the daytime.

*Meets all HOA rules as they are down facing lights approved for 'dark sky' neighborhoods.

Built for Arizona

Our lights are UV-protected, weatherproof, and heat-rated for the extreme conditions of Southwest.

Smart Investment

With energy-efficient UL® approved LEDs and no need for seasonal installs, Halo saves you time and money every year—while boosting your home's value and curb appeal if you ever sell.

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We serve homeowners across Arizona with free custom quotes, professional service, and a satisfaction guarantee.

Ready to light up your home?

RGBW 4-in-1 LED Technology:

Each light gives off 2000+ lumens and a 140° beam angle.

The design ensures clear, super bright lighting for everyday use and holiday displays.

DIY Individual Light Control:

You can easily change each light's color, brightness, and settings, 14 million colors, perfect for decorations for any occasion and doubles to provide home security illumination.

Scene Modes for Any Occasion:

With over 55 customizable scene modes, these lights set the right mood for Christmas, Halloween, birthdays, graduations, July 4th or any celebration.

Reliable Durability:

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Crafted from UV-resistant materials with an IP67 waterproof rating, these lights withstand rain, and extreme temperatures (-22°F to 176°F), making them perfect for permanent outdoor use.

Control Method:

Control your lights through our exclusive cell phone and pad App.

Versatile for Any Celebration:

These lights work for every holiday and party, providing dynamic lighting effects to enhance any event. They can be synchronized with any music you choose.

Light Optics	Diffused, gasket wrap-around lens designed for wide illumination of 140 degree beam angle. RGBW Pure True Warm White (most competitors: beam angle - 100-120 degrees, most are RGB and cannot produce soft-white)	
Output	2,372 lumens (=99lm/W efficacy) 1.8 watts per light (competitiors: 1000-2000 lumens, 0.9-1.2 watts)	
Color Temperature	4000-6000 Kelvin – True White – CRI-80	
Housing / wiring	Rust-free polycarbonate to match eave, 217 classic RAL colors (K7 Color chart). Premium 16 guage 2 pin wire, waterproof junction box.	
Track Information	12 inch spacing. Installation of tracks is easier with longer spacing between bulbs. Less bulbs end up on corners which means less shortening or lengthening in order to accommodate the install. This results in more consistent spacing of all the lights.	
Controller Type	App	
Certifications	IP67. UL Wet location, FCC, R0HS	
Additional Features	Energy Efficient, Dimmable, IP67 Waterproof, RGBW 5 in 1 LED, Color Changing	
Connectivity Protocol	Wi-Fi, Bluetooth	
LED Rated Lifespan	100,000 Hours	
Warranty	Lights, Power Supplies, Wiring, and Controllers	

The Difference between RGB and RGBW LED Lights? Halo™ Permanent Lighting - we use only RGBW*

*In fact, from the name, we can also see that the main difference between RGB and RGBW is that RGBW has an additional "W". What does "W" mean? It's actually "white", which allows RGBW LED lights to provide a richer color palette, more precise performance, and better brighter, full-spectrum lighting than RGB lights.

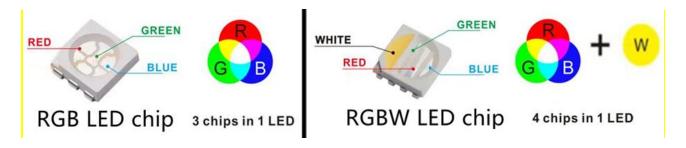
Table briefly explains the significant differences between RGB and RGBW.

Difference between RGB and RGBW LED Strips

Features	RGB LED Lights	RGBW LED Lights
Chip	3-in-1 LED chip	4-in-1 LED chip
CRI	Lower	High
Full Spectrum	No	Yes
Application	General functional lighting	Precise functional lighting
Foot	4	5
Brightness	Bright	Pure White-Bright
Price	Normal	Medium

The most critical factor in deciding whether it is RGB or RGBW is the LED chip.

Image shows the key difference between the RGB and RGBW LED.



Difference between LED chips of RGB and RGBW

RGB VS RGBW is a hot topic for many people. They have been appeared for various lighting applications for many years and also had an impact on lighting design. When you need to purchase a colorful LED strip and send an inquiry to the LED strip supplier, you may be confused about RGB and RGBW, so what's the difference between RGB and RGBW? Now, this article will help us to see the difference between RGB and RGBW in detail.

What is RGB?

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RGB is based on multiple combinations of three optical primary colors, Red, Green, and Blue, and is designed from the principle of color light emission. To put it simply, RGB pixel LED light can be regarded as three

lights of red, green, and blue. When their lights are superimposed on each other, the colors are mixed, and the mixed brightness is equal to the sum of the two lights; the higher the mixing degree, the higher the brightness.

What is RGBW?

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☆ ☆ RGB appeared earlier than RGBW and has a long history of development, which has brought more possibilities for achieving more LED lighting effects. In principle, pure white can be obtained by mixing the three primary colors of red, green and blue at a ratio of 1:1:1. But in fact, this kind of mixing is more complicated, and the white obtained is not up to the desired effect. You may have seen in advertisements or heard from marketers that RGB LEDs can produce "full-spectrum light" through the mixture, now we can tell you that it's not true.

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RGB color mixing can indeed produce a variety of different colors. But just using the red, green and blue wavelengths is not enough to achieve cool, changeable functional lighting. Even if the standard RGB LED strip lights up in a ratio of 1:1:1, these three colors cannot produce white light. These three primary colors can only produce other colors similar to white by causing gray fading. There are no RGB LED lights that can achieve a true "full-spectrum" effect.

With the development of the lighting industry and market, the requirements for color richness continue to increase. Therefore, a new and upgraded version of **RGBW digital LED tape light** has appeared! RGBW actually adds a white light-emitting chip on the basis of the previous RGB 3 in 1 chip. Or it can be said to be RGBW adds a white sub-pixel on the basis of the original RGB three primary colors to form a RGBW four-color pixel LED.

Halo Permanent lighting does not use the 3 Color diode LEDs but using the superior 4 Color diode.

RGB vs. RGBW

It is not difficult to see that the difference between RGB and RGBW mainly lies in four aspects: chip, CRI, function and application.

(1) RGB (3-in-1 LED chip):

RGB LED lights are made up of Red, Green and Blue three primary colors.

(2) RGBW (4-in-1 LED chip):

RGBW LED lights is made up of Red, Green and Blue and White colors. The extra white color chip is not only added one white color but also can mix with the other 3 colors to produce more precise and vivid colors.

(3) CRI:

RGBW has higher **Color Rendering Index**, so RGBW LED lights can reflect the original color of the object more truly. That means higher color reproduction using RGBW.





Difference between CRI of RGB and RGBW

(4) Full Spectrum:

With the added white color, RGBW LED can display more kinds and precise colors to achieve a full-color lighting.

(5) Application:

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RGB LED lights are usually used for **lighting projects** without special requirements. RGBW can achieve more kinds of color mixing and has higher color reproduction. RGBW LED lights are suitable for complex and precise lighting.



Difference between application of RGB and RGBW

(6 Brightness:

RGBW is based on RGB by adding white pixels W to form RGBW four-color pixels. RGBW is brighter than RGB,

with better light transmission and lower power consumption.



Difference between brightness of RGB and RGBW

(7) Price:

The RGBW LED strip has a larger application space because of the addition of a white light chip, and the manufacturing process is more complicated, hence price of RGBW is justifiably higher than ordinary RGB lights.

Most of our competiors

We use exclusively

RGB (Lower price)



PCB 3 (3-1) Color Diodes Can only Produce Warm White RGBW (Higher price)



3 (4 in 1) Color Diodes 14 million colors with Pure White

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Difference between price of RGB and RGBW

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#### **Frequently Asked Questions**

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#### (1) Which is better RGB or RGBW?

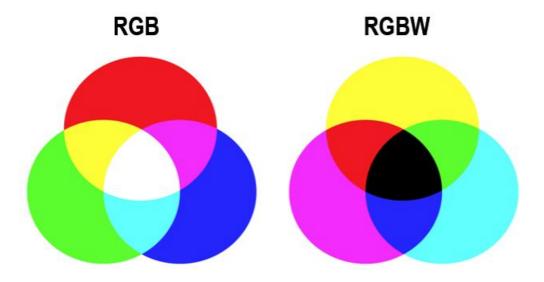
If you just want basic RGB color and don't need pure white light, then a basic RGB LED strip is better, more efficient, and more cost-effective for you. However, if you're looking for a white light option for mixing RGB lights, then RGBW is a great option for you. The RGBW LED offers different bright whites and it also has a special RGB+WW+W Bluetooth and Wi-Fi controller.

#### (2) Why do you need a 4 in 1 chip?

Although RGB can theoretically produce white light, in fact, it does not produce pure white light. But the RGBW LED chip can provide a purer white creates greater possibilities for color mixing, than with the RGB chip, presenting more and richer color changes.

#### (3) Can RGB make black? RGBW does!

RGB works with additive color mixing, **it can't produce black**. Maybe you're confused by CMY, where you add colors together to get black, but those colors are used for paint, so it doesn't apply in your case to LED lighting.



#### (4) Which one to choose between RGB and RGBW?

RGBW LED lights have two technical advantages:

- a. The same brightness consumes lower power consumption.
- b. The same power consumption can achieve greater brightness.

If you only need basic RGB colors standard RGB LED strips are sometimes lower in cost.

However, RGBW is a better choice as you will get more powerful application functions, brightness, scene possibilities and customization options.

#### (5) Average Costs

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- According to HomeGuide®, installed permanent LED lighting typically is between \$25 to \$40 per linear foot, with full installations averaging \$2,000–\$8,000 for about 100–200 ft of coverage.
- Several well known local companies normal quotes (depending on the season) are between \$25 to \$35 per foot installed, homeowners spending \$3,000–\$6,000 total (average around \$4,600) cost varies according home being one or two-story and the complexity of roof / eave angles.
- These figures are based on market averages; request a personalized quote for your home to get accurate pricing. We happily do free estimates use contact information below!

# Your Home. Your Holidays. Your Way.

We serve homeowners across Arizona with free custom quotes, professional service, and a satisfaction guarantee.

Ready to light up your home?

CARL JOHNSON 480-399-1462 <u>info@sensiblesolaraz.com</u> SENSIBLE SOLAR AZ™ & HALO™ PERMANENT LIGHTING EXPERT

Click or go to fill out request for a free estimate: https://www.halohomelighting.com/?rep=carl



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# Sensible Solar Az





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#### AMAZING \$0 SOLAR – ASK ABOUT OUR SOLAR PROGRAMS

A smart, wonderful, and sensible way to obtain all the advantages of low-cost solar electricity at \$0 out-of-pocket without having to buy a solar system costing tens of thousands of dollars.

Experts at integrating the Revolutionary Tesla<sup>TM</sup> Powerwall®, Enphase<sup>TM</sup>, & Solar Edge<sup>TM</sup> Battery Storage to Power Your Home Night & Day!











#### **Solar & Solar+Battery Programs**

We create and install a custom system at no cost to you and maintain, warranty, and monitor it for 25 years. You become a generator of your own energy at a much lower cost than you currently buy from your utility. There is absolutely no cost or out of pocket ever for your system, plus no lien on your home.

#### HOW IS THIS POSSIBLE? YOU DON'T GET SOMETHING FOR NOTHING!?

It's really quite simple: APS energy is expensive and has historically increased yearly, however electricity can be produced on your roof for significantly less per kWh. Simple, all you pay is one low-fixed cost payment for electricity your system generates; we take care of the rest.

#### PURCHASE WITH CASH / FINANCING? WE HAVE GREAT PRICES

Fact: Solar energy averages 25-40% less expensive when produced on your roof.

What I do is replace the high-cost energy from your utility with a custom-designed solar system.

No lien placed on your home, guaranteed no-fee transfer to new owner should you want to sell in the future.

Each month after solar, you receive two statements: <u>APS and Solar</u>. Your <u>APS statement</u> will now show energy credits with only a small grid connection fee, since you now generate your own power detailing all credits for excess energy your system produces and returns to the grid. Those who lease, you receive a <u>Solar statement</u>, a fixed-cost billing only for the electricity you generate, much less expensive than what you were paying monthly to the utility.

You swap bills, all charges normally paid to your utility you now substitute for much lower cost solar electricity produced by your own system.

A truly great benefit of installing solar is that any excess energy you generate is measured, fed back into the grid, and is registered as a credit on your APS bill. Typically, homeowners use less than half of their solar energy they generate in the fall, winter, and spring and even the summer when a snowbird! The over production, plus any Tesla® battery storage excess is sent back to the grid, metered & registered as credits offsetting 16+ misc. fees, surcharges, & taxes on your APS bill! Look at your bill, total on a calculator, they are 45-65% of your bill! Solar credits rollover, accrue monthly, every January you are paid an energy buyback check for the surplus! Free from junk fees, surcharges and taxes with solar! APS pays you, sweet!