

CCFL antibacterial light Case studies & customer feedback

- Customer name : **Asahi Shuo-en**
- Purpose of use : **Adopted to promote a safe and secure life for residents and an environment where staff can work comfortably (especially to prevent mold in the bathroom).**

Installed in kitchens, dining rooms, and bathrooms to maintain a safe environment in terms of hygiene.

Highly evaluated as more effective than expected in preventing mold in the bathroom.



- Customer name : **Nakamura Dental Clinic**
- Purpose of use : **To prevent mold in air conditioner filters**



The customer incurred high costs related to the disassembly and cleaning of A/C filters subject to airborne water spray and drill fragments scattered indoors during treatment.

However, after installing the antibacterial light, maintenance frequency decreased and they were surprised at the low degree of dirt.

They also were happy to reduce pollen-based allergies among employees who are worried about symptoms becoming more severe as the season progressed.

- Customer name : **Takada Nursery School**
- Purpose of use : **To improve the indoor environment where children spend their time**

Antibacterial measures were adapted to all nursery rooms, toilets, and school lunch rooms with antibacterial lights. About three weeks after installation, there are no absentees at the Christmas party, which typically has absentees every year. Norovirus, influenza, RS virus, etc. were prevalent but the children were full of energy.

In addition, the smell of the toilet improved. The product is popular.



- Customer name : **Wagokoro**
- Purpose of use : **To provide safer "food" and cut electricity bills**

Achieved "bactericidal effect" and "deodorant effect" without destroying the atmosphere, and has led to lower electricity bills.

The customer is very pleased. Also satisfied that the color of food ingredients does not change due to lighting.

For inquiries

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A light to protect the world
CCFL antibacterial light

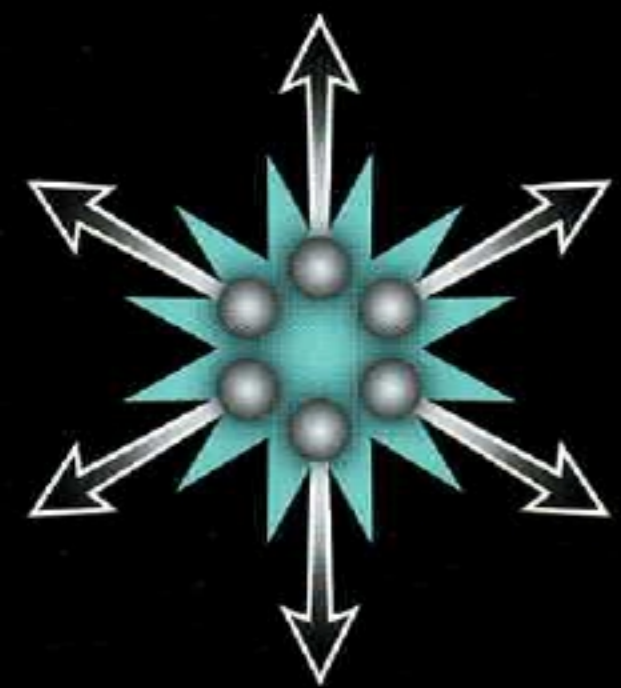
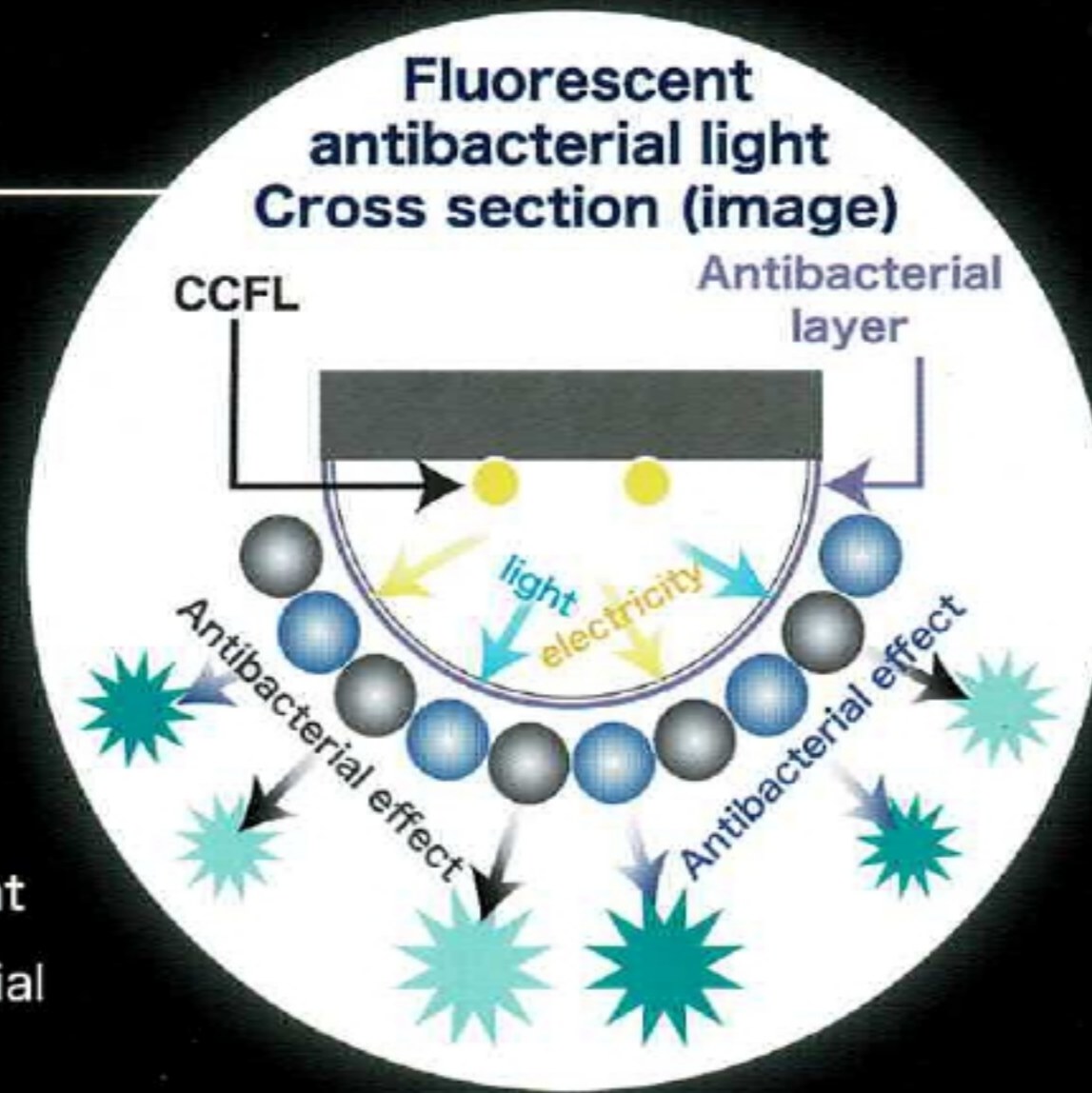
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Patented technology that protects through irradiation

Structure of antibacterial light

The cover of the antibacterial light has antibacterial layers that are applied uniformly to the surface in multiple layers. These layers are comprised of "nano silver" that generates nano ions and "titanium oxide" that activates a photocatalytic effect. The electricity and light emitted from a cold cathode fluorescent lamp (CCFL) act on this antibacterial layer to exert an antibacterial effect.



Sterilization

Silver cations and active oxygen combine to destroy cell membranes! Silver ions enter the cell membrane directly and block enzyme activity to eliminate them.

Nanoion (Ag +)

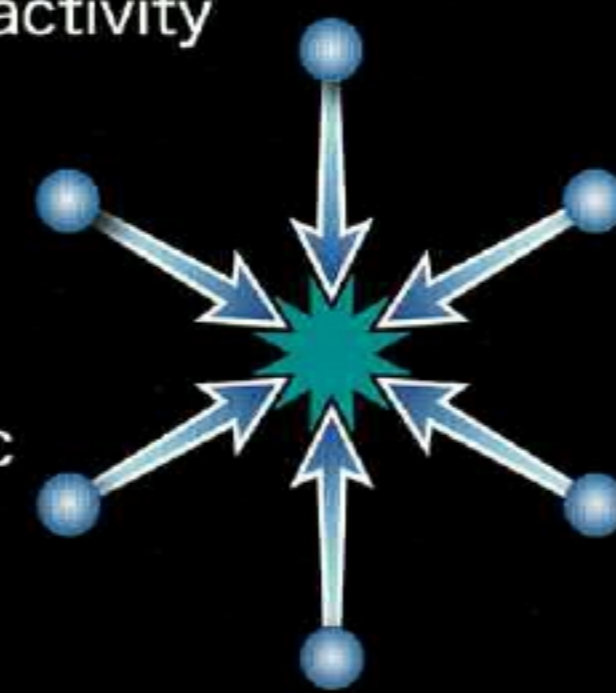
Active oxygen

Hazardous substances
(bacteria, viruses, organic substances, etc.)

Hazardous substances
(dirt, organic substances, pollen, PM2.5 particles, etc.)

Deodorizing / decomposition

Active oxygen is generated by the photocatalytic effect of titanium oxide to oxidatively decompose dirt and hazardous substances.



Antibacterial effect simply by turning on (sterilization, deodorization, antifungal, etc...) Also effective against COVID-19!

1 Effective against more than 650 types of viruses and fungi!

"Silver" is one of the materials coated as an antibacterial agent. Silver is not only considered a natural antibiotic, its finer physical properties are referred to as "nanosilver", **which is said to be effective against more than 650 types of pathogens such as viruses and fungi.** Evaluation results from an international accreditation body confirm that **this light has the effect of inactivating COVID-19** by 61.5% in 4 hours and by 97.5% in 8 hours. A similar inactivating effect has been confirmed for influenza virus and the norovirus.

2 Also helps air purification!

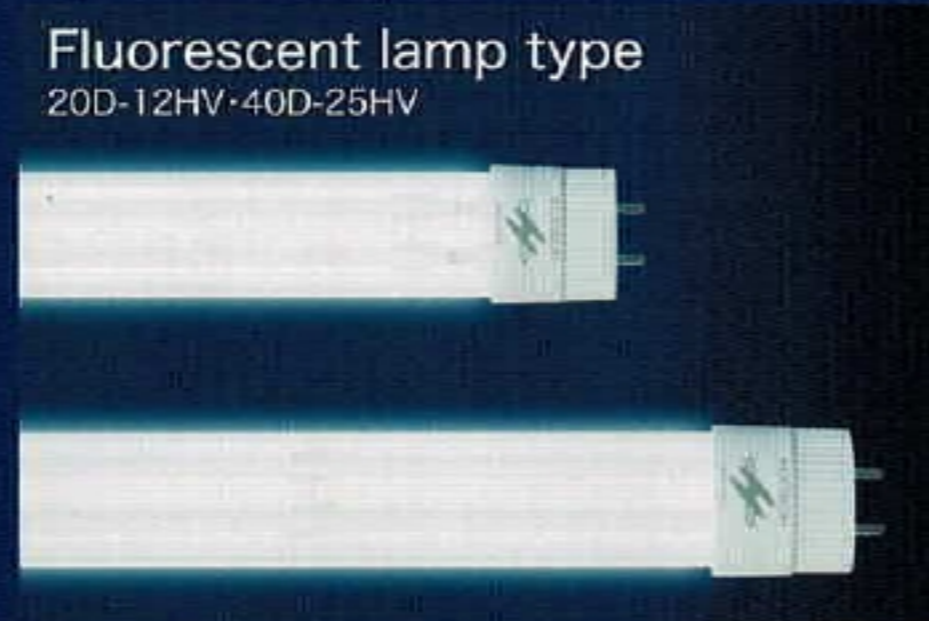
Similar to "silver", another material considered an antibacterial agent is "titanium oxide". Titanium oxide absorbs external light (or ultraviolet rays) to cause a catalytic reaction and produce active oxygen. This active oxygen wraps organic matter (dirt, bacteria) and oxidatively decomposes **it to clean the indoor environment.**

3 For bathroom black mold!

In recent bactericidal effect tests using three culture strains - Aspergillus niger, Penicillium, and Aspergillus niger, in a comparison of those irradiated with antibacterial light and those irradiated with light-shielded (unirradiated) resulted in a 10% reduction in 4 hours and a 30% reduction in 8 hours. This convenient product **eliminates mold** the longer it is used.

Safe and secure light

Unlike "germicidal lamps" that emit ultraviolet rays that are harmful to the human body, the light of antibacterial lights has the same properties as conventional fluorescent lamps, meaning you can use this light with peace of mind.



Long-lasting and energy-saving!

Light that is kind on the eyes!

Easy to install!

Product specifications and range of effect (indoor height of facility : within 2.3 to 3.5m)

Product name	Range of effect	Brightness	Service life	Power consumption	Specifications
Bar light type CCFL-BAR120WFL5 (white)	Approx. 7m ² /unit	4,200lm/210°	40,000h (Approx. 9.1 years with lighting for 12 hours a day)	42w	AC100-240V W230xL1,250xD63mm Weight 2.8kg 5,000K (equivalent to 40w 2 lamp type, built-in inverted Fuji type lamp)
40w type fluorescent lamp multi-power supply type 40D-25HV day white	Approx. 3.3m ² /piece	1,600lm/210°		25w	AC100-240V G13base Weight 310g 5,000K φ32(T10)×1,198mm
20w type fluorescent lamp multi-power supply type 20D-12HV day white	Approx. 2.0m ² /piece	700lm/210°		12w	AC100-240V G13 base Weight 180g 5,000K φ32(T10)×580mm
Light bulb type CCFL-11HV Light bulb color (yellow)	Approx. 1.5m ² /piece	600lm/360°	30,000h (about 6.8 years with lighting for 12 hours a day)	11w	AC100-240V E26 base Weight 96g φ64×129mm Compatible with airtight appliances
Light bulb type CCFL-11HV day white (white)		600lm/360°		12w	AC100-240V Mount embedded hole diameter φ150mm Weight 300g 5,000/2,700K φ180(140)×H53mm
φ150mm downlight type CCFL-D12W (Y)	Approx. 1.5-2m ² /piece	520lm/180°		12w	AC100-240V Mount embedded hole diameter φ125mm Weight 220g 5,000/2,700K φ140(100)×H53mm
φ125mm downlight type CCFL-D10W (Y)		480lm/180°		10w	AC100-240V Mount embedded hole diameter φ125mm Weight 220g 5,000/2,700K φ140(100)×H53mm