

Shopping for Grow Lights? Learn the Optimal Number of Lumens Required for Your Plants.



If you're venturing into the realm of indoor gardening, one essential tool you'll need to master is the grow light. These artificial light sources mimic the sun's rays, providing the energy necessary for plants to thrive. However, choosing the best grow lights for plants can be a daunting task. After all, there are a large number of options on the market. You want to stay frugal but you want to get a good light. One thing to consider is the number of lumens required for your plants.

What Are Lumens?

Lumens are a unit of measurement used to quantify the total amount of visible light emitted by a light source. This is

calculated as it is perceived by the human eye. In simpler terms, lumens are a measure of how bright a light appears to us.

The concept of lumens is based on the sensitivity of the human eye to different wavelengths of light. The eye is more sensitive to green-yellow light, so light sources that emit more light in this range will appear brighter to us.

Brighter Isn't Always Better

In the context of grow lights, lumens can be somewhat misleading. That's because plants have different light requirements than humans. Whereas lumens are measure by how our eyes perceive them, a plant's "eyes" would see them differently. Plants primarily use specific wavelengths of light in the blue and red spectrum for photosynthesis. Therefore, even though a grow light might have a high lumen output, it may not provide the right light spectrum or intensity that plants need for healthy growth. Nevertheless, lumens are one good indicator to look at when choosing the best grow lights for your plants.

Lumens and the Best Grow Lights for Plants

Let's start out speaking generally. First, higher lumens generally indicate a brighter light output. If you know that you have plants that need a lot of bright light, then you might want to look for grow lights with higher lumens. But what's a high number for lumens? Most grow lights will offer between 2000 – 10000 lumens per square foot, so plants that need a lot of light will be closer to that 10000.

As a very general guideline, some indoor growers

recommend around:

- 2000 to 5000 lumens per square foot for low-light plants
- 5000 to 7000 lumens per square foot for medium-light plants
- 7000 to 10000 lumens per square foot for high-light plants

What does that mean?

Low-light plants can tolerate indirect or filtered light. They are ideal for areas in your home or office with less intense light levels. Examples include spider plants and snake plants as well as peace lilies.

Medium-light plants thrive in moderate light levels and can tolerate some direct sunlight. Placing them in locations with a bit more light will help them grow and remain healthy. Examples include philodendron, African violets, and Boston fern.

High-light plants benefit from intense light exposure, making them well-suited for use with high-output grow lights. They are often cultivated for their flowers, fruits, or specific culinary uses. Tomato and basil plants are common examples. Orchids are also in this category.

The Best Low, Medium and High Light Grow Lights for Plants

If you're ready to start looking at some good options for grow lights, then you can head to Amazon to get started. Here are some top options in each category:

Low Light Grow Lights

- [GYTF's T5 White Full Spectrum LED Plant Growing Lamp Strips](#) are 3000 lumens. They have very bright LED bulbs

that provide full spectrum light. This is great for plants. You can get them in packs of 2, 3 or 4 ranging in price from \$19.99 to \$34.99.

- FECiDA's Desk Grow Lights for Indoor plants are another good option at 2000 lumens. These are designed to sit nicely on your desk. They have an adjustable height of 16" – 24". They cost a little over \$30 on Amazon.
- Need something a little taller? LBW's Adjustable Tripod Stand adjusts to between 15 and 48 inches. It's 3800 lumens.
- Monios-L T8 LED Grow Light 4FT grow light strips are 4300 lumens, so they're at the higher end for low light grow lights.

Medium Light Grow Lights

MILYN's 100W Led Grow Light Bulb is 5000 lumens. If you have a range of low-light and medium-light plants then you might want to try these.

[FECiDA's 600W LED Grow Light Dimmable lights](#) are good for seed starting and for medium-light plants. It offers 5000 lumens.

High Light Grow Lights

FECiDA's dimmable lights don't just come in the 600W. There's also a 1000W and even a 2000W. These offer 12000 and 20000 lumens respectively. Therefore, if you primarily grow indoor plants that fruit or flower, then you might want to check out what they have to offer.

In Addition to Lumens: PPF

If you want to use lumens as a rough reference, you can look for grow lights with higher lumen outputs, but it's crucial to also consider the light spectrum and coverage area. For example, plants in the vegetative stage require a higher proportion of blue light, while flowering and fruiting plants

benefit from more red light. Therefore, a balanced spectrum with a higher total output of usable PAR light would be more valuable than just looking at lumens.

If you want to dig deeper, then you should also look at [Photosynthetic Photon Flux Density](#) (PPFD). PPFD measures the number of photons in the photosynthetically active radiation (PAR) range that reach a specific area (usually measured in micromoles per square meter per second, $\mu\text{mol}/\text{m}^2/\text{s}$).

Different plants have varying PPFD requirements at different stages of growth. It's crucial to provide the right amount of light for optimal photosynthesis and overall health. Therefore, when shopping for grow lights, it's essential to consider the light's PPFD output and its spectral distribution (the balance of red and blue light), rather than focusing solely on lumens.

But, getting the right number of lumens is a great place to start! It will help you narrow down the options. Then you can choose among those select options by looking at PPFD, cost, and other details.

Read More:

- [6 Inexpensive Grow Lights for Indoor Plants](#)
- [6 Tips to Revive Wilted Plants](#)
- [Container Gardening: Fabric Pots vs. Plastic Pots](#)

7 Tips for Buying Gardening

Materials Online

For anyone who loves to garden, there's nothing quite like the feeling of finally finding that perfect plant or piece of equipment. But with so many options available online, it can be hard to know where to start. Here are a few tips to help you find the best gardening materials online.

1. Only Buy From Secure Sites

When making any purchase online, it's important to only buy from secure sites. Look for the 'HTTPS' in the URL before entering any personal or financial information. This will ensure that your information is encrypted and safe from hackers.

If a site doesn't have this security measure, move on to another one. There are plenty of reputable gardening retailers out there, so there's no need to take any chances. Additionally, make sure to only use your credit card on secure sites. This will help protect you from fraud in the event that your information is compromised.

2. Read Reviews

One of the most common forms of [internet crime](#) involves using the internet to communicate false information about a product or service. When looking for gardening materials online, be sure to read reviews from multiple sources before making a purchase.

This will help you better understand what others thought about the product before you commit to anything. Additionally, take the time to read the company's return policy before making a purchase. This way, you'll know what to do if you're not satisfied with your purchase.

3. Check the Shipping Costs

One of the biggest mistakes people make when shopping online is forgetting to factor in shipping costs. Be sure to check the shipping cost of any item you're considering before adding it to your cart.

In some cases, the shipping cost may be more than the actual product. If this is the case, look for another retailer that offers free or discounted shipping.

4. Check for Warranties and Guarantees

When you're buying expensive gardening equipment, it's important to ensure that it comes with a warranty or guarantee. This will protect you in the event that the product arrives damaged or doesn't work as advertised.

Be sure to read the fine print of any warranty or guarantee before making a purchase. This way, you'll know exactly what's covered and for how long. Additionally, many retailers offer extended warranties for an additional fee. If you're planning on using the equipment frequently, it may be worth considering this option.

5. Consider Durability

Gardening equipment can be expensive, so you'll want to ensure that it's built to last. When you're shopping online, look for products that are made from high-quality materials. For example, while a good garden hose can last up to [ten years](#), a cheap one may only last one season.

Additionally, pay attention to the process used to construct the product. For example, look for products that are forged rather than cast. Because forged components have [37%](#) greater fatigue strength than cast components, they have a six-time longer fatigue life. This means that they're less likely to

break under heavy use.

6. Compare Prices

Never forget to compare prices before making a purchase. With so many retailers competing for your business, there's sure to be a wide range of prices for the same product.

Take the time to find the best deal before committing to anything. Additionally, be sure to sign up for newsletters and follow your favorite retailers on social media. This way, you'll be the first to know about any sales or discounts.

7. Know When to Shop

Finally, it's important to know when to shop in order to get the best deals. Many retailers offer discounts at certain times of the year, so it's important to be aware of these dates. For example, many retailers offer discounts on gardening equipment in the spring. This is because it's the time of year when people are most likely to start working on their gardens.

So, if you're looking for gardening materials, be sure to keep these tips in mind. By following these simple tips, you'll be able to find everything you need at the best possible price. Happy shopping.

4 Frugal DIY Drip Irrigation Systems



4 FRUGAL DIY

Drip Irrigation Systems

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Buying a fancy drip irrigation system is one way to go. But

it'll cost you. Instead, consider a DIY drip irrigation system. Either way, you'll need to spend time installing irrigation, so why not save a few bucks, too?

Benefits of drip irrigation

You've got a hose or a sprinkler, so why invest time and effort into building a DIY drip irrigation system?

Here are the advantages of this type of watering system:

- **Less water waste.** Water doesn't evaporate as readily with a drip irrigation system.
- **Targeted watering.** Because the tubing is close to plant roots, water gets right to where it needs to go—which means less waste and higher efficiency watering.
- **Less disease spread.** With drip irrigation, water is unlikely to splash onto plant foliage. That means fewer chances for contaminated soil to spread pathogens.
- **Easy watering.** Once installed, an irrigation system makes watering incredibly easy. No more lugging around a heavy hose. You can even install a timer and have the system work completely on its own.
- **Fewer weeds.** Because water goes right to plant roots, weeds are less likely to grow between plants.

DIY drip irrigation systems

You'll need to spend a bit of money on materials to build your DIY drip irrigation system, but the initial cost is worth it, considering how much time you'll save down the line.

Here are some ideas for creating DIY drip irrigation systems:

- **PVC pipes:** Modern Farmer has a great [step-by-step tutorial](#) for creating this kind of drip system.

- **Soda bottles:** This is an easy drip irrigation system for the frugal gardener that costs next to nothing. It's a great option for small space gardeners. Here's a video on how to use soda bottles to create a cheap drip irrigation system:

- **Rain barrel system:** Here's a video that shows you how to use a rain barrel in a drip irrigation system to minimize water waste:

- **Bucket:** Got a bucket? You're in luck! You can build a simple DIY drip irrigation system easily. This video shows how you can pair drip tape or tubing with buckets to create a low-tech irrigation system that doesn't require a hookup to a nearby water source:

This setup is even simpler:

4 Smart Garden Devices That Save Time and Money



Manual work in the garden is sometimes gratifying, but over time the grind becomes tedious. Thankfully, there are a host of smart gardening products out there that can help save you

time and money. Which smart garden devices are worth the investment?

Here are my top 4 smart gadget recommendations for gardeners seeking to save time and spend less money on their edible plots.

Instapark Outdoor Automatic Watering Timer

I recently purchased and installed an automatic watering timer to [water](#) my front yard flower patch. This section of my garden sits under my home's roof overhang so it rarely receives any natural water and my regular hose doesn't reach that far, so it's a pain to water manually. I got some cheap irrigation hoses and connected them to this digital timer (both the hoses and timer cost under \$50) and now this perma-dry spot gets watered on a regular basis. There's a neat option to skip watering days (in case of rain), which I make sure to do so as not to waste water. The whole set up was inexpensive and it saves me loads of time in the long run. Last year, I relied on rainwater to wet this area and I lost quite a few plants, which I had spent time and money starting from seed.

Flexi Hose Expandable Garden Hose

I don't quite know what I was doing before I had this kind of hose. Now, watering is such a breeze it barely feels like a chore. Lugging around a heavy, clunky hose that's hard to put away? That's far from ideal. I'd sometimes skip watering because I hated to untangle the easily kinked hose. A flexible, expandable hose has its own challenges—it's a fair bit more delicate than a heavy-duty hose—but it's always easy to carry throughout the garden and it's a delight to put away since it shrinks down to size once drained. Just be sure to store it away for the winter to prevent the casing from cracking. While this isn't technically a smart device, I think

the design is clever enough to qualify. It has saved me time and money because it makes watering a lot easier and I haven't neglected my watering duties since getting this type of hose.

AcuRite Wireless Rain Gauge

When it comes to gardening, I rely on the weather forecast a lot. No matter how diligent I am in checking the weekly weather predictions, I can't accurately measure the amount of rain my garden gets without the help of a gadget. A plain rain gauge does the trick, but if you like smart technology, this nifty wireless device is a handy monitoring tool. It's a self-emptying collector that's useful for checking how much rainwater your garden is getting. It's also an excellent device for people in flood-prone areas. And it costs under \$50!

Click and Grow Indoor Smart Garden

This intelligent garden system is on the higher end of the price scale, but it's well worth the investment. I've grown so many herbs in this little automated garden that I never buy them at the grocery store anymore. The hydroponic unit makes it possible to grow [greens](#), herbs, and other plants indoors all year round. All you need to do is add water and harvest away!