

**Intense, cold and dry
Efficient disinfection of packaging
material surfaces with BlueLight®
Premium UV Systems.**



NobleLight

EXCELITAS
TECHNOLOGIES®



Polytec GmbH
Polytec-Platz 1 - 7

Tel: +49 (72 43) 604 4540
E-Mail: ot@polytec.de

D - 76337 Waldbronn
www.polytec.com

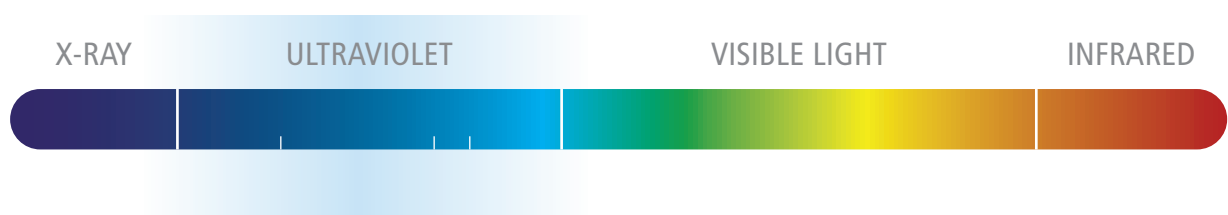
Intense UV light

For the food industry



For microbiologically sensitive foods such as dairy products or beverages, hygienic packaging is essential. UV radiation effectively disinfects a wide variety of packaging formats such as cups and sealing foils, pouches, milk cartons and caps. This significantly improves the product shelf life and reduces the number of returns due to spoiled food. This saves manufacturers time, effort and money.

Ultraviolet light, in the wavelength range of 254nm, destroys the DNA of all microorganisms. In just seconds UV light inactivates viruses, bacteria, yeast and molds, without chemicals providing an environmentally friendly solution. Premium UV Systems reduce the the number of germs on the surface up to 99.9 % e.g. molds up to log3, bacteria up to log5. Fraunhofer tested.



BlueLight® Premium UV Systems

For forming, filling and sealing machines



6-lamp Premium UV System

BlueLight® Premium UV Systems disinfect the surfaces of all types of food packaging, e.g. sealing foils, cups and tubs, pouches or gable top packaging.

Flexible

The Premium UV systems can be used vertically or horizontally. They are simple to install and easy to operate. There are many versions for individual machine environments. Premium UV Systems are ideal for use in in-line filling machines with 4 to 12 rows for cup disinfection.

Efficient

Optimized UV lamp technology enables high UV intensities: Only 90 seconds to full UV output. Switching on and off is possible without loss of quality. Short response times increase throughput and save operating costs. Long service life of UV lamps reduces maintenance costs.

Safe

All Premium UV modules have an:

- Integrated breakage detector for monitoring the module window
- IR sensor to control the cooling air supply
- Temperature switch to control the module internal temperature

Highest safety at low cost

Safety aspects:

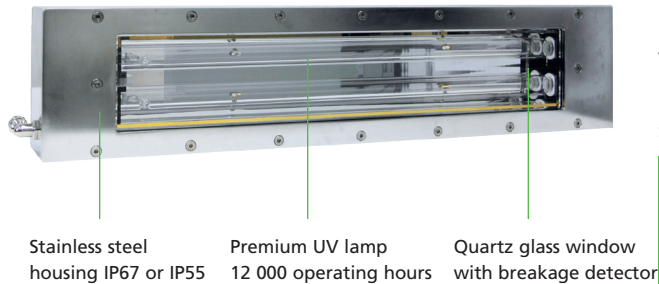
- Integration into your HACCP concept: quartz glass with breakage detector, temperature and radiator function are automatically monitored
- Intense, cold UV radiation that does not heat the packaging material
- Equipped with emergency stop function, where the UV module switches off, but the cooling continues to run
- Resistant to CIP cleaning (cleaning in place)
- IP67 protection class is achieved, which means the Premium UV System can also be used in humid environments
- Plastic doors (e.g. made of Makrolon) are sufficient as radiation protection
- Environmentally friendly, as no chemicals are added

Cost optimization:

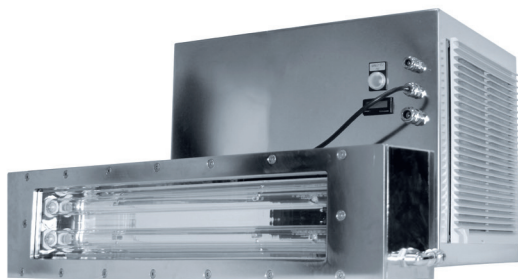
- Short exposure time (1 to 4 seconds) and thus low operating costs
- Extremely short and fast burn-in time, allows fast start-up of the filling process
- Economical due to low-maintenance process
- Simple handling; can be retrofitted into existing filling and capping lines
- Investment & operating costs: 24 € / 100,000 cups, s. example calculation page 4

BlueLight® Premium UV Systems

Scope of delivery and design information



- Compact – the modules require little space in the filling line
- Electronic ballasts and ventilation are in one control module, making retrofitting even easier
- Air cooling instead of water cooling, the ventilation in the control module is sufficient to cool up to three UV modules
- Equipped with operating hours counter and on / off lamp signal
- Supply voltage 180–264 V connections / 50 / 60Hz
- Scope of delivery: UV module and control module with power supply, operating hours counter, integrated air cooling and air hoses
- Premium UV Systems are available with UV modules in different standard sizes



2-lamp Premium UV System with control

The UV lamp is the only consumable. This has a service life of 12,000 operating hours* and can therefore be used effectively for 2 years in 24-hour operation. During this time, approximately 86 million cups can

be disinfected with just one Premium UV System. This means that the investment costs per cup is much less than one cent, as the example calculation below shows.

Example calculation:

For an 8-row cup filling and sealing machine with **36,000 h running time (approx. 6 years)**, 2 Premium UV Systems are required.

One system disinfects the cups, the other the sealing film. The costs for the disinfection of **100,000 cups** including the foils is only **24 EUR**.

Notes on the design of premium systems

Cups, sealing foils or sealing lids require different irradiation times:

Cup:

- Depending on cup height, approx. 4 seconds* Irradiation time.
- For example, it is sufficient to illuminate two cycles

Foils:

- Foils require 1 to 2 seconds* irradiation time
- Boards are also irradiated for only 1 to 2 seconds*.
- Minimum distance between UV module and foil approx. 20 mm recommended

In addition, the length of the fume hood and the feed rate, as well as the type of microorganism to be killed, determine the design of the Premium UV Systems. Bacteria, for example, require a lower lethal UV dose than molds.

Our UV application experts will be happy to advise you on the optimal design for your filling line.
On-site testing – Ask about our rental systems to test the use of Premium UV Systems directly in your process.

Technical data of the Premium UV Systems for disinfection

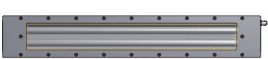


Fig. 1

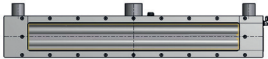


Fig. 2

Technical data 2-lamp Premium UV System | protection class IP67

UV Module Type	Unit	P2036	P2062	P2087	P2132
Radiation incident area (window size)	mm	367 × 111	617 × 111	867 × 111	1315 × 111
UV module size	mm	560 × 170 × 110	780 × 170 × 110	1060 × 170 × 110	1508 × 170 × 160
Irradiance at 20 mm distance	mW/cm ²	67	67	67	67

Technical data 2-lamp Premium UV System | protection class IP55

UV Module Type	Unit	P2035	P2061	P2086
Radiation incident area (window size)	mm	107 × 365	107 × 615	107 × 865
UV module size	mm	530 × 150 × 111	780 × 150 × 111	1030 × 150 × 111
Irradiance at 20 mm distance	mW/cm ²	65	65	65

For all 2-lamp UV modules, ventilation hoses can be attached either to the wide rear side of the UV modules (Fig. 1) or to the narrow side at the top (Fig. 2).



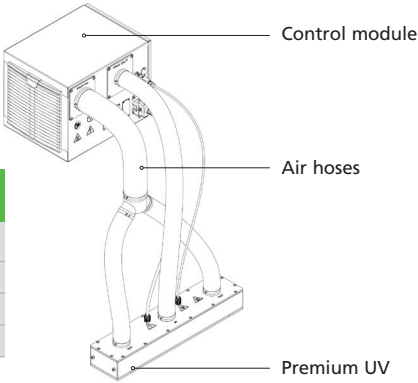
Technical data 6-lamp Premium UV System | protection class IP55

UV Module Type	Unit	P6036.30	P6062.30
Radiation incident area (window	mm	367 × 298	615 × 298
UV module size	mm	550 × 360 × 155	780 × 360 × 155
Irradiance at 20 mm distance	mW/cm ²	90	90



Technical data 8-lamp Premium UV System | protection class IP55

UV Module Type	Unit	P8036.38	P8062.38	P8087.38
Radiation incident area (window	mm	367 × 372	615 × 372	865 × 372
UV module size	mm	550 × 434 × 155	780 × 434 × 155	1030 × 434 × 155
Irradiance at 20 mm distance	mW/cm ²	100	103	103



Standard control module operates all UV systems. (Figure exemplary)

About Excelitas Technologies

Excelitas is a leading provider of advanced, life-enriching technologies that make a difference, serving global market leaders in the life sciences, advanced industrial, next-generation semiconductor, aerospace and defense end markets. Headquartered in Pittsburgh, PA, USA, Excelitas is an essential partner in the design, development and manufacture of photonic technologies, offering leading-edge innovation in sensing, detection, imaging, optics, and specialty illumination for customers worldwide. Excelitas is at the forefront of addressing many of the relevant megatrends impacting the world today, including precision medicine, industrial automation, artificial intelligence, connected devices (IoT) and military modernization.



Polytec GmbH

Tel: +49 (72 43) 604 4540

D - 76337 Waldbronn

Polytec-Platz 1 - 7

E-Mail: ot@polytec.de

www.polytec.com



www.excelitas.com

For a complete listing of our global offices, visit www.excelitas.com/Locations

© 2022 Excelitas Technologies Corp. All rights reserved. Excelitas®, Excelitas Technologies® and the Excelitas logo and design are registered trademarks of Excelitas Technologies Corp. All other products and services are either trademarks or registered trademarks of their respective owners. Excelitas reserves the right to change this document at any time without notice and disclaims liability for editorial, pictorial or typographical errors.

Inhouse XNG UVP05 11/24

Stay Connected

