



**Productive light for enjoyable and long-lasting food.**  
Discover our efficient and economical solutions.

# The best recipe for your food:

## Our special light sources for disinfection, heat processes and light analyses

**Taste, health, enjoyment:** Hardly any other industry is subject to such high and diverse demands as the food industry. We help you to meet these requirements: With innovative specialty lighting solutions, you can optimize your products and processes. Our solutions help ensure your customers can enjoy attractive, long-life and safe food products that meet the latest nutritional trends.

### **Innovative solutions with UV and infrared**

From aseptic filling of yoghurt cup and safe disinfection of bottles and lids, to the careful processing of chocolate to the precise analysis of all ingredients, our solutions with productive light support your application. In addition, our solutions are clean, economical and environmentally friendly.

### **Reliable disinfection of surfaces, air and water**

If you say germ-free, you must also say Heraeus: our intelligent UV solutions remove pathogens completely and in a particularly environmentally friendly way – without adding chemicals and complex cleaning processes. (more on p.4).

### **Individual heating processes make your food more attractive**

From the appetising browning of ready-meals or desserts to the processing of pralines or chocolate: our energy-efficient infrared specialty light sources not only make food more attractive, they also make filling and processing more productive. (more on p.8).

### **Precise analyses for better stability**


Our special lamps enable the exact determination of ingredients or impurities. This makes your food more digestible – and longer lasting. (more on p.10).

### **Heraeus Noblelight makes light productive!**

Heraeus Noblelight is the top destination worldwide for photonics-based solutions from ultraviolet to infrared.

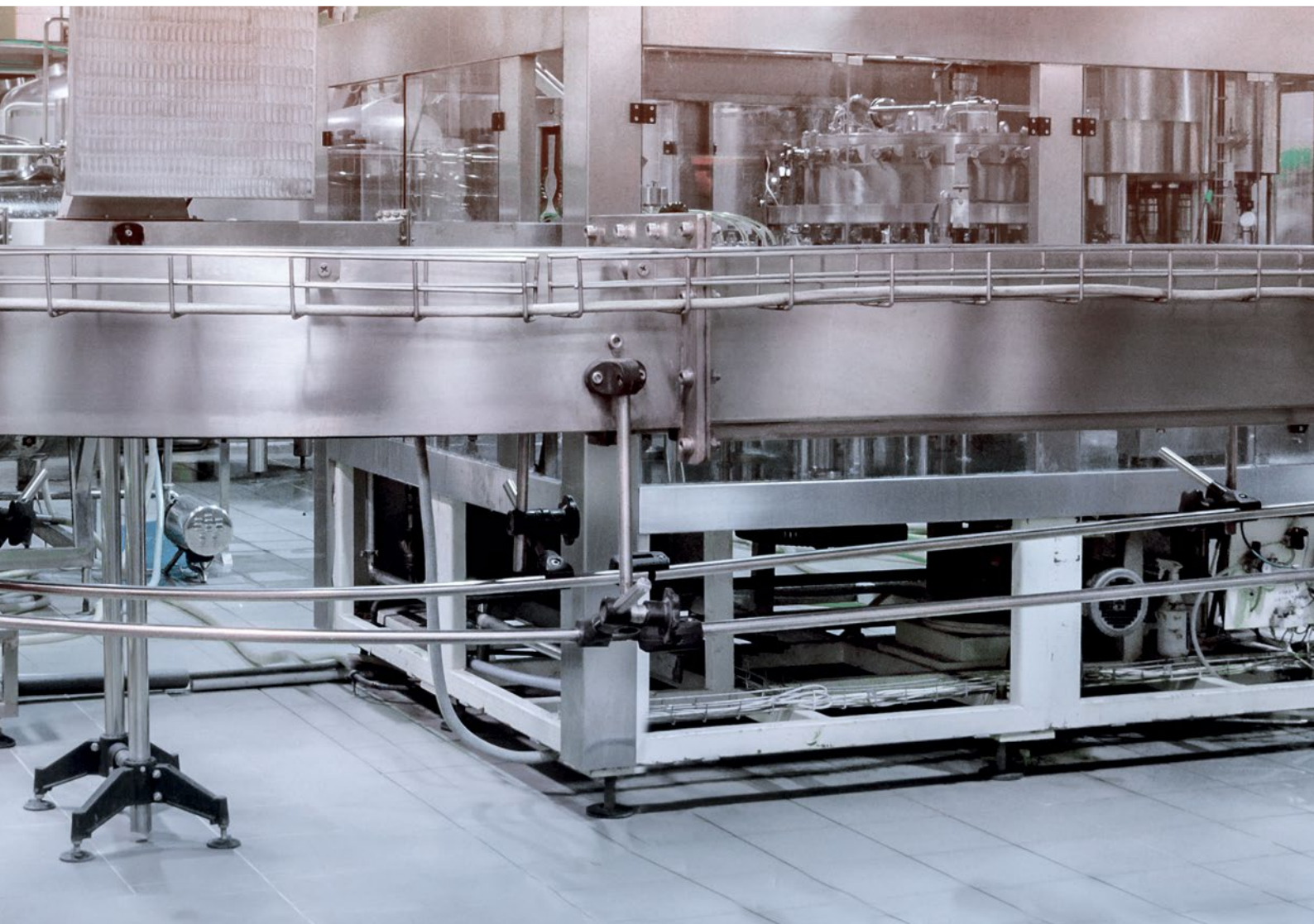
### **Discover the possibilities with productive light**

As experts with many years of experience, we are happy to advise you on how to adapt the power of light precisely to your foodstuffs – and how to integrate it productively into your processes. And so that you can be absolutely sure that our solution will help you, we can simulate your application with us in advance if you wish.

Three white square containers filled with a smooth, yellow custard-like substance are arranged diagonally on a light blue background. A silver spoon is placed in the top container, lifting a portion of the custard. The containers are slightly tilted, and the custard has a glossy, uniform texture.

# LIGHT IS LIFE

Without light, there is no food. And even in industrial food production, light is essential: the special light sources from the market and technology leader Heraeus are indispensable for the safety, appearance and shelf life of your products.



# Reliable disinfection with UV light

## BlueLight<sup>®</sup> gives germs no chance

### **Safe, environmentally friendly and germ-free:**

That is the claim. In hardly any other area is hygiene as important as it is with food. Our UV disinfection applications provide safe and environmentally friendly protection, removing bacteria and viruses not only from surfaces, but also from air and water. And without any chemicals at all.

### **Germ reduction up to 99.9 percent – Fraunhofer-tested**

The BlueLight<sup>®</sup> UV modules are specially designed for the food industry and reliably destroy pathogens in seconds – 99.9%. This is also confirmed by the test report of the Fraunhofer Institute for Process Engineering and Packaging in Germany.

## **SURFACE DISINFECTION**

### **A clean thing**

From cups, foils to assembly lines to all kind of surfaces of food packaging: Our UV-BlueLight<sup>®</sup> modules ensure maximum safety and hygiene – for manufacturers and consumers alike. The improved shelf life minimizes the number of returns and lowers the risk of a recall – saving you significant time and money.

Climate-friendly and sustainable: The low-energy and safe process reduces production costs and environmental impact of your products.

## **AIR DISINFECTION**

### **UV light – and the air is clean**

The use of grease and oil often leads to unpleasant odours. Moreover, grease deposits are not only annoying, but also lead to an increased fire hazard – especially in exhaust air hoods and fume vents. The solution to this problem: UV systems from Heraeus.

UV lamps with a wavelength of 185 nm photolyse, destroy and neutralise grease and odour molecules. At the same time, they clean the hoods and vents. The VUV radiation generates ozone, which decomposes into excited oxygen, creating an oxidising effect in the fume vent hood – and thus keeps the hood clean. Simple and effective.

The result: optimal hygienic conditions and the best possible fire protection – at greatly reduced costs.

## WATER DISINFECTION

### Clean and safe water

Chlorine products in food or water affect the taste and are harmful to our environment. It is far better to effectively treat and disinfect contaminated water with high-energy UV radiation – without adding chemicals such as chlorine or ozone.

Best drinking water quality: The special UV systems from Heraeus not only destroy pathogens in the water, but also break down harmful chemicals. UV radiation even inactivates chlorine-resistant pathogens without affecting the smell or taste of the water.

## YOUR ADVANTAGES WITH UV LIGHT



Germ-free and safe



Environmentally friendly



Chemical-free



Easy to install and operate



Energy-saving



Suitable for organic products

## GOOD TO KNOW: HOW UV DISINFECTION WORKS

Ultraviolet light from Heraeus kills viruses, bacteria or other pathogens in seconds. It works in the wavelength range from 280 to 100 nanometres and has a strong bactericidal effect. Disinfection with UV light destroys the DNA structure of microorganisms such as viruses, bacteria, yeasts and fungi, thus preventing them from multiplying.



THE SUITABLE  
SOLUTION  
FOR EVERY  
PROCESS  
AND PRODUCT:

THE BLUELIGHT®  
FAMILY



### BLUELIGHT® FLASH DISINFECTION SYSTEM

Fast, faster, fastest: The new BlueLight® Flash Disinfection System disinfects lids and caps even at the highest processing speed – lightning fast and effective (LOG4).



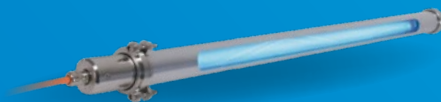
### BLUELIGHT® HYGIENIC SYSTEM

The natural germ killer for food packaging such as cups and sealing foils: The powerful BlueLight® Hygienic System destroys germs and reduces your energy costs by up to 90% (LOG3).



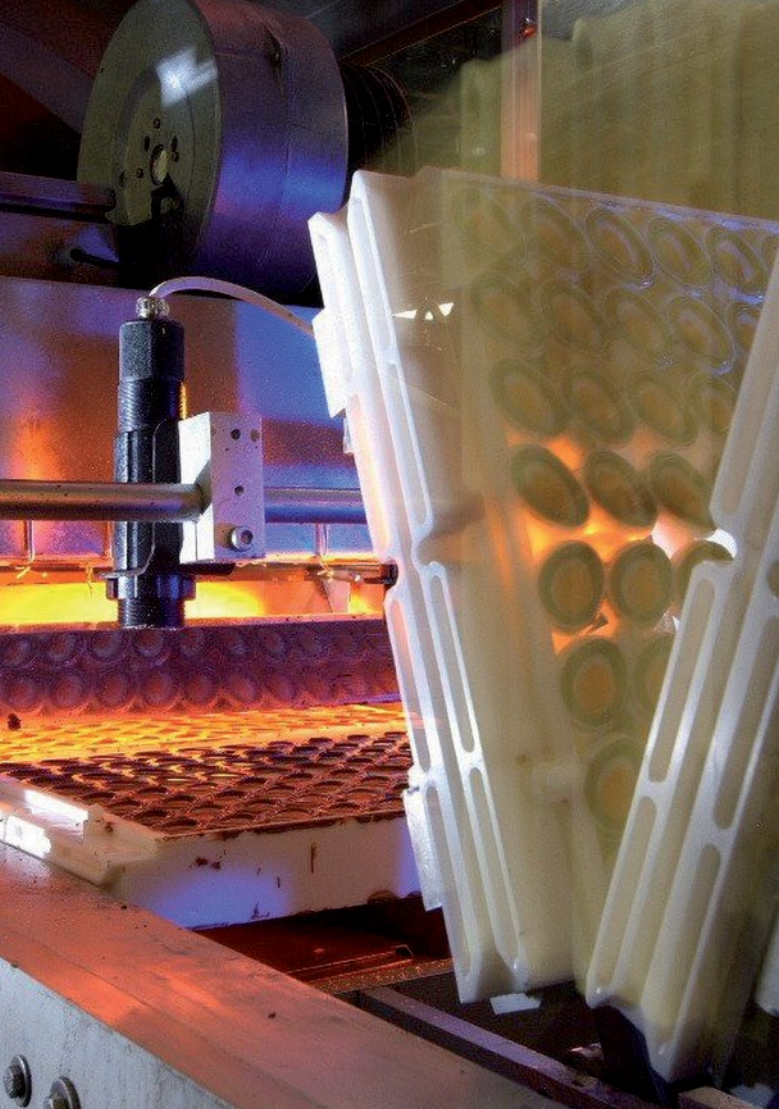
### BLUELIGHT® PREMIUM SYSTEM

Reliably long-lasting: our cost-effective BlueLight® Premium system disinfects all kinds of packaging and can be installed flexibly in all directions.



### STERIBELT DISINFECTION SYSTEM

Takes up little space: Specially designed for the surfaces of conveyor belt surfaces, the low-maintenance Steribelt system with its flat design protects your production and employees.





# Infrared heat makes food more attractive

## Products that appeal to all the senses

**Heat to the point: With contact-free and targeted heating, our infrared special light sources make production and packaging more efficient – and your food more appetising and attractive. This makes snacks and desserts irresistible and new, unique food products possible.**

Whether for processing or filling chocolates, pre-browning ready meals or heating surfaces: The food industry requires exact temperatures. Our state-of-the-art, environmentally friendly infrared heaters provide heat exactly when you need it, without preheating – saving energy and with minimal maintenance.

### YOUR ADVANTAGES WITH INFRARED HEAT



Minimal energy costs



Targeted heat



Contact-free and fast-acting heating



Exact compliance with temperature specifications

### OUR IR PRODUCTS FOR SAFE HEATING PROCESSES

Together with you, we determine the parameters required for your system. Experienced engineers and technicians accompany you and help you select the right emitters and systems.



### INFRARED CARBON EMITTER

Carbon infrared heaters CIR<sup>®</sup> have a unique design of the heating filament. The effective medium-wave radiation combined with very short reaction times in the range of seconds – for particularly efficient heating and drying processes.

# Precise food analyses

## Light-accurate measurements

**Melamine in milk, horsemeat in lasagna, engine oil in olive oil, or glycol in wine can be detected by spectroscopic analysis. More and more consumers today are paying attention to what is in their food and how they can eat more conscientiously. Many have to avoid certain ingredients. Others are looking for a new taste experience.**

In modern food processing, a number of additives help to make a product last longer and be healthier for consumers. Sugar and salt content are controlled to prevent obesity and heart disease. The exact determination of trace elements or impurities makes food more digestible.

Light-accurate measurements: Our lamps allow for precise and reliable analysis when using high-pressure chromatography (HPLC), UV/Vis and atomic absorption spectroscopy.

### GOOD TO KNOW: UV AND IR IN FOOD PACKAGING

Did you know many packaging materials, labels and containers are decorated, coated, and even shrink wrapped using UV curing and IR heating? UV-curable and waterborne inks and coatings improve functionality and appearance on cardboard, paper, glass, plastic and metal food packaging. UV and IR curing and drying improves packaging quality and production rates while lowering operating costs on glass bottle decorating and beverage can lines, printing and converting lines for cartons, pouches, cups, and other food packaging.

### OUR PRODUCTS FOR LIGHT-ACCURATE ANALYSES



#### DEUTERIUM LAMPS

Deuterium lamps allow extremely fine detection and such high test sensitivity that they are even used to detect illegal doping in sport.



#### FIBERLIGHT® L<sub>3</sub>

FiberLight® L<sub>3</sub>, with its broadband spectrum from ultraviolet to far visible light, supports qualitative and quantitative analysis, helping to ensure food purity and safety. Small, energy-efficient and battery-powered, this light source enables mobile and portable analyzers that can be used on-site.



**As a market and technology leader** with over 165 years of experience, Heraeus Noblelight offers you high-quality photon solutions for productive light in food production.

**On the basis of our many years of innovation leadership**, we develop and realise UV and IR applications and produce several hundred thousand lamps a year.

**Our know-how is your advantage.** Our application-experienced experts develop and optimise your processes in personal dialogue and close partnership with you.

**We secure our quality lead** through continuous innovation and investment in research and development. As a Heraeus customer, you also benefit from the simulation and testing options in our application centres and the international service of a global company.

**The tradition of special light source production** dates back to 1904, when Heraeus invented the UV lamp and the 1950s, when the company paved the way for infrared technology. Today Heraeus Noblelight has over 900 employees and its own subsidiaries in many countries worldwide.

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