

# Germicidal UV-C Light



Retail & Hospitality



# Introduction

Thank you for downloading our guide to germicidal UV-C lighting for retail and hospitality businesses!

In this guide you'll find information about UV-C lighting for your specific needs.

## Key Subjects

Here's what you can expect on the next few pages:

- What is germicidal UV-C light?
- A brief history of UV light disinfection
- UV-C lighting for retail and hospitality
- UV-C light fixture options for you

Thanks again for your download. We hope this guide provides you with the information you need to choose UV-C light for your retail/hospitality needs.

*Justin Stouch*

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[Contact me directly!](#)

# What is germicidal UV-C light?

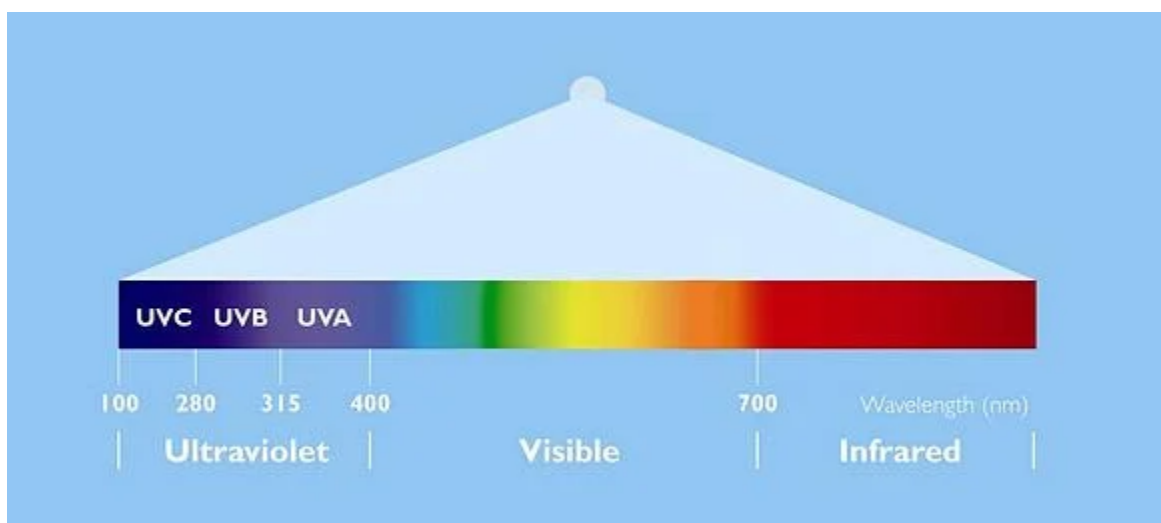
Before we define germicidal UV-C light, we need to define ultraviolet, or UV, light. [We also have a whole blog post on the basics of UV here.](#)

Ultraviolet light is a type of naturally present electromagnetic radiation that is in sunlight and actually makes up approximately 10% of the total light generated by the sun. UV light is electromagnetic energy with wavelengths shorter than visible light but longer than x-rays. The wavelength of this light ranges from 10nm to 400nm and is classified into three sub-bands; UV-A, UV-B, and UV-C.

UV light with wavelengths less than 290nm are considered to have “germicidal” properties. Germicidal means that the light can kill (inactivate) pathogens, just as it sounds. Earth’s atmosphere absorbs ultramagnetic radiation with wavelengths less than 290nm, meaning that most of the UV-C and UV-B generated by the sun is blocked by our planet’s ozone. **Germicidal UV-C light is commonly used to inactivate or kill microbes on surfaces, in air, and in water. When implemented properly, UV-C lighting can kill up to 99.9% of pathogens.**

Germicidal ultraviolet light kills pathogen cells by damaging their DNA. Exposure to the electromagnetic radiation (light) at certain UV wavelengths modifies the genetic material of microorganisms and destroys their ability to reproduce. The UV energy triggers the formation of specific thymine or cystosine dimers in DNA and uracil dimers in RNA, which causes the inactivation of microbes by causing mutations and/or cell death as well as failure to reproduce. ([source](#))

[Looking for UV-C disinfection systems? Click here.](#)



# A Brief History of UV Light Disinfection

The disinfection properties of ultraviolet lighting have been known for over 140 years, since [Downes and Blunt](#) discovered the antibacterial effects of the shorter wavelengths of sunlight. Shortly thereafter, it was proven that the UV portions of the light spectrum were able to destroy microorganisms.

After confirming UV lighting's ability to kill pathogens, the next step was to find a way to replicate the UV wavelengths that would result in the disinfection of surfaces, air, and water. The first UV quartz lamp was invented in 1904 and resulted in the germicidal lamp.

Germicidal lamps are a type of lamp that produce the wavelengths of ultraviolet light (UV-C; 200nm to 280nm) that have disinfection properties, [like the ones used in this study to reuse N95 masks during the coronavirus pandemic](#).

UV disinfection unit in use in operating room:



# UV-C Lighting for Retail & Hospitality

Both retail and hospitality businesses survive based on patron recommendations and reviews, and cleanliness is a vital part of customer satisfaction. In fact, [78% of hotel guests agree that cleanliness is the single most important factor when choosing where to stay](#). And that's just one example.

Below and on the following pages we'll take sectors of the retail and hospitality industries and describe their need for UV-C light disinfection specifically.

## Food & Beverage Service and Processing

[There are an estimated 48 million cases of food-borne illness each year!](#) Food-borne illnesses can wreck a restaurant's or food processing plant's reputation and diminish customer base almost instantly. Also, illnesses spread from staff member to staff member so easily because of the close contact required in the industry, potentially leaving you understaffed. This doesn't even mention FDA recalls of foods because of viral and bacterial outbreaks ([remember when we couldn't eat romaine lettuce?](#)).

Germicidal UV-C light has been proven effective at killing pathogens like E. coli and salmonella, common food-borne bacteria that cause widespread illness. Keep your customers and staff happy and safe by disinfecting your surfaces.

Here are just some food and beverage facilities that can benefit from UV-C disinfection light systems:

- Restaurants
- Food trucks
- Catering businesses
- Banquet halls
- Food processing and packing facilities
- Grocery stores and supermarkets
- Convenience stores
- Food storage facilities



# UV-C Lighting for Retail & Hospitality

## Hotels & Motels

78% of hotel guests agree that cleanliness is the single most important factor when choosing where to stay. Cleanliness and safety have a genuine impact on a hotel's reputation and bottom line.

As we've mentioned, manual cleaning simply does not do enough on its own. Sometimes cleaning this way actually **does more harm than good** as you spread germs from surface to surface. Add in UV-C disinfection procedures to your hotel's "cleaning" and market that to your guests- it's sure to make an impact and convince them to come back again, or stay at other branches.



Guest rooms are a great place to start with UV disinfection in this industry, but the uses for this lighting extend beyond that to conference rooms, restrooms, gyms, pools, banquet halls- any space within your hotel or motel can utilize UVGI (ultraviolet germicidal irradiation), justifying your investment in UV-C systems.

# UV-C Lighting for Retail & Hospitality

## Fitness Industry

Exercise and athletic facilities are at a higher risk for certain infections, think athlete's foot and staph, because of the close contact and the sharing of equipment. Gyms, fitness clubs, recreation centers, pools- all of these spaces are used by so many people each day, and **bacteria thrive** in moist (read: sweat!) settings. Distinguish your gym or athletic club from the others by providing your members with the assurance that their equipment, locker room, etc. is truly clean by adding that extra layer of protection UV-C disinfection light provides.

Here are just some of the specific spaces that can benefit from UV disinfection lighting in the fitness industry:

- Gyms
- Specialty fitness clubs and centers
- Recreation centers, including youth rec
- Public pools
- Basketball courts, tennis courts, hockey rinks- all organized sporting facilities



# UV-C Lighting for Retail & Hospitality

## Travel Industry

Recently, [cruise ships have gotten a lot of attention because of the novel coronavirus](#), which spread rapidly aboard multiple cruises, causing them to dock and isolate all over the world.



[Airlines](#), airports, trains, and train stations are additional spaces where close sustained contact and artificial air, as well as inconsistent manual cleaning, can lead to rapid spread of disease. And both cruise lines and airlines can flourish or fail based on customer safety and satisfaction.

Families love to travel from all around the world to theme parks, like Disney World and Six Flags, for getaways. Massive crowds waiting hours in line and then crowded in small spaces on rides, in bathrooms, in restaurants means swift spread of germs. [Water parks are especially susceptible to spreading bacterial infections.](#)

# UV-C Light Fixture Options For You

Germicidal UV-C lighting is versatile and available in different forms to suit its many applications.

## Mobile UV-C Disinfection Units

Germicidal UV-C light systems are available in portable form as mobile UV-C disinfection units. These units or carts can be moved easily from room to room to disinfect multiple spaces. These could be useful in hotels, as an example, because they could be utilized in so many spaces- individual guest rooms, the fitness center, the pool, food service areas, conference rooms, ballrooms, etc. The unit is placed in the room and activated to disinfect surfaces and air in that particular space. These units are usually on wheels or tripods and are easy to operate and transport.

## UV-C Ceiling and Wall Fixtures

There are several options when it comes to the type of UV-C fixture for your space. Here are a few:

- **Ceiling installed-** These UV-C disinfection fixtures are hung from the ceiling of your facility, often recessed within the ceiling like a conventional troffer, or hung via chain or aircraft cable. Ceiling mounted UV-C light fixtures are extremely effective because you can space them apart appropriately to disinfect your specific space based on size and level of disinfection required.
- **Wall mounted-** Similarly to the ceiling installed fixtures, wall mounted fixtures can be spaced and installed for appropriate disinfection levels based on the size and contours of your facility.



# Top 5 Blogs for You

Want to learn more about UV light disinfection? We have more content for you:

## **What is UVGI? What is UV Disinfection Lighting?**

Frequently asked questions about ultraviolet germicidal irradiation, or UVGI.

## **Using UV Disinfection Lighting to Kill Coronavirus: FAQs, Part I**

Does UV work on coronavirus? How long does it take? Who's using it? These questions and more answered.

## **Using UV Disinfection Lighting to Kill Coronavirus: FAQs, Part II**

FAQs continued from the above post.

## **Is UV Light Safe? FAQs on Safely Using Ultraviolet Disinfection**

How can I use the technology but also keep my students and staff safe? Learn here.

## **Do Sanitizing UV Wands Really Work?**

The short answer: no. But why? We'll tell you in this post.



# Contact Us To Get UV Lighting Units!

We can supply your facility/business with these germ-killing devices. Just fill out the form by clicking the button below.

[CLICK HERE](#)