

Hygiene Lighting with HG-Lights®

A simple prerequisite for good and sustainable photocatalysis is light. Perfect lighting conditions can today be generated with new LED lights and bulbs. Therefore, for the interior air-cleaning and sanitation in it a good idea to coat light diffusors of all kinds, because at the lights' source the light intensity is highest.



Lights which are coated with TitanProtect® will clean the air in the most effective way. Reactive oxygen species which are produced on the lights' surface are capable to decompose unpleasant odours (which e.g. arise in kitchen and restroom areas) and nicotine as effectively as viruses, germs and bacteria which can be transferred through the air and which come into contact with the surface of the light.



Infections from the air

Droplet infection and the passage of infection through the air are a part of the direct transmission path of pathogens of various kinds.

Especially dangerous are so-called "droplet nuclei", which can often measure only 5 microns and cover long distances through the air (airborne spread). For example, the pathogens of tuberculosis are primarily transferred in this way.

Pathogens that are transmitted through the air, reach the mucous membranes of the upper respiratory tract and multiply there. Especially in the cold season influenza infections are often transmitted in this way, too.

Lighting manufacturers we offer our certified TitanProtect®-coating under the registered brand name of HG-Lights®.

The coating of lights

The HG-Lights®-coating of luminaire surfaces makes high demands on the binding system and the correct processing of coating products because surfaces such as PMMA and polycarbonate are very hydrophobic and must be appropriately prepared for a durable coating.

For networking, drying and curing of these special coating systems, different integral process steps with IR and UV radiation are required. For quality assurance, the coating of lights and covers can only be assured in the modern NADICO manufacturing plant in Germany.

HG-Shields[®]

For easy retrofitting of existing lighting systems (eg louvre lights) we supply coated shields for engaging in the ceiling grid or retrofitting into existing lights. HG-Shields[®] are available in all standard sizes and on request also in individual formats.



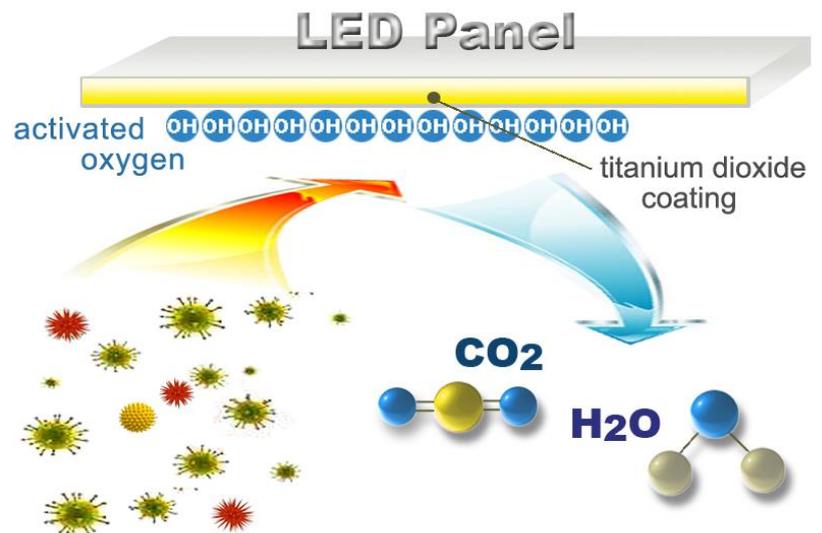
Application areas:

- Clinics and Hospitals
- Medical Practises and Waiting Lounges
- Retirement and Nursery Homes
- Schools and Kindergartens
- Hotels and Gastronomy
- Food Industry
- Public Transport

The efficiency:

Often the energy efficient replacement of existing lighting systems (eg T5 luminaires) is not economical. In this case the retrofitting of HG-Shields[®] is a perfect solution. The shields are simply inserted under the existing louvre luminaire into the ceiling grid. An attachment is not usually required because the overlying light fixes the HG-Shields[®] securely.

The active principle:



A practical example:

One with TitanProtect®coated lamp (LED-Flatlight 60 x 60cm, 5000 lumens) converts in 75 minutes the smoke of a cigarette (23 mg organic material) completely into carbon dioxide, water and harmless nitrates.

The advantages at a glance:

- neutralization of foul odours and nicotine
- elimination of harmful gases (e.g. Formaldehyd)
- broadband hygienisation of the indoor air
- unlimited effectiveness of the coated light
- degradation of germs and their endotoxines
- absolutely safe when applied and when in use
- colour- and odourless coating
- costs-savings by the photocatalytic self-cleaning effect of the light
- technology is diverse, tested and certified

The invisible danger - multidrug-resistant bacteria (MRSA)

According to the German Society of Hospital Hygiene (DGKH) each year up to one million people contact with dangerous germs exclusively in German hospitals. Up-to-date the number of deaths due to infections is 40,000. That is almost eight times more than on the road! The number of patients with a MRSA infection related to a medical treatment is approximately 14,000.



HG-Lights®-coatings clean the air of harmful viruses and germs. Independent tests and certificates confirm among other things the sustainable reduction of MRSA on the coated lamp.

Business / Office SBS or the „Sick Building Syndrome“

The air for Breathing - so important but often so polluted. In many areas gas emissions from building materials or furnishings and unpleasant odors disturb the well-being of people quite massive. Diseases such as the "Sick Building Syndrome", the so-called "building-related illness", often lead to massive health problems and high costs.



Viruses and germs are transmitted in addition to the direct contact, not uncommonly, in the form of tiny droplets through the air. Moulds, fine dust from printers and copiers and emissions from building materials can cause allergies or asthma.

Public Transport Risk of infection in the tightest of quarters...

In buses, trains and airplanes, every day many people come together at close quarters. Thus, the transmission of germs through the ambient air is inevitable. Even air conditioning systems contribute to that.



HG-Lights®-coated lights clean the air continuously and, accordingly, prevent the distribution of germs effectively and permanently, also in public means of transport. The elimination of unpleasant odours is an additional benefit.

Food Industry

Hygienic requirements at its highest level...

Pathogen-free production environments are an absolute must in the food processing industry. There already exist sophisticated standards for the sanitation of the surfaces of machines and repositories. However, the problem of transmission of germs via the ambient air is still open.



Right here, the use of HG-Lights® provides a consistent and effective remedy in production and staff environments. Furthermore, apart from the luminous flux which in any case is required, there is no demand for any additional energy.

Hotels and Gastronomy

High hygienic standards for the guest...

Clean indoor air is a business card of each quality-conscious hotel and restaurant operator. HG-Lights® eliminate unpleasant odours from kitchens, smoking areas and restrooms reliably, silently and non-toxic. In addition, the proliferation of germs and bacteria through the room will be prevented.



A practical example: by the installation of just two HG-Lights®-coated lights, the VOC-contamination is reduced by more than 90 %!

Retirement and Nursery Homes

Effektive Protection for Residents and Personal ...

Where people are medicated and nursed, it is necessary to take measures to protect the residents and the nursing staff. This is particularly true with elderly people. They are particularly susceptible to infections or colonization of their environment with MRSA or other germs.



In addition, often there is the problem of bad odours due to incontinence and difficult ventilation situations. HG-Lights® is the perfect solution for all elderly people and nursery homes.



Service:

To prove that the coating was applied, the customer will receive a certificate for presentation at his own premises. HG-Lights® are certified by Quality Labs, Nuremberg.