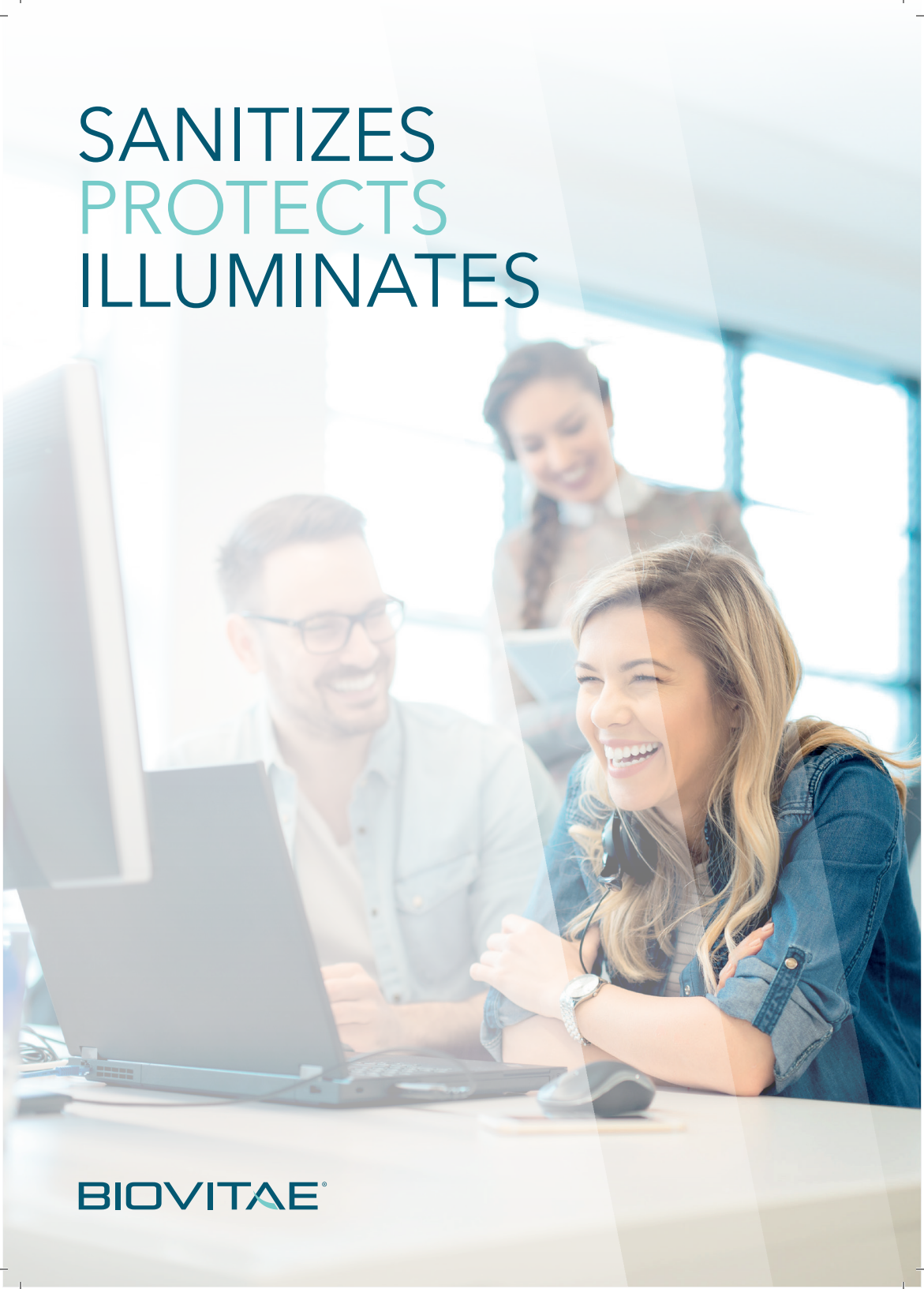
SANITIZES
PROTECTS
ILLUMINATES



BIOVITAE®

Every day, invisible enemies are attacking our organism

Microorganisms live in close contact with living beings and can be transmitted through direct infection (from person to person and from animal to human) by air, water, food and contaminated surfaces. To defend ourselves against pathogenic microorganisms, we use more and more drugs - especially antibiotics - and chemical disinfectants. But it is exactly their abuse that has triggered a planetary emergency, Anti-Microbial Resistance (AMR): microorganisms, through a series of mutations, have become increasingly resistant to antibiotics and chemical disinfectants, forming new, stronger and more aggressive strains.

The World Health Organisation's (WHO) Global Action Plan called AMR "the greatest threat to modern medicine". The most effective strategy to combat AMR is prevention.

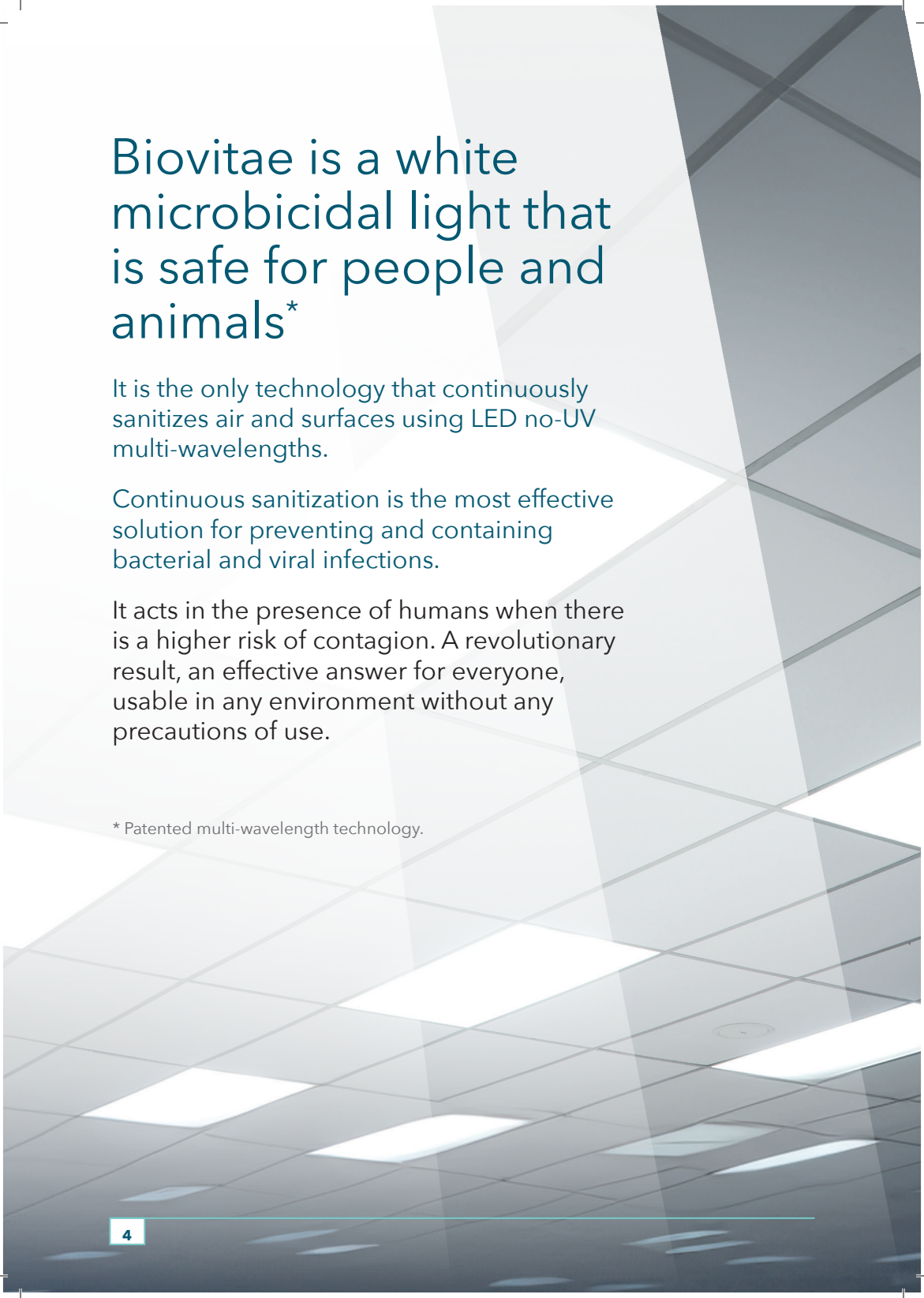
Biovitae is a white microbicidal light that is safe for people and animals*

It is the only technology that continuously sanitizes air and surfaces using LED no-UV multi-wavelengths.

Continuous sanitization is the most effective solution for preventing and containing bacterial and viral infections.

It acts in the presence of humans when there is a higher risk of contagion. A revolutionary result, an effective answer for everyone, usable in any environment without any precautions of use.

* Patented multi-wavelength technology.





Eliminates bacteria

Penetrates and eliminates the biofilm

Eliminates viruses, including SARS-COV-2

Reduces odors

Reduces the risk of allergies

UV free

Supports the circadian rhythm

High energy efficiency

For continuous use in the presence of people and animals

Natural white light

Biovitae light eradicates bacteria, viruses*, fungi and moulds**and prevents microbial infections and allergies***.

Its spectrum acts on all microorganims (GRAM+GRAM-bacteria, spores, molds and fungi) and causes their death. The perfect integration of white light with the sanitizing function and the absence of UV rays allow a continuous sanitization under any environmental conditions, even in the presence of living beings, without any risk to their health.

* Independent tests on the technology demonstrated on SARS-CoV-2, a reduction of up to 99.8% in 60 seconds on surfaces. Independent tests on the technology on Staphylococcus Aureus (MRSA, E. Coli, P. Aeruginosa and B. Atropheus, demonstrated a reduction of up to 99% in 2 hours on all surface types. Sanitisation performance may vary depending on the amount of light reaching the surfaces in the environment where the product is installed and the period of exposure. Tests conducted on various strains of viruses and bacteria under experimental conditions.
** Bacterial moulds.
***Active on microorganisms causing allergies through pollen and dust.

Life Centric Lighting®

Biovitae goes beyond placing human safety and comfort at the center of its technology.



Biovitae is more than healthy protection

Light does far more than enable vision-it's one of the body's most powerful biological signals. Recent research has uncovered melanopsin-containing retinal cells (ipRGCs) that detect daylight and relay it directly to the brain's master clock, synchronizing sleep, alertness, mood, and hormone cycles with nature's day-night rhythm.

We cannot always replace nature, but we can design our technologies in greater harmony with it.

That is the idea behind Life Centric Lighting® and the vision guiding Biovitae

Unlike regular LEDs that are designed only to improve visibility and do not take into account the invisible effects on our body, BIOVITAE considers people, indoor environments, microorganisms, and the wider ecosystem as interconnected parts of the same living system – Its light is designed to support your circadian rhythm and overall wellness while helping control indoor microbial load.



Life Centric Lighting

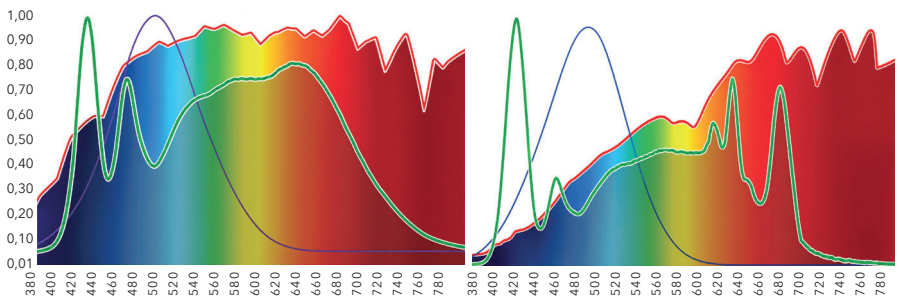
One light two protections

Biovitae sanitizes the environment and supports the biological clock-simultaneously, continuously, safely. BIOVITAE's daytime spectral profile closely resembles natural day sunlight light-continuous, with high microbicidal output, more blue and less mid-to-long wavelength content-supporting the daytime circadian rhythm. BIOVITAE's evening time LEDs instead mirror afternoon and evening light, continuous and highly microbicidal, but with less blue and more mid-to-long wavelengths, aligning with evening and nighttime physiology. The shift doesn't necessarily require the change of color temperature.

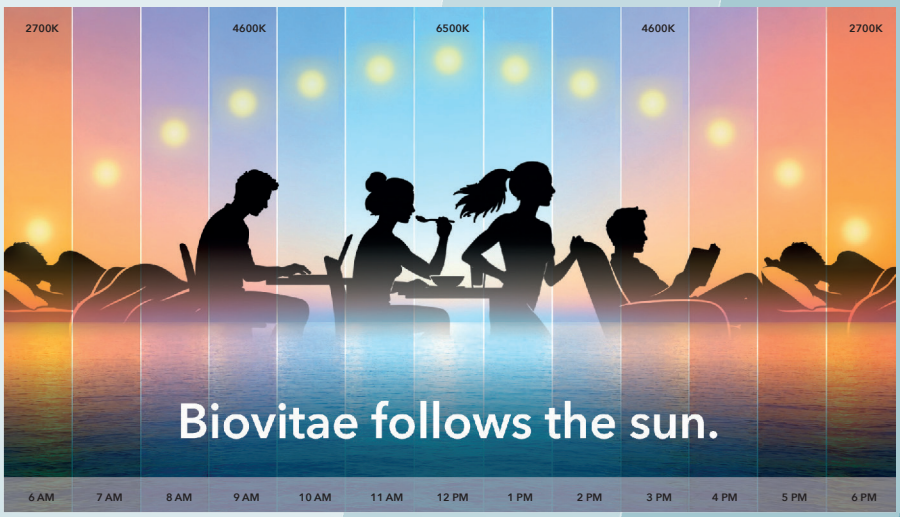
DAYTIME SOLAR SPECTRUM FROM 09:00 AM TO 04:00 PM

EVENING SOLAR SPECTRUM FROM 04:00 PM ONWARD

09:00 AM 10:00 AM 11:00 AM 12:00 PM 01:00 PM 02:00 PM 03:00 PM 04:00 PM 05:00 PM 06:00 PM 07:00 PM 08:00 PM 09:00 PM 10:00 PM



Life Centric Lighting



The human body is designed for spectral shifts that follow the natural day–night cycle

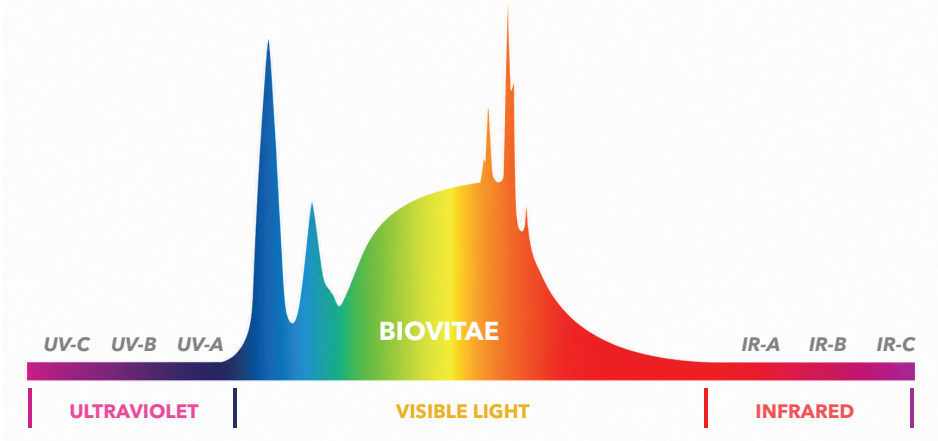
Throughout the day, sunlight changes continuously, shifting its spectral composition and correlated colour temperature (CCT). These natural spectral variations act as primary circadian cues, shaping non-visual photoreception and regulating key biological functions:

Hormonal regulation (including melatonin and cortisol)
Metabolic activity
Alertness and cognitive performance
Sleep-wake timing

Biovitae is designed to replicate some of the most important benefits of natural daylight: safely minimizing microbial load and supporting overall wellness with a continuous spectrum that aligns with daytime and evening circadian rhythms.

How it works

The microbicidal action of Biovitae is activated by a combination of wavelengths of the visible spectrum (NON-UV) in the range between 400 and 420 nm, which is scientifically proven to be harmful to bacteria, viruses and other microorganisms (fungi, spores, molds).



The figure shows the frequency range of the Biovitae visible spectrum (UV-FREE (400-420nm, 430-460nm, 500-780nm), which is scientifically proven to be lethal for viruses, Gram+ and Gram- bacteria, fungi, spores and moulds

Biovitae is also effective on Biofilm

Bacterial biofilm is associated with about 60% of bacterial infections, it slows wound healing and promotes the relapse of infections.

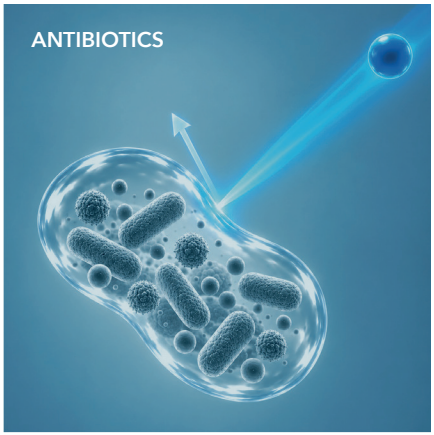
Biofilm: an aggregation of micro-organisms enclosed within a gelatinous substance consisting of proteins, polysaccharides and genetic materials which forms thin films that adhere to surfaces and are invisible to the eye.

Inside the biofilm, bacteria are protected, can organize themselves, exchange information and develop resistance to commonly used antimicrobials and to attacks by the host's immune system.

To defend ourselves against infections, it is important to prevent the formation of biofilm and to ensure that it is removed from surfaces when already formed.

The composition of this substance makes it impenetrable even to disinfectants and antibiotics, and not even UV frequencies can penetrate it. Visible light can pass through the biofilm, but only the wavelengths of Biovitae are able to kill the bacteria inside and destroy it.







Why is Biovitae different?

- **Effective on air and surfaces**
- **Safe, no risks or contraindications**
- **Compliant with the human circadian rhythm**
- **Lighting function integrated in sanitizing function**
- **Requires no structural work**
- **Time-saving action**
- **Cost-effective**
- **Cleantech:** low Co2 emission, no emission of polluting by-products

	BLUE LIGHT BACTERICIDAL LED	UVC	BIOVITAE
LIGHT COLOR	Blue Light	Violet Light	**White Light**
CONTINUOUS SANITIZATION	No	No	**Yes**
EFFICACY ON VIRUSES AND BACTERIA	Medium/Low on bacteria, Low on viruses	High on bacteria and viruses, but with reversible effect	**High on all bacteria and viruses**
POWER CONSUMPTION	35 - 200 Watts	60 - 1440 Watts	**8.8 - 78 Watts**



BIOVITAE



405NM BLU-VIOLET



UV-C



CHEMICALS

100% Safe

No harm to humans or animals

No material degradation

No labour required

UV freeZero photobiological risk
(Photobiological Hazard Class IEC 62471-7:2023: A)**Compliant with ROHS 2**

(Directive 2011/65/EC), which requires the reduction of the use of lead (Pb), mercury (Hg), cadmium (Cd), hexavalent chromium (Cr6+), polybrominated biphenyls (PBB) and polybrominated diphenyl ethers (PBDE) in the manufacture of electrical and electronic equipment sold in the European Union.

Flicker-free device
And no harmful effects on people with neurological disorders.

Biovitae protects you and the environment

Biovitae promotes biologically safe and sustainable environments in accordance with One Health philosophy, an approach to health that considers human, animal and ecosystem health inextricably linked.

In Biovitae lit environments, the microbial load is kept constantly under control and below infectious level, thus potentially reducing the use of chemical disinfectants, which are not only harmful to human and animal health, but also cause environmental pollution.

Biovitae is an environmentally friendly sanitisation technology

Provides significant improvements in performance and energy efficiency, while reducing costs, resource consumption and the release of pollutants into the environment

It is a **class F device**

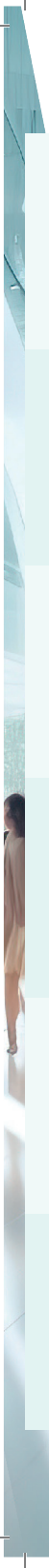
Biovitae sanitizes, protects and illuminates every indoor environment

Biovitae products offer simultaneously the function of sanitization and illumination with a natural white light available in different color temperatures. For specific applications where illumination is not required, only the sanitization function (blue-violet light) can be used.

Biovitae devices are available in the standards provided by the market and do not require special adapters or transformers. The product range is aimed both at individuals, for everyday use in home or work environments, and at the public sector to secure all collective spaces

Installation requires no structural work as the devices fit perfectly with pre-existing systems in all environments.





IN THE OFFICE AND AT SCHOOL

Indoor air can be up to 5 times more polluted than outdoor air due to chemical and biological pollutants. Biovitae offers a simple and effective way to improve air quality and protect the health of students and workers and especially the most vulnerable such as children, adolescents and those with allergies and asthma.

IN HEALTHCARE FACILITIES

It reduces the microbial load, prevents bacterial biofilm formation, and creates a safe environment. It prevents the risk of hospital and healthcare-associated infections (HAIs).

AT HOME

It protects against microbes colonizing various surfaces and objects such as furniture, utensils and cleaning tools. It acts on the microbial load of food products, improving their preservation and extending their shelf-life, and makes it safer to live with pets that, in certain situations, can pose a danger to the whole family.

IN INTENSIVE LIVESTOCK FARMING

It creates a safe environment for animals and plants by reducing the microbial load and transmission of infections between animals and from them to humans. In parallel, its action enables the reduction of the excessive use of antibiotics, both in animals and in products of animal origin.

IN FOOD PROCESSING PLANTS

Reduces the risk of bacterial contamination of food and increases food safety.

IN PUBLIC SPACES AND MEANS OF TRANSPORT

Gyms, restaurants but also means of transport are environments in which the high occupancy and the hot, humid environment that is often generated, exposes more people to the risk of infection. In this context, continuous sanitization becomes a strategic weapon to contain the risk of infection.

BIOVITAE IS CERTIFIED BY NATIONAL AND INTERNATIONAL BODIES

Biovitae® is a prevention device and does not replace the use of drugs.
Biovitae® is a registered patent and logo owned by Nextsense S.r.l.

PRODUCT CERTIFICATION

EMC - LVD tested by DEKRA - Photometric & Colorimetric by DEKRA

contributes to EAP2,EAC2,EQC1 EQC4,EQC6 credits (v4.1 BD+C) IT12-26080301

contributes to EAP2,EAC3,EQC1 EQC2,EQC5 credits (v5.1 BD+C) IT12-26080302

TESTED BY

ON BACTERIA (in vivo and in vitro)

ON VIRUSES (in vitro)

AWARDS

Top Global Health Innovation 2020

ClimatexHealth Challenge Best Innovation 2023



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THE LIGHT THAT PROTECTS

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