EXCELITAS TECHNOLOGIES®

NobleLight


# BlueLight® Flash System

The new solution offering >log 4 reduction at high speed without chemicals and mercury free


**Excelitas Noblelight's BlueLight® Flash system is a chemical-free, powerful technology offering you instant disinfection.**

**It is a sophisticated pulsed light solution ideally suited for high-speed food packaging disinfection.**

# For a reliable, fast and environmentally friendly solution

## Key features and benefits

- Instant treatment with no warm-up time
- Compact, easy to integrate into any orientation, and can be retrofitted
- Environmentally friendly disinfection with no use of chemicals and mercury free
- Low energy consumption
- Built in safety – a protective quartz window with breakage detection
- Easy to use with an operator friendly HMI interface, customisable to your process
- Simple UV lamp replacement – a cartridge design enables reduced downtime
- Utilises special fused silica quartz for UV flash lamps
- Stainless steel hygienic design UV module to IP65
- Reflector optimised for maximum UV intensity
- Support, service and commissioning for system integration

## Applications

**Flat caps from Ø26mm to Ø55mm**

**>log 4 reduction**

**Speeds up to 90,000 bph**

**Food packaging disinfection for liquid and viscous food including beverage bottle caps, pots, tubs and sealing films**

## Delivering energy efficiency and cost savings

Owning a BlueLight® Flash System is more cost effective that you think. Thanks to our years of learning and development with our BlueLight® family of products we are able to bring you the latest in disinfection technology

## Sample calculation

**Machine runtime: 3500 h/year***
**BlueLight® Flash system including chiller**
**2 lamp head - 2750v @ 10Hz**
**4.9kW total lamp power**
**£1.08/h**
**Energy cost - £3780/year**

**(*two shift operation £0.15/kWh/3500h)**

# Microbiological Test Results

| | Packaging / Sample material | Reference Germ | Inoculation method | Distance sample to lamp (in mm) | Average log reduction: after 1 flash | after 2 flashes |
|---|---|---|---|---|---|---|
| Plastic bottle screw caps |  | Aspergillus brasiliensis ATCC 16404 | multi dot | 20 | 2,02 | 4,21 |
| Stainless steel disc (Ø 20 mm) |  | Bacillus pumilus ATCC 27142 | nebulised | 30 | 3,90 | 4,80 |
| Aluminum tin (volume 820 ml) |  | Cronobacter sakazakii DSM 4485 | sprayed | 20 | 4,50 | 4,80 |
| Aluminum lid (Ø 108 mm) |  | Cronobacter sakazakii DSM 4485 | sprayed | 20 | 5,00 | 5,20 |

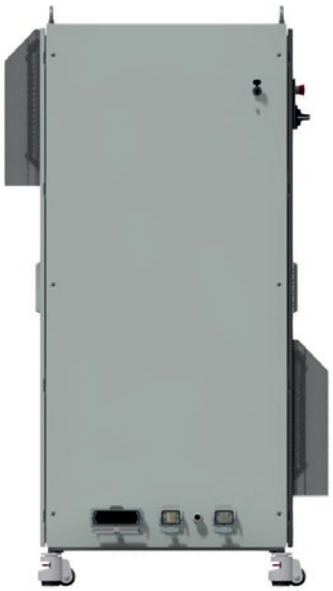
# UV Module

BlueLight® Flash UV module

| Dimension or unit description | |
|---|---|
| **UV module size L × H × W (mm)** | 400 × 210 × 130 |
| **Optical window (mm)** | 240 × 70 |
| **UV module weight (kg)** | 10 |
| **UV module IP rating** | IP65 |
| **Conduit – control module to UV module (m)** | 10 |
| **Mounting point dimensions (mm)** | 95 × 368 |

## Chiller and control module

BlueLight® Flash typical chiller



BlueLight® Flash typical control module side and front profile

| Dimension or unit description | |
|---|---|
| **Control module – inclusive of fixings H × D × W (mm)** | 1775 × 1034 × 702 |
| **Control module weight (kg)** | 200 |
| **Control module IP rating** | IP55 |
| **Chiller dimensions H × D × W (mm)** | 1140 × 820 × 654 |
| **Chiller weight (kg)** | 150 |

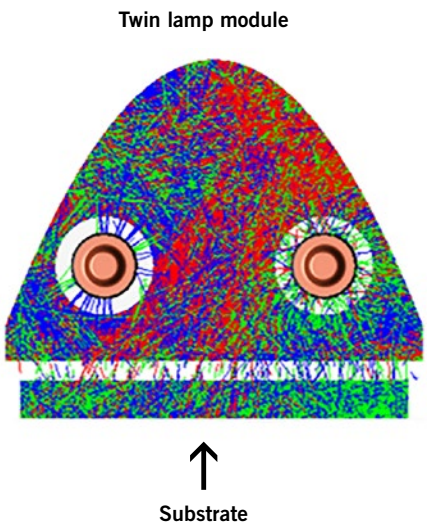
## Productivity

| Beverage caps | Time | Volume |
|---|---|---|
| **Max production rate – caps up to 30mm** | Caps/hr | >90.000 |
| **Max production rate – caps up to 40mm** | Caps/hr | 80,000 |
| **Max production rate – caps up to 50mm** | Caps/hr | 60,000 |
| **Start-up time** | Seconds | <1 |

# Ray tracing simulation

Excelitas Noblelight has developed a unique ray tracing simulation tool to be able to accurately model log reduction rates across a wide range of food packaging and materials.

**Fig a:** Wet surface ray trace
**Fig b:** Light distribution quite even on wet surface, so most of the surface will get a similar dose



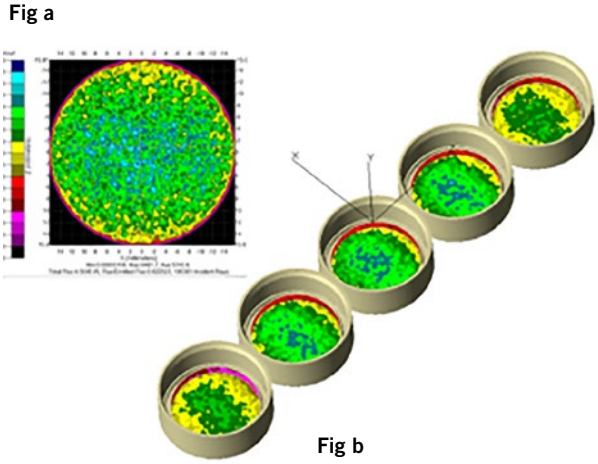




Diagram 1: In house ray tracing simulation representing optical head and substrate

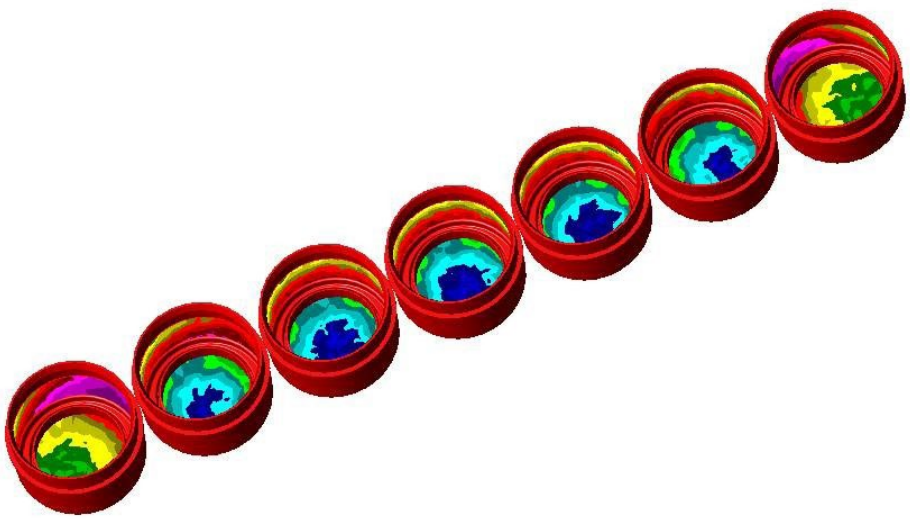


Diagram 2: Ray tracing model showing energy distribution

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## TEST BEFORE DECIDE

Make use of our ray tracing simulation and microbiological test capabilities before you decide on a solution. We will be happy to advise you! BlueLight Flash – for long-lasting enjoyable food and beverages.

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