tempLED

CONTROLLED AREA LIGHTING

UNCOMPROMISING PURITY

YOUR STRONG PARTNER ON THE WAY TO A CLEAN ROOM

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UNCOMPROMISING PURITY

The demands on a cleanroom or controlled areas are diverse and high: whether in the medical sector, in the food and automotive industry or in precision and microtechnology.

Our cleanroom or controlled area luminaires are subject to **DIN EN ISO 14644-1 standards** and constant quality control. We develop and produce ourselves so that we can react quickly to new, different requirements and adapt to the individual needs of our customers.

tempLED is your contact for the production of clean rooms or controlled areas of ISO classes 2 - 9.

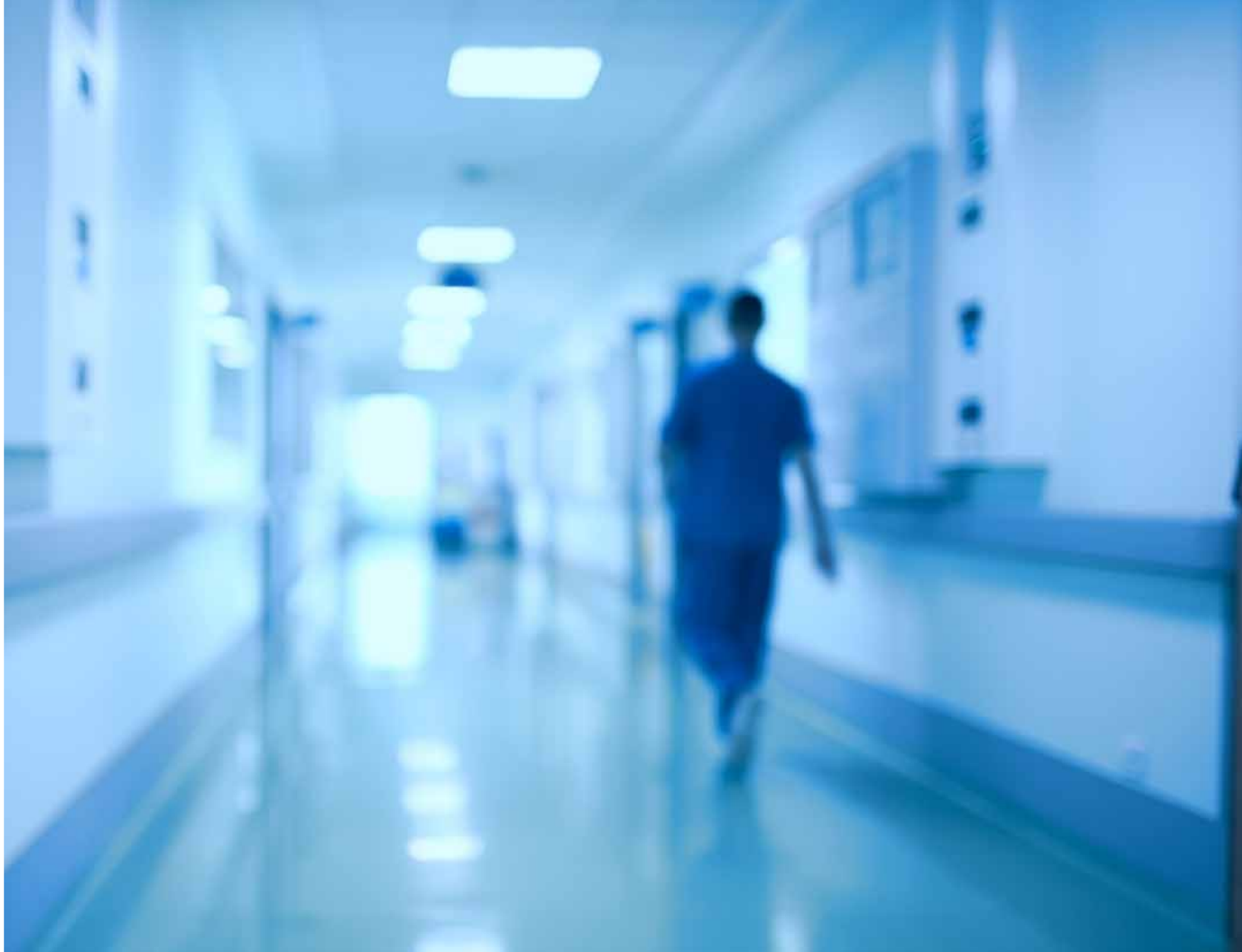
PURITY AREAS

very high purity grade

CLEAN ROOMS

high purity grade

CONTROLLED AREAS



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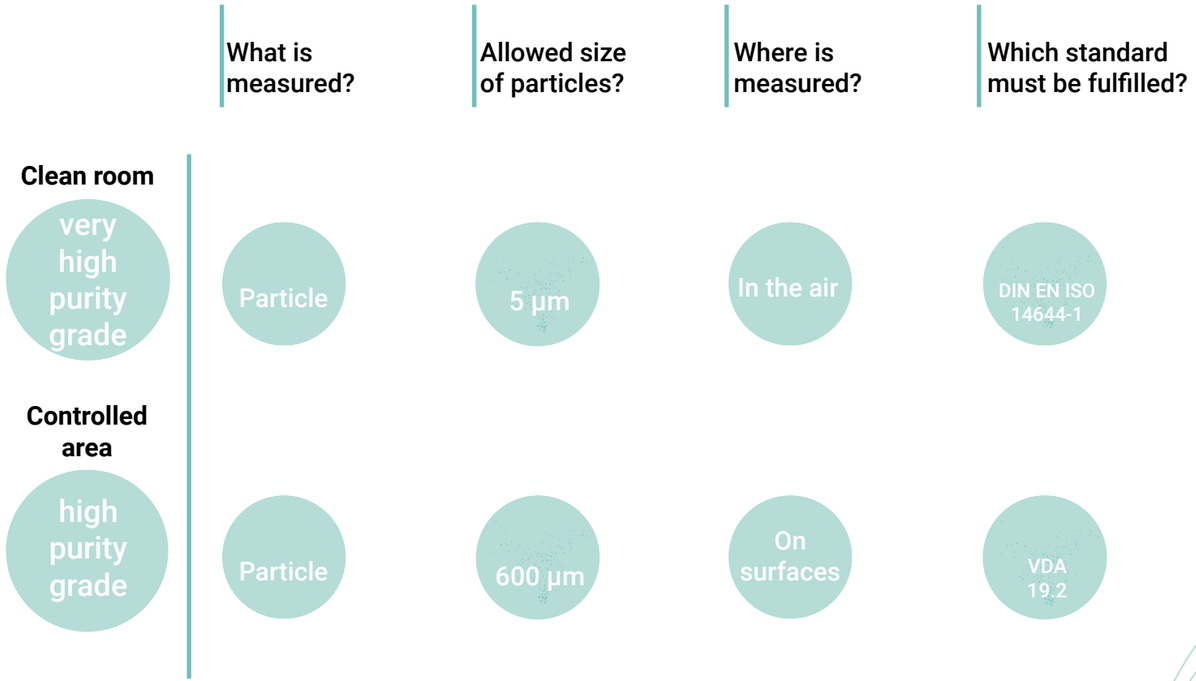
DIFFERENCES
CLEAN ROOM & CONTROLLED AREA



DIFFERENCES
tempLED RayClean PRO & tempLED RayClean

	Clean room tempLED RayClean Pro	**Controlled area tempLED RayClean**
Which standards does tempLED meet?	DIN EN ISO 14644-1 Classes 2 - 6	VDA 19 (ISO 16232)
Structural differentiation of the tempLED luminaires	• Modular system support • Antibacterial sealing foam throughout	• System support integrated in luminaire housing • Continuous sealing foam
Technical differentiation of the tempLED luminaires	IP 65	IP 30

CLEAN ROOM STANDARD TO DIN EN ISO 14644-1

very high purity grade

	particles per m³							
Class	**0,1 µm**	**0,2 µm**	**0,3 µm**	**0,5 µm**	**1,0 µm**	**5,0 µm**		
ISO 1	10						clean room	not on sale
ISO 2	100	24	10				clean room	on request
ISO 3	1.000	237	102	35			clean room	on request
ISO 4	10.000	2.370	1.020	352	83		clean room	on request
ISO 5	100.000	23.700	10.200	3.520	832		clean room	on request
ISO 6	1.000.000	237.000	102.000	35.200	8.320	293	clean room	tempLED Standard
ISO 7				352.000	83.200	2.930	clean room	tempLED Standard
ISO 8				3.520.000	832.000	29.300	controlled area	tempLED Standard
ISO 9				35.200.000	8.320.000	293.000	controlled area	tempLED Standard

CONTROLLED AREA STANDARD TO VDA 19.2

high purity grade

Cleanliness levels	Definition / Delimitation	Marking
0	There is no separation or air filtering.	None
1	Work processes are separated from each other by markings or partitions. Particles are not filtered out of the air.	Controlled area
2	Work processes take place in structurally delimited premises. Particles are not filtered out of the air, but fall to the floor and onto surfaces.	Controlled area
3	Work processes take place in structurally delimited premises. People and materials only enter the room via airlocks. Particles are filtered out of the air.	Clean room

high purity grade

CONTROLLED AREA

Applications

Food industry

Micro-mechanics

Medical practices & hospitals, e.g. patient rooms

Indoor greenhouses

very high purity grade

CLEAN ROOM

Applications

Chip industry & electrical engineering

Laboratories

Hospitals, e.g. operating theatres & intensive care units

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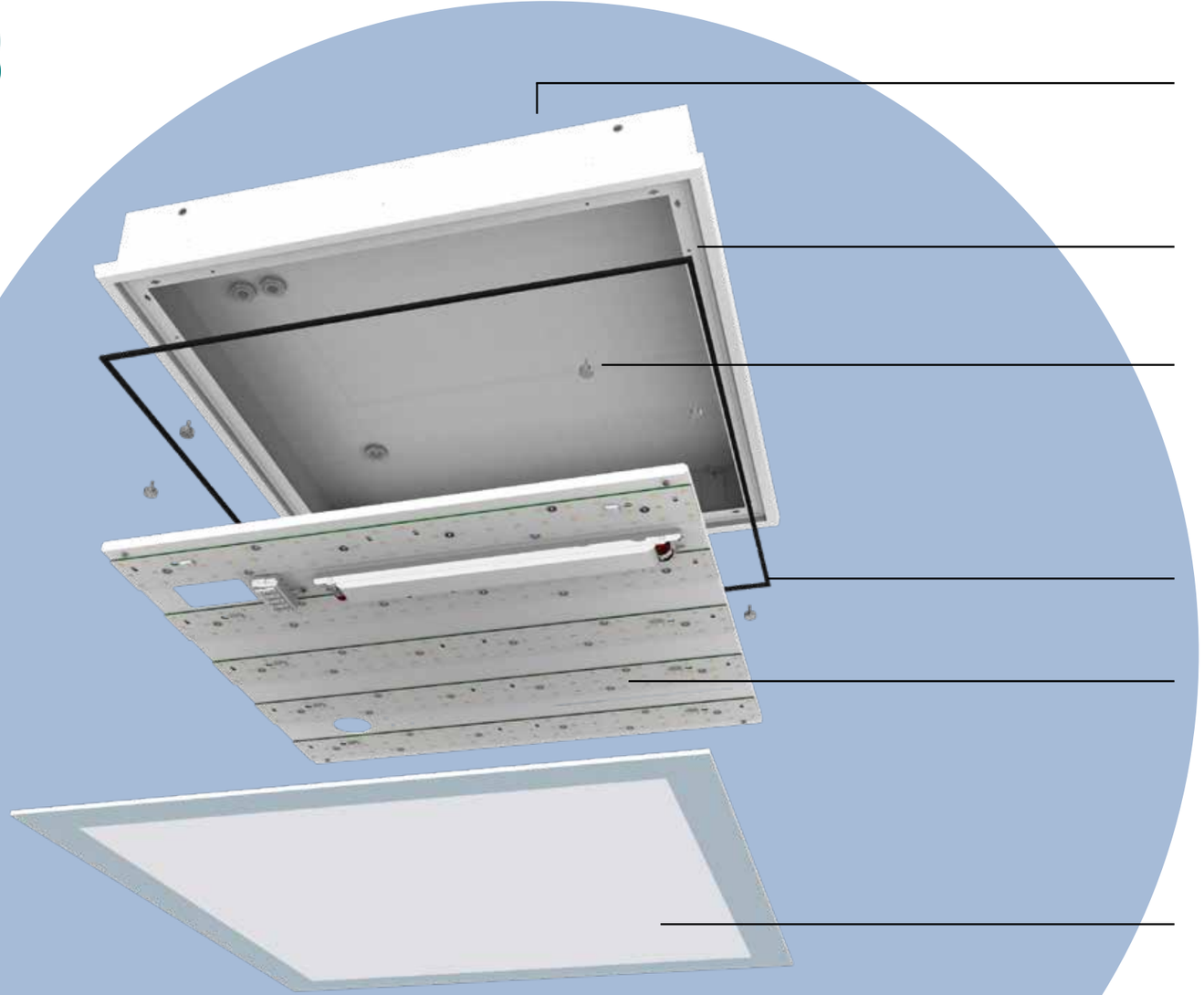

RayClean Pro

very high purity grade

Modular overall construction of the luminaire.

IK08 · IP 65

Abrasion-resistant steel housing with powder coating.
Steel insert frame for tool-free insertion.

Magnets for tool-free,
effortless one-man assembly.

Antibacterial polyurethane foam gasket injected
right into the corners.

CASAMBI optional · nedap optional

Modular system carrier.

170 lm/W · 25 – 100 W · bis 15.500 lm · CLO

Safety glass with screen-printed frame in pure white (RAL9010).
Glass cover easily detachable with suction cup.

R_a >80 · 4,000 K 5,000 K · DALI · monochromatic yellow light 583-595 nm · growth-oriented plant light · disinfectant UV-C light

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Easy, tool-free attachment of the carrier, thanks to the extra strong neodymium magnets.

Power supply unit according to Zhaga standard, optional second power supply unit for various combination possibilities as well as emergency lighting.

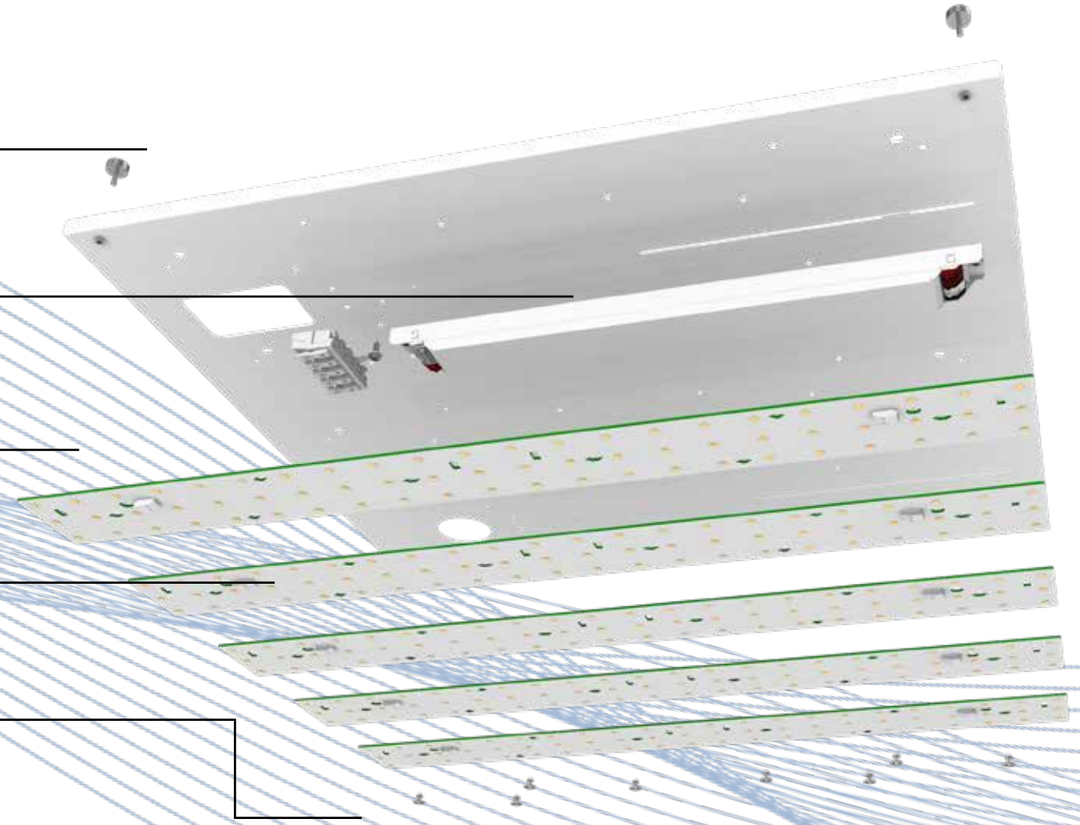
Four powerful and long-lasting Zhaga LED light fields.

Choice of light colours: whether white, yellow or plant light, UV-C or RGBW - the modular luminaire support can be individually equipped.

Fast, tool-free LED replacement - for maximum flexibility.

Many more possibilities:

- DALI
- Motion sensor
- Casambi and Nedap
- Human Centric Lighting
- Emergency lighting



RayClean Kit

Modular system carrier in detail

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Modular overall construction of the luminaire.

Abrasion-resistant steel housing with powder coating.
Steel insert frame for tool-free insertion.

IK08

IP 30

Polyurethane foam seal injected right into the corners.

Magnets for tool-free,
effortless one-man assembly.

Modular system carrier.

170 lm/W

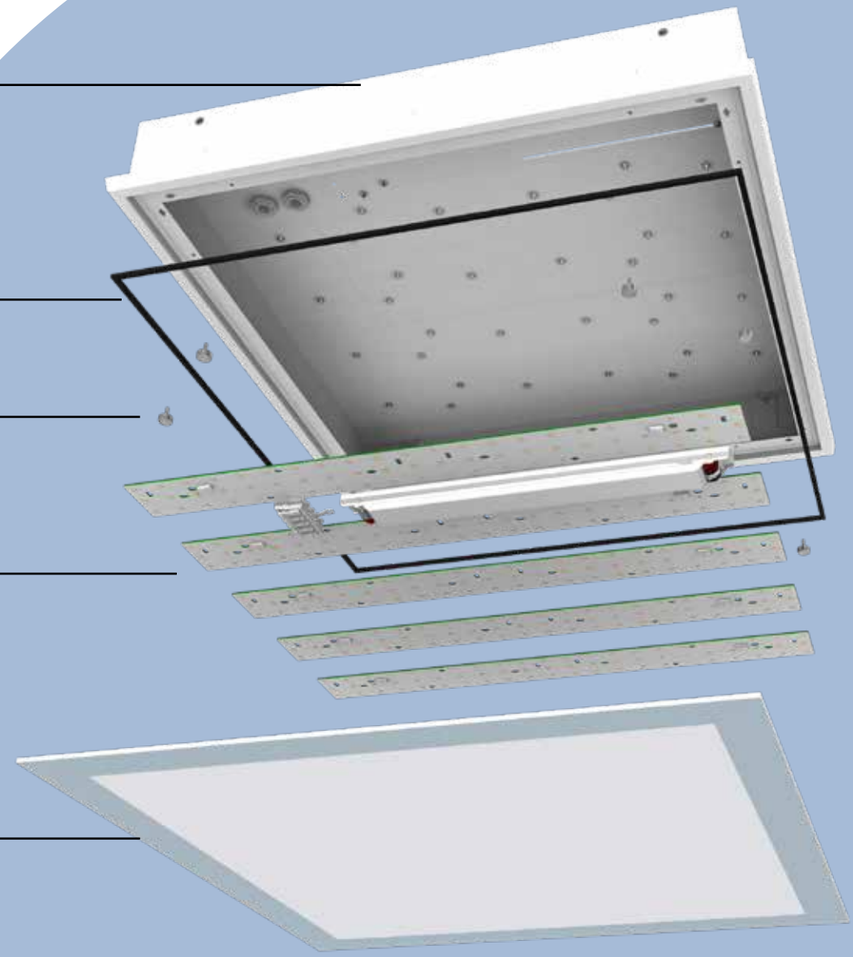
25 –
100 W

bis
15.500
lm

Safety glass with screen-printed frame in pure white (RAL9010).
Glass cover easily detachable with suction cup.

R_a >80

4,000 K
5,000 K



high
purity
grade

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RayClean

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It couldn‘t be easier!

Do you already have a conventional lighting system?

Switch to LED lighting with us and benefit from the many advantages of the tempLED system.

Our modular luminaire support can also be used in your existing luminaire. You don‘t even have to remove your luminaire from the ceiling: Thanks to the magnets, you insert the support and immediately use the future-oriented technology of the tempLED without much effort.

RayClean Kit

RETROFIT-KIT FOR
CLEAN ROOM AND CONTROLLED
AREA LUMINAIRES

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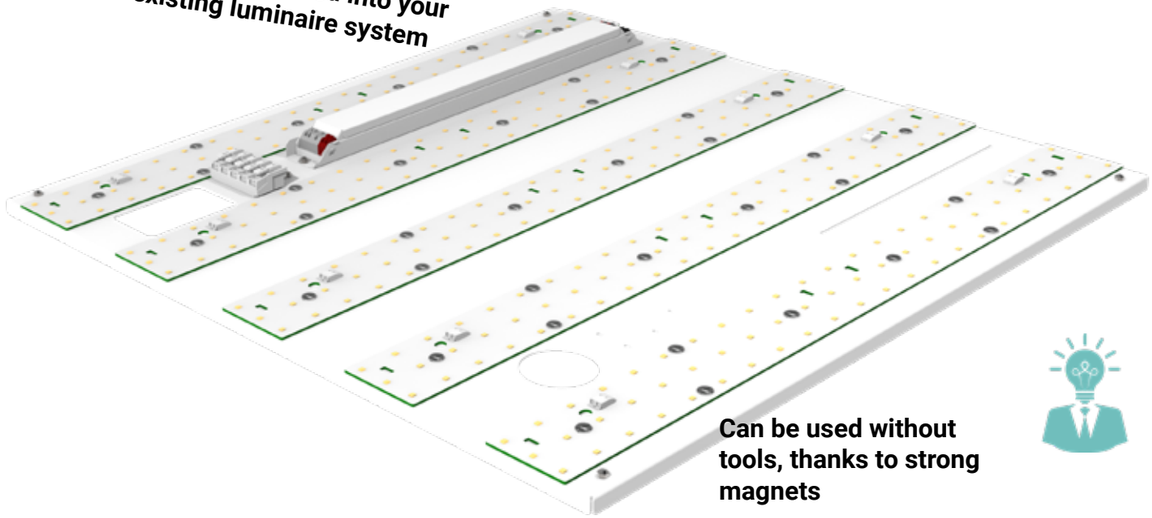
Can be integrated into your existing luminaire system



Can be used without tools, thanks to strong magnets

Modular system support adapted to your requirements

monochromatic
yellow light
583-595 nm

growth-oriented
plant light

disinfectant
UV-C light

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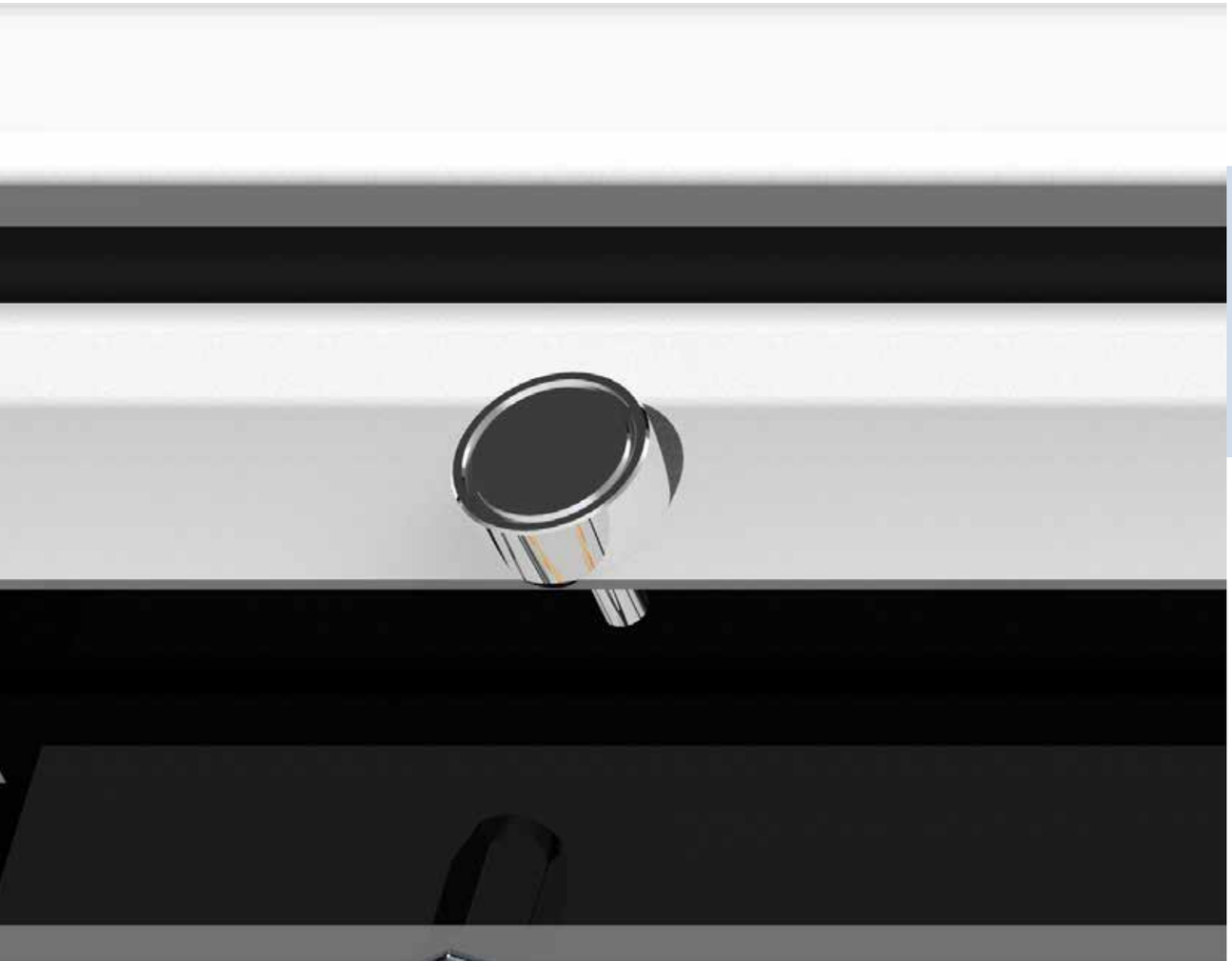
UNCOMPROMISING SEALING

The uncompromising cleanliness of the RayClean Pro is achieved primarily by the seal, which is made of antibacterial polyurethane foam.

This is a soft, elastic foam seal that is applied to the enclosure from a spraying machine. This creates a seal that is continuous even in the corners.

Your benefit:
„Even the smallest particles have no chance of penetrating.“

A.M.H. CEO tempLED



UNCOMPROMISING USABILITY

The strong neodymium magnets have two decisive advantages:
On the one hand, they can be attached completely without tools.

Secondly, they have a smooth surface and are therefore easy to keep clean, unlike screws.
There are no grooves in which small dust particles can collect.

Your benefit:
„Easy cleaning of the luminaire and simple one-man installation thanks to the magnets.“

D.S. authorised signatory tempLED

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UNCOMPROMISING PERSPECTIVE

The cleanroom luminaire has ESG safety glass. As the abrasion-resistant screen printing frame is located under the glass pane, it is particularly easy and efficient to clean.

The optic - a smart diffuser foil - is available in different versions. It has a high system efficiency and is suitable for realising efficient and sophisticated lighting systems.

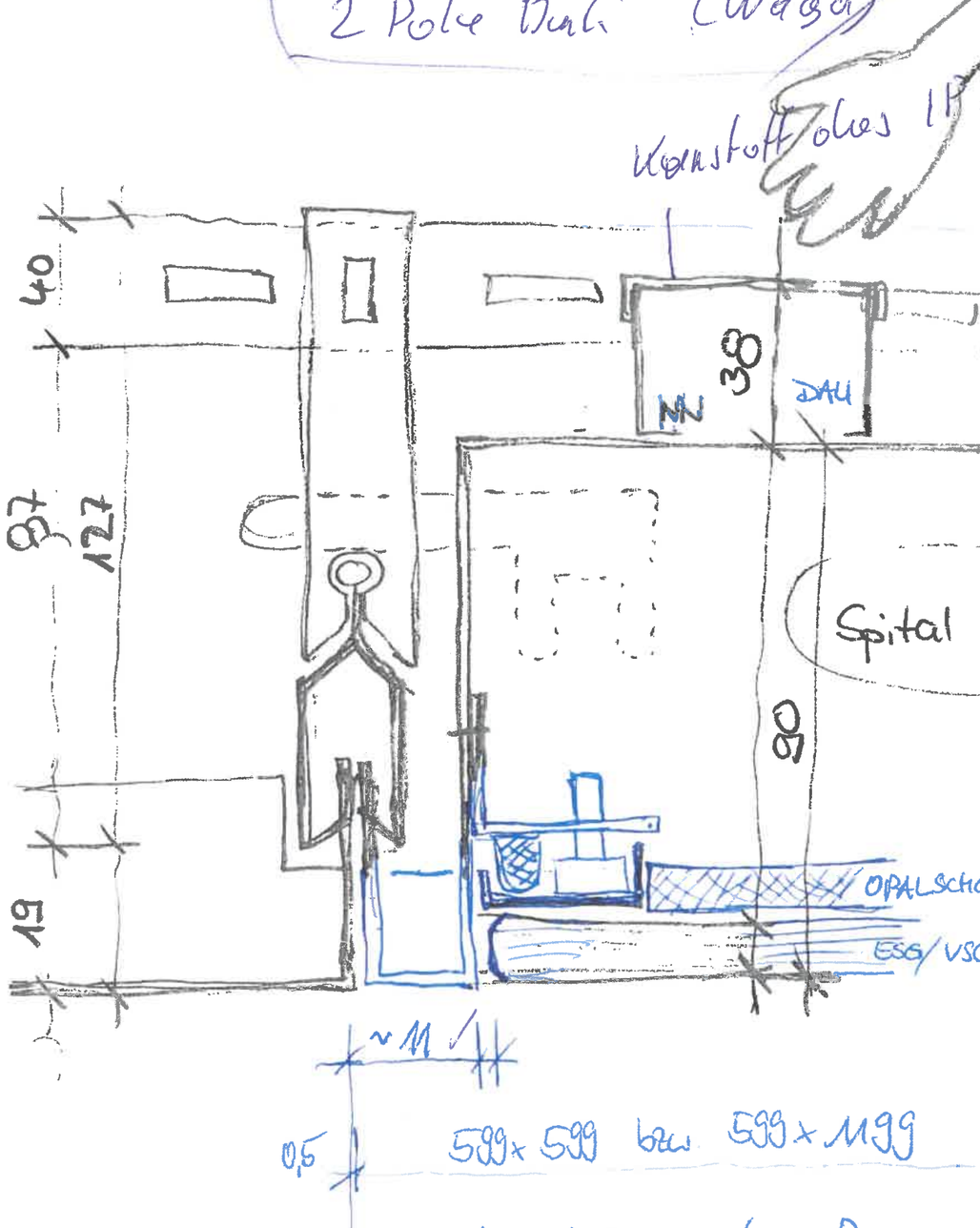
Your benefit:
„Uniform and effective light control as well as a homogeneously and maximally illuminated light emission surface.“

A.H. CEO tempLED

CUSTOMISED PROJECT SOLUTIONS

INNOVATION - From the idea to the product
Our services for you:

- We develop and produce the RayClean Pro at our site in Austria.
- In doing so, we are constantly developing ourselves and our product.
- Our RayClean Pro is subject to very precise quality control.
- With us, every customer request is still followed up with pencil and eraser.
- We develop customised solutions - **Because no project is like the other!**



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CLEAN ROOM IN PRACTICE

tempLED RayClean Pro
Laboratories

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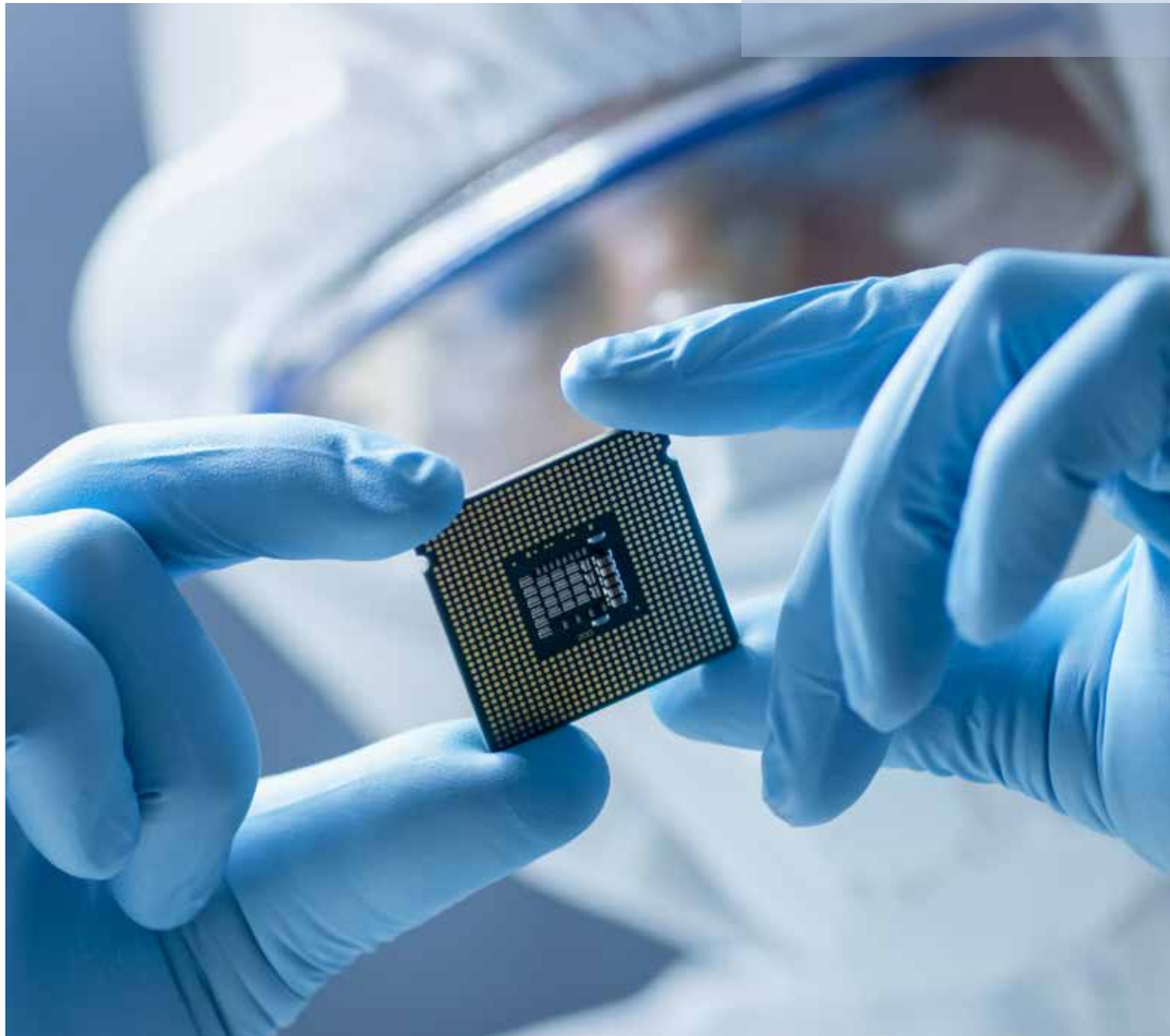
tempLED RayClean Pro
Chip industry



CONTROLLED AREA LIGHTING IN PRACTICE

tempLED RayClean
Beverage industry

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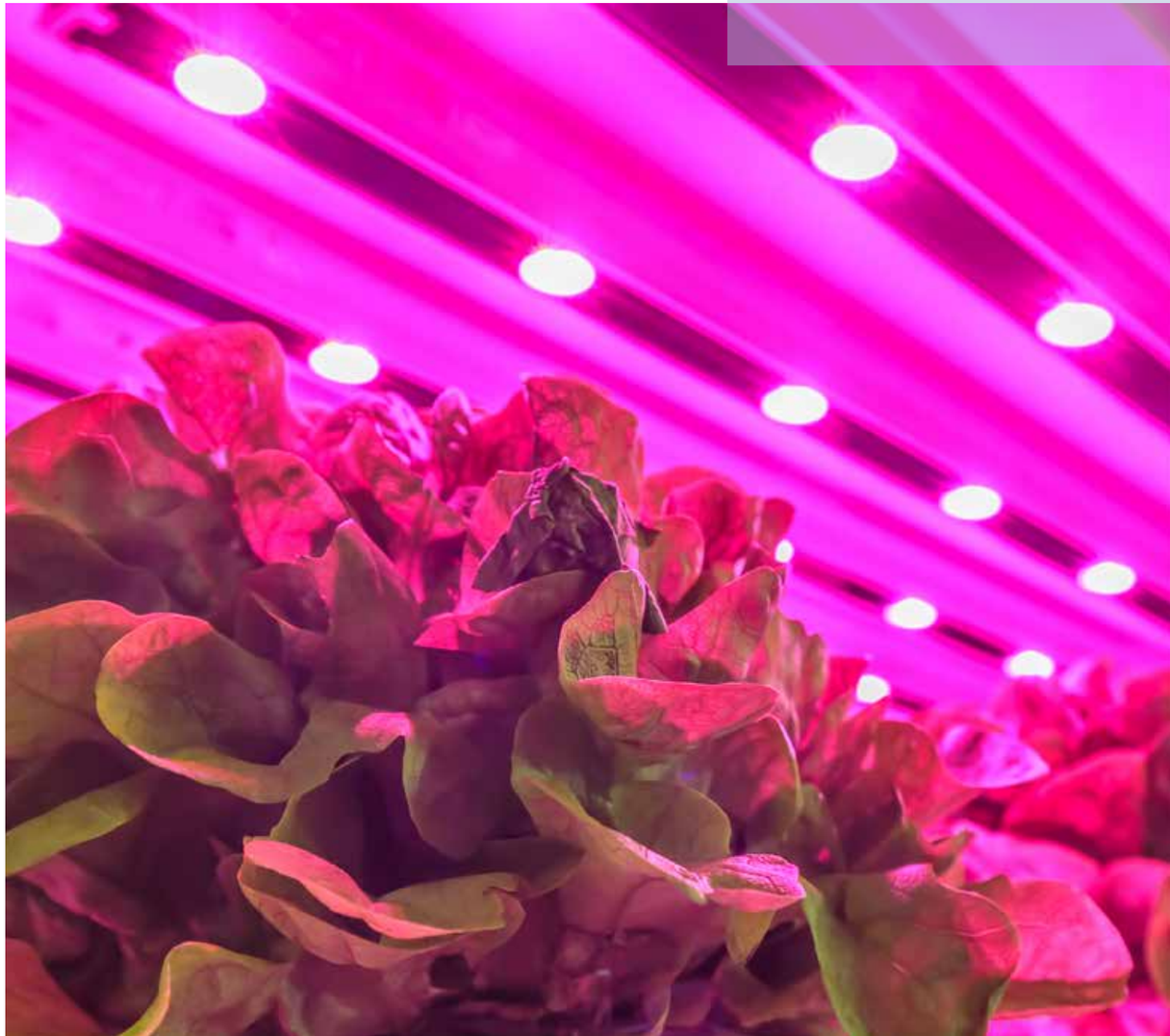
tempLED RayClean
Indoor greenhouses



BEYOND CLEAN ROOM
SAFE GERMICIDAL
THROUGH UV-C - RADIATION

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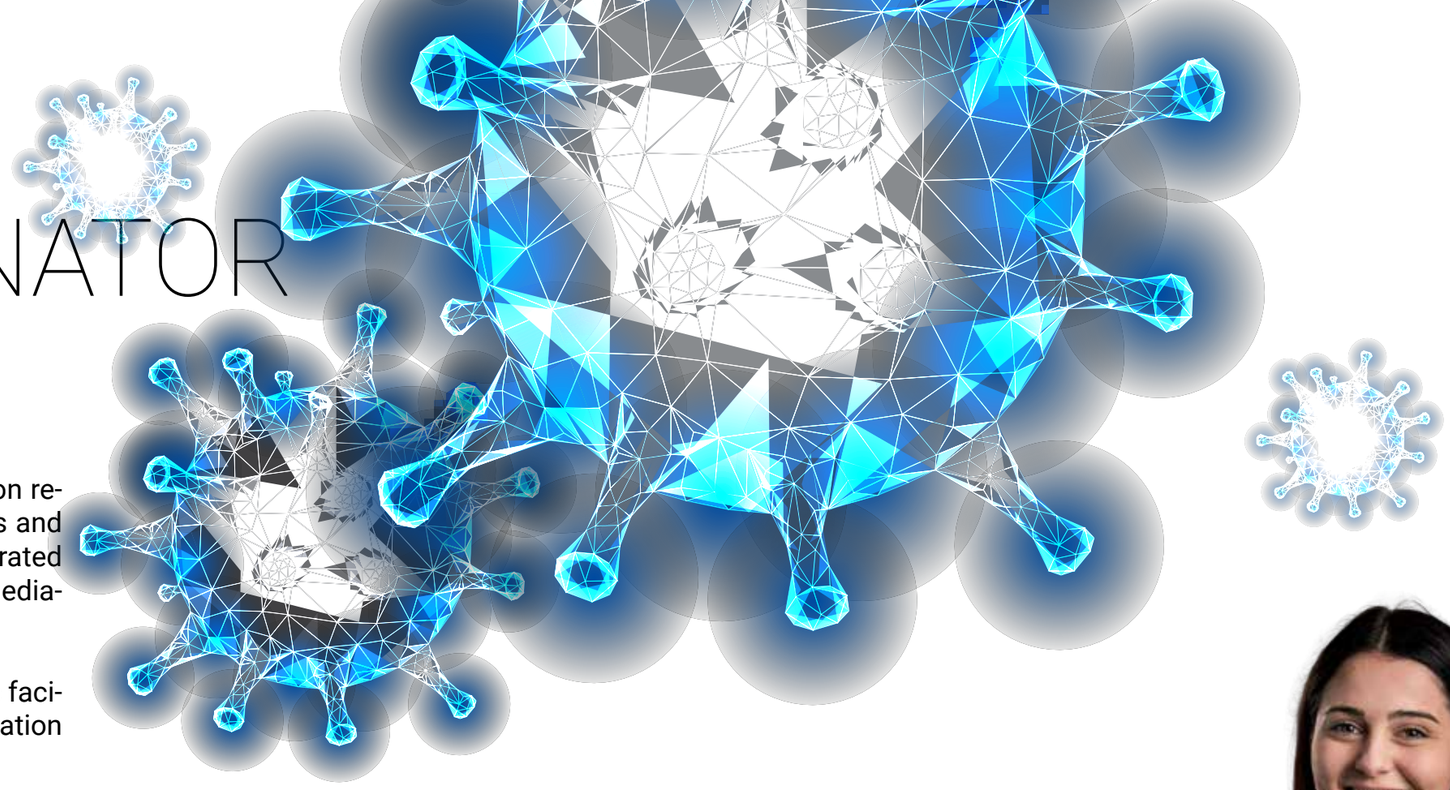
VIRUS EXTERMINATOR



RayClean Pro with UV-C radiation

The cleanroom lamp can also be purchased with UV-C radiation on request. UV-C radiation effectively removes bacteria, viruses, germs and mould spores from surfaces, air and water. Controlled by an integrated or external presence detector, the UV-C radiation switches off immediately when people enter the room.

Not only suitable for medical purposes - also in offices and public facilities or in the food industry, rooms are cleaned with the UV-C radiation and all germs are killed.

The RayClean Pro with UV-C eliminates:

- Bacteria
- Viruses
- Germs
- Mould spores

Get in contact with us:

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Please feel free to inform yourself about our entire product range

- High temperature lighting
- Hall lighting - also for great heights
- Outddor lighting
- Line lighting
- Controlled area lighting
- Lighting for sports facilities
- Multi purpose & tri proof lighting
- Plant lighting

Data sheets
Lighting design files
Installation intructions

simply download at
www.tempLED.de/downloads

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