Description

NanoProf's Airpurifying Light

NanoProf's Airpurifying Light filters the air through the photocatalytic capacities of titanium dioxide. The most important condition for good and sustainable photocatalysis is light. NanoProf's Airpurifying Light is a light unit already coated with a tailor made titanium-dioxide (TiO2) coating. Therefore, the coating of transparent covers on light armatures of all kinds is a good idea for the air purification and hygienisation of interior spaces, since on the surface of the luminaire there is most of the light energy in the room.

Coated lamps purify the air in a very effective way. The reactive oxygen species generated on the surface of the light covers are capable of effectively removing odors, nicotine, cooking and toilet odors as well as viruses, germs, traces of fungus and bacteria which can be transmitted through the air and come into contact with the light armature cover.

The photocatalytically active coating is fully transparent. Upon radiation with light, the coatings will release oxygen radicals from the ambient air and thus decompose solid and gaseous substrates by oxidation („cold combustion").

The coating of light armature cover surfaces demands a complex binding system in the coating. A correct processing of the coating on the commonly used PMMA and polycarbonate surfaces has to overcome the very hydrophobic and dense characteristics of these materials. These materials need to be prepared for a permanent coating. For the crosslinking, drying and curing of these special coating systems, various integral process steps including UV and IR to let the TiO2 coating bond into the surfaces are made.

Simple retrofitting of existing lighting systems like grid lights or ceiling armatures in offices, NanoProf's offers coated front panels for insertion. These front panels are available in basically all individual formats.

Benefits of Standard Available NanoProf's Airpurifying Light Ceiling Armatures

TECHNICAL BENEFITS

- OPERATIONAL BENEFITS

Logistic info

- 20W nC® Light equals 80W lamp
- Luminous flux 1600 lm
- Colour temperature 3000K
- Starting time 100% on 0,001 sec (instant on)
- Ideal 295 x 295mm size for ceilings
- Prevents forming of fungus, algae, moss
- Prevents and digests odours
- No infrared attracts no flies
- No lead or mercury contents
- Long service life 25000 hrs
- Easy to install
- Robust housing for industrial, factory and school application
- Operation conditions -25°C to +
- 55°C
- TiO2 has unlimited time of function
- Optimal air condition throughout the building when deployed broadband
- Prevents stale emissions from carpets or curtains Non-hazardous, easy to transport
- FINANCIAL BENEFITS
- Low cost
- Energy A++
- SMD LED type, saves 80%
- energy Minimizes energy loss/costs caused by airing the room
- Minimizes calling in sick from flu, hay fever, sick building syndrome
- Minimizes costs for air filtration
- 2 Year warranty

NanoProf's Holland | KvK 77948297 | Delft, The Netherlands
T +31 850601501 | M +31 614888118 | sales@nanoprofs.com | www.nanoprofs.com

NanoProf's Airpurifying Light

Easy to install by DIY or electrician.
Dimensions 295 x 295 x 14 mm
Wattage 20W
Voltage AC 170V – 240V Frequency 50/60Hz

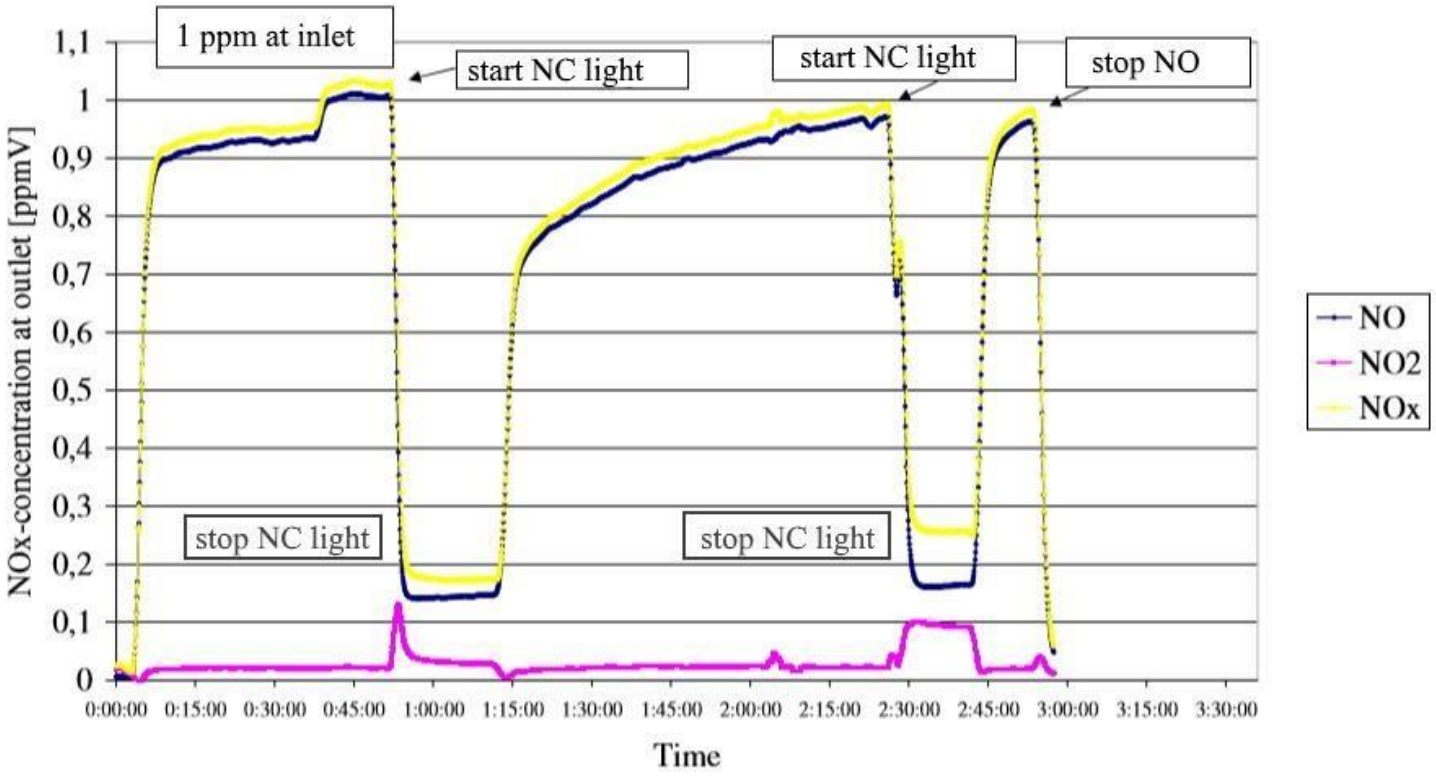

Figure 3 - Sample 5190 - Synthetic Polyamid Carpet – foulard.

Test method for air purification performance of photocatalytic materials – “Removal of nitric oxide”, ISO TC 206/SC N. The test set-up consists of a metal container, in which 1 pavement block is placed, with a UVtransparent glass at the top. Air with a NO-concentration of 1 ppm is blown over the surface with a flow rate of 3 l/min. The height of the free space is 3 mm. The temperature is approximately 23°C and the relative humidity is 50%. The nC light intensity is equal to 10 W/m² in the range between 300 and 460 nm. The maximum is at 365 nm. The sample has a surface of 100*200 mm².