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Shopping Spaces

UV-C lighting

Case study:
DM Chemist's Shops
Slovakia



Signify, a world leader in lighting, has started a pilot project to disinfect the air in dm chemist's shops with UV-C lighting. UV-C sources are capable of disinfecting bacteria and viruses, and significantly contributes to the protection of customer and employee health. Signify UV-C disinfection devices are currently installed in 20 dm shops in Bratislava and its surroundings, and the planning is to include up to 140 branches in Slovakia."

Customer challenge

It is well known that UV-C radiation is capable of disinfecting air, surfaces, objects, and water. It has been widely used for over 40 years¹. Disinfection using UV-C radiation has been effective against all bacteria and viruses tested to date² (many hundreds over the years of testing, including various coronaviruses). In laboratory testing, Signify's UV-C light sources reduced SARS-CoV-2 virus infectivity on a surface to below detectable levels in as few as 9 seconds³. A clear indication that UV-C radiation can play a valuable role in health protection strategies, particularly under the current circumstances.

Chain of DM Chemist's Shops with UV-C lighting to disinfect air



Learn more

Visit www.signify.com/uv-c for more information.

The right lighting

Each dm shop is fitted with Upper Air Wall Mounted (ceiling mounted) luminaires, as well as Philips wall-mounted air luminaires (approximately 7 units per shop – depending on the size of the shop). The UV-C radiation emitted by these luminaires is optimised for rooms with low ceilings and is radiated horizontally at the level of the device and above it. Special reflectors and lamellas ensure that the light is radiated everywhere around the device as well. This method allows the device to disinfect the maximum volume of air while also ensuring that the device is safe and does not interfere with the functioning of the shop. The device can be used non-stop, even when customers and employees are present. All the products used are environmentally friendly and do not generate any ozone emissions during or after use.

1. EPA Report, "Building Retrofits for Increased Protection Against Airborne Chemical and Biological Releases" Pg. 56.

2. Fluence (UV Dose) Required to Achieve Incremental Log Inactivation of Bacteria, Protozoa, Viruses and Algae Revised, updated and expanded by Adel Haji Malayeri, Madjid Mohseni, Bill Cairns and James R. Bolton. With earlier contributions by Gabriel Chevretils (2006) and Eric Caron (2006) With peer review by Benoit Barbeau, Harold Wright (1999) and Karl G. Linden.

3. Nadia Storm et al, Rapid and complete inactivation of SARS-CoV-2 by ultraviolet-C irradiation, 2020. Report: at <https://www.nature.com/articles/s41598-020-79600-8>. The UV-C irradiance used in this study was 0.849 mW/cm².



The project also includes the installation of UV-C disinfection upper air in the company's conference rooms. Conference rooms are also connected to Interact Pro, an application which facilitates the installation and management of wireless interconnected lighting. The application allows installation companies to set up the device quickly and allows employees to adjust it – they can then adjust the lighting settings in the workplace in a way that enhances their comfort and productivity. The system of connected lighting is also an economical way to help reduce energy costs, thanks to optimised lighting that adapts to the needs of employees and the type of work. In the next phase of the project, the plan is to install UV-C disinfection upper air wall mounted in employee facilities and warehouses.

Signify is currently extensively investing in expanding its portfolio of UV-C lighting to deliver up to the global growth in demand for disinfectants. “We have introduced 12 UV-C product families, especially designed for disinfecting air, surfaces and objects. These products focus on various customer sectors from offices, schools, gyms, retail, and warehouses to public transport,” says Harsh Chitale, head of the Digital Solutions division of Signify.



The UV-C units are installed by our partner in Slovakia, Elektrospol s.r.o.

