



vitaLED®

**BRUMBERG®**  
— light for generations —

Health. Comfort. Quality of life.

#### BRUMBERG – A family company now in its 5th generation

We stake our name on our reputation and our commitment to you. We have built our brand on being committed to being an authority and driver of innovation in lighting solutions. We also work with a team spirit and mutual responsibility that are just as important to us as the quality of our technology and services.

These values and standards have been the basis for our company's continued success for five generations. As a family company, we value our flexibility and independence and ability to plan on a long-term, sustainable basis.

Photo: Benedict Brumberg, Johannes Brumberg

# vitaLED®

## Intelligent and Healthy Lighting

We live in a time when people are worrying about their health and living environments than ever before. The world is undergoing significant changes and we need to be able to withstand them.

The advent of modern technologies such as the Internet or the mobile phone, lets an incredible communication flood affect us. You can then add in environmental factors and political aspects that can lead to people feeling uncertain and even fearful. Our brains and our bodies need to be able to process all of this information. It is therefore particularly important to minimize the daily flood of stimuli and remain focused on creating quiet zones and intentional moments of relaxation.

And light plays a special role in this process. Especially the non-visual effects of light can influence such things as our blood pressure, body temperature, metabolic processes, and other processes that follow our body's internal "clock." All of that needs to be processed by the brain which often leads to its feeling overloaded. Accordingly, different situations call for different lighting solutions.

Classic light sources, such as incandescent or halogen lamps, cannot, however, fully reflect the full color spectrum required for such solutions. Our vitaLED® lighting system is different. Your body's biorhythms will be positively influenced by the much larger color spectrum and the option to adjust the vital process. This will significantly improve your performance and concentration and can even accelerate healing processes.







# Innovative Lighting Technology

## Wellbeing thanks to Vital Light.



Professor Ulrich Kuipers  
Southwest Westphalia University  
of Applied Sciences

New LED-based lighting technologies not only make significant savings of electrical energy and the reduction of CO<sub>2</sub> emissions possible, they also provide healthy light that will positively influence your sense of well-being and ability to perform. This requires artificial light to change throughout the day like natural light. vitaLED® makes such light control possible. The human retina contains photo-receptors that are sensitive to blue light and control the production of important hormones in the brain such as melatonin, serotonin and cortisol. Melatonin affects our sleep cycles, making us tired and lowering our activity, whereas cortisol is a stress hormone and serotonin brightens our moods and motivates us.

vitaLED® was developed in collaboration with the new lighting technologies research center at the Southwest Westphalia University of Applied Sciences. It is controlled via ethernet, wifi or Bluetooth. vitaLED® can bring the positive effects of the changing color of light throughout a beautiful, sunny day into your interior spaces.



Emotion. Safety.  
Individuality.  
**Light that's perfect for me.**

vitaLED®: the intelligent lighting system that can be adapted to the needs of your everyday life. It creates just the light you need or want at the moment and it can energize you or help you rest. Discover the new possibilities of modern lighting technology with vitaLED®.

My favourite place -  
my home



# Discover a new way to live. Make light personal. Create a feeling of security.

- **Awake gently.** The correct lighting helps you to start the day well.
- **Get off to a flying start.** You can adjust the color and brightness of the light to help you concentrate better and be more effective at your job. An increased level of blue in the white light range can also enhance performance.
- **Come home to a sense of well-being.** The atmosphere created in the living room by dimmed light in warm colors enables you to slowly relax, encourages regeneration, and helps the day slowly draw to a close.
- **Show off your personality.** Designing your own lighting scheme with the colors and intensities of your choosing will make you feel good all round.

## Living Naturally

Warm light has little blue components and thus soothes and enhances your well-being. You can set up various lighting schemes that mimic the natural shifts in available light throughout the day.



# Light stimulates. Light supports biorhythms.

Light as a fundamental part of everyday life has a great influence on our biorhythms and supports biological processes and keeps us energized and ready to perform. These processes are constantly adapted with the changes in our environment, but there isn't always enough light available when we want it. People spend nearly 90% of their lives indoors.

vitaLED®, when combined with modern lighting design, provides biologically active light that makes it possible to compensate for the lack of light in a way that reflects the processes in nature. This provides optimal support for periods of activity and rest and thus helps to keep people healthy and fit.

Biologically active artificial lighting can be switched on or adjusted continuously and automatically depending on the available daylight. Daylight and artificial light should complement each other and not compete when lighting indoor spaces. Combining the two both saves energy and also increases the quality of lighting.

## Optimal Workout

An increased proportion of blue light has an energizing effect and increases the ability of the human body to perform. In addition, it activates our metabolism and reduces our cravings for carbohydrates.

# Individual Color Moods

## Networked light for more flexibility and convenience.

Control your lighting easily via remote control, probe, or touch panel either from home or while on the go via our app. You can also access pre-defined settings automatically.

Select from the lighting designs you've already set up or adjust the lighting to the needs of the moment. For example, you can create a cozy atmosphere for relaxing when you get home from work or set up your lighting to give you a boost of energy in the morning.

A networked lighting concept can be used to coordinate lighting solutions in individual rooms or areas of your home that can be controlled synchronously or individually for each zone.

You can control the entire lighting in your home and garden with just one touch of the screen.





Living Better

Better Living Spaces

Intelligent Lighting Control

Energy-Efficient Lighting Management

Individual Start to the Day



vita**LED**<sup>®</sup>smart

# Getting Started with Dynamic Lighting

## Flexible lighting. Simple. Smart.

- **Individual well-being.** Add atmosphere to your living spaces with dynamic lighting.
- **For your needs.** Adjust the color and brightness of your lighting to fit your needs. Whether when you want to be active or enjoy some down time, the right lighting helps make it possible.
- **Evoke memories.** Remember a lovely summer evening or a steel-blue sky on the glacier. Bring the unique mood of that experience into your home: as simple as choosing a photo from your personal photo album.
- **Live smarter.** Control your lighting system easily via your smartphone. Whether you want a color sequence or static light, vitaLED<sup>®</sup> smart makes everything possible.





# Just what I like

## Flexible lighting. Simple. Smart.



vitaLED® smart is the professional way to start adding dynamic color lighting for your home. The system design makes it quick and easy to install and begin enjoying your new lighting.

Because the lights do not require a lot of wiring or the hassle of configuring a wireless router, this system can be added to your home with little effort. Sit back, relax and create your own individual lighting scheme with the app from your smartphone or tablet. The easy and intuitive system control rounds off the package and offers plenty of scope for your creative ideas.

1

Power  
supply

2

Distribu-  
tor

3

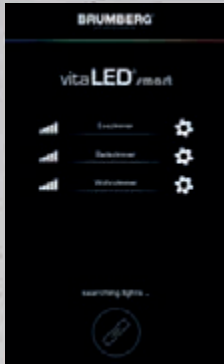
Lights

**Healthy, individually adjustable light:**

All you need is a power supply unit, a Bluetooth distributor, and the lights themselves. These can be readily installed in your ceiling. Then all all you need to do is download the app for your smartphone or tablet and you're set to go.

Of course, you can always just turn the lights on and off in your spaces using the normal light switch!

# Options for controlling your light with the vitaLED® smart app



## Connection screen

The "Connection-Screen" displays available Bluetooth distributors. These can be activated and renamed at this screen.



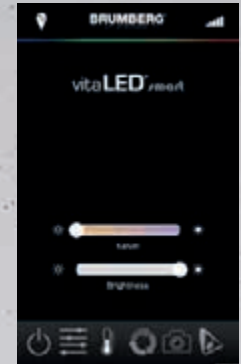
## ON/OFF screen

The selected zone can be switched on and off with just a tap on the "ON/OFF" screen.



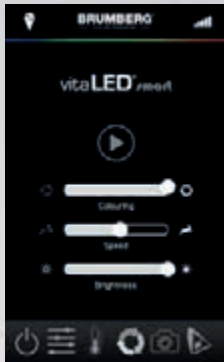
## Channel screen

All four color channels (R/G/B/W) can be individually controlled using the channel screen.



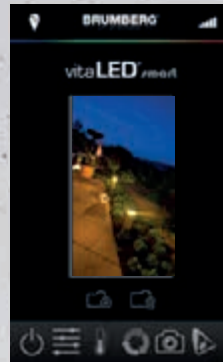
## Kelvin screen

The color temperature in the white light range can be continuously adjusted from 2,000 to 10,000° Kelvin using the Kelvin screen. The selected color value can also be continuously dimmed from 100% to 10%.



## Color run screen

The color run screen controls the saturation, speed and brightness of the color in the light output.



## Photo screen

The photo screen lets you upload a personal image. You can then tapping an area of the photo to tell the system that this is the lighting mood you wish to have in your space.



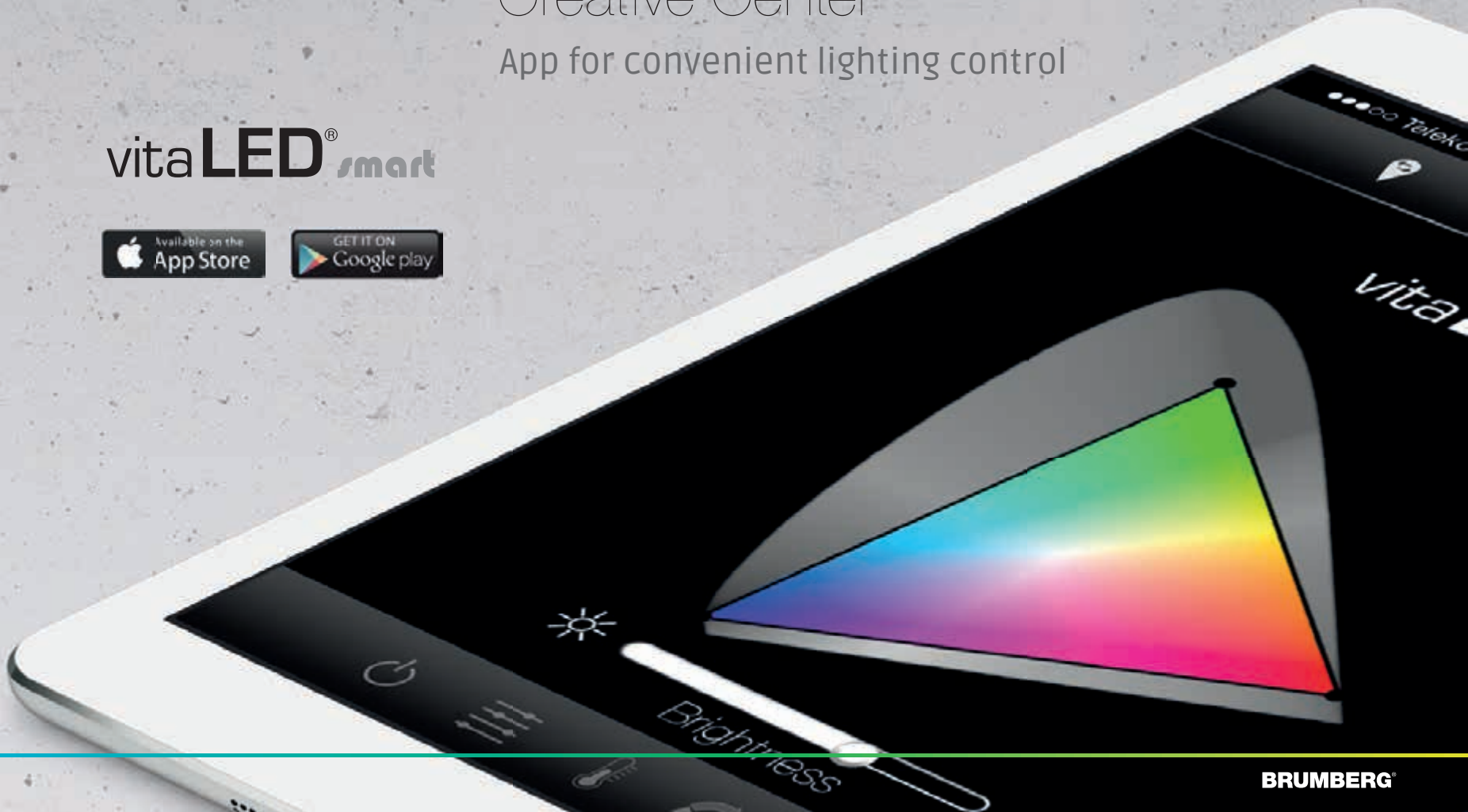
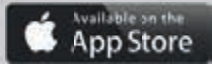
## Triangle screen

The triangle screen can be used to select a specific color from the color triangle.

# My Personal Creative Center

App for convenient lighting control

vita**LED**<sup>®</sup>smart







# Vital Light for Every Living Space

## Retail Gastronomy

- Create special dining and shopping experiences
- Create a sense of well-being
- Direct customer traffic
- Create specific atmospheres for different brands
- Drive purchase decisions

## Health and Wellness

- Get rid of stress
- Increase energy and performance
- Promote sociability
- Activate metabolism

## Living

- Lighting specific to your needs
- Balance out season low-light conditions
- Personalize your smart home's lighting

## Work Learning

- Increase concentration
- Increase efficiency
- Get rid of stress
- Prevent fatigue
- Create an atmosphere that encourages productivity



# Bathroom and Wellness





Energizing light in the morning > 6,000 Kelvin,  
relaxing light in the evening < 3,000 Kelvin

## Pure Relaxation: My bathroom as a wellness oasis

Each day begins and ends in the bathroom. People spend a daily average of up to an hour in the bathroom. A tasteful ambience is becoming increasingly important. What was once just a functional space is becoming a comfortable home spa. Wellbeing and pampering are paramount.

A well-conceived lighting concept is an integral part of enhancing the feeling of well-being in your bath. Even more than other living spaces, the bathroom has different lighting needs depending on the time of day and mood. While you may want cold light in the morning to wake you up, you'll probably want warm lighting in the evening to help you relax in the bath.

Indirect lighting creates a harmonious atmosphere and not just in professional saunas and beauty studios, but also in your personal wellness oasis. Lighting accents emphasize selected areas that are used functionally. You can use colored light to immerse your spa in soft color tones that can be relaxing, balancing, inspiring or activating as you wish.

vitaLED®

# Bathroom and Wellness

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DORN  
BRACHT

Sensory Sky, Dornbracht

We have participated in the development of Sensory Sky, which takes showering from routine to an experience where the elements of water, light and fragrance are mixed and matched in different combinations to make showering a holistic experience.

For example, you can immerse yourself in the reAdjust scenario, just one of the three scenarios that can be chosen with your Sensory Sky shower. The reAdjust choreography is designed to create clarity, increase your concentration power, and sharpen your senses. Fog and warm rain reduce the daily flood of stimuli to a soothing minimum until the sky gradually clears and you're ready again to focus on perceiving the world intensively.

Light: white light that becomes bright simulates the cool atmosphere of dawn, while warm, yellow light acts like the erupting sun that soon disappears and gives way to a cool, hazy light. The scenario then ends with clear skies.

Light effect: the primary variable lighting colors of yellow and green give us a sense of tranquility and vitality that radiates an incredible feeling of well-being. As the white light emerges repeatedly, it bathes us in a feeling of infinity and gives our body and mind the desire to accomplish great things.

# Creating Atmosphere with Light and Water

## vitaLED® makes showering an even more special experience

In this digital age, people are demanding more user-friendly, convenient, and smart control solutions. Brumberg and Dornbracht have come together to pursue innovations that make best of potential synergies by combining digital applications into the best possible solution.

The combination of the elements of water, light, and fragrance found in the different scenarios has turned showering into a holistic experience. Intelligent, networked lighting controls for your bathroom let you optimally coordinate the various elements so that the wet spaces and the bathroom in general can be immersed in any lighting scheme you might come up with. Solutions that offer a maximum ease of use and a maximum sense of well-being.

Light is more than lighting. Light is wellness. Light affects the quality of life.



# Bathroom and Wellness



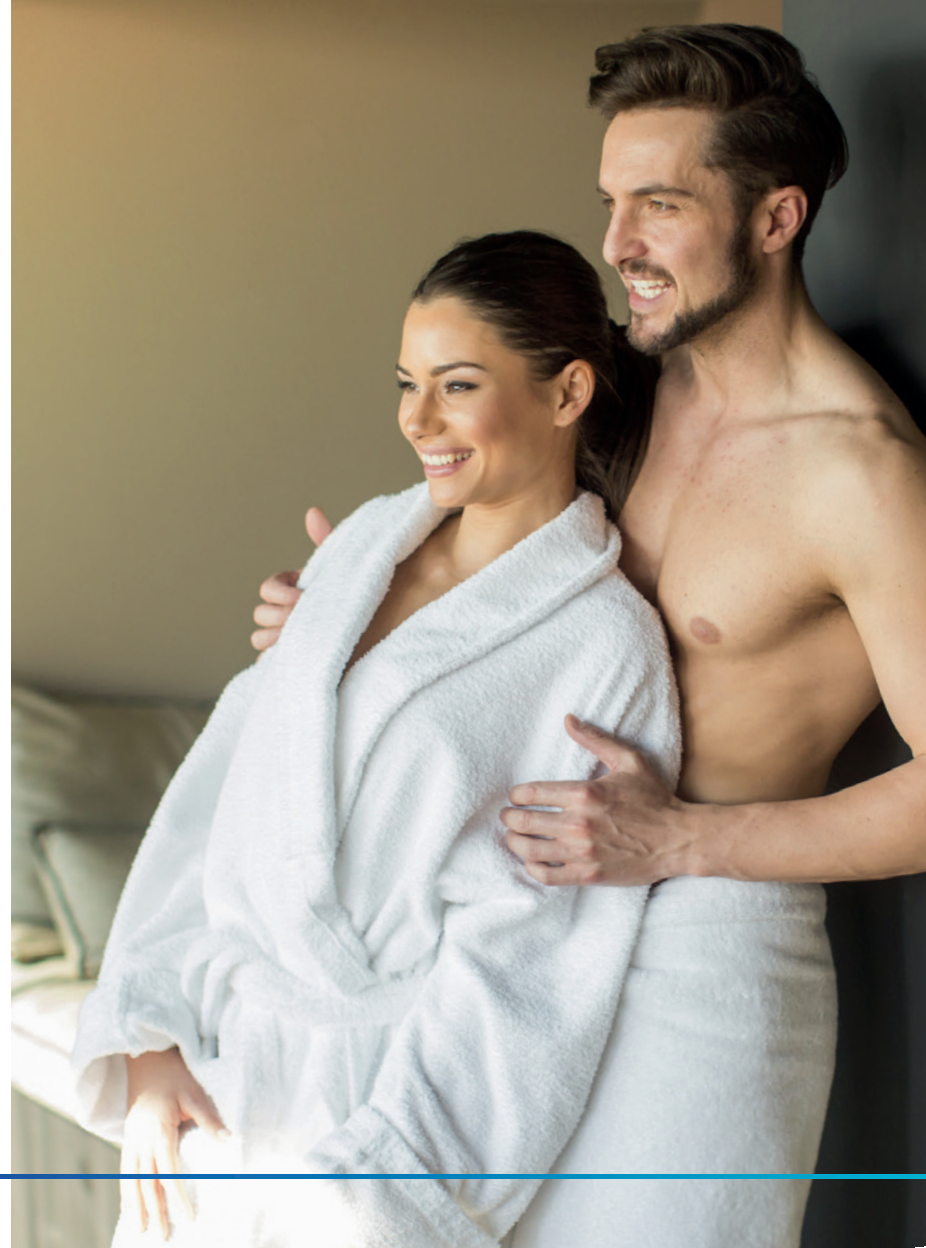


vitaLED®

01

# Bathroom and Wellness

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## Lighting and wellness in our Munich showroom

### Spectacular lighting showroom in Alling near Munich.

In cooperation with our network partners and our cooperation partner Dornbracht, we have set up an impressive showroom showcasing the most innovative lighting technology at Experience Point, just 20 minutes from Munich's airport.

Our 500 m<sup>2</sup> showroom provides a cross-section of our portfolio. The design of the exhibition is, as usual, extremely straightforward, to keep the attention on our products which are almost exclusively fitted with the latest LED technology. From static white lights to dynamic RGB colored light to the intelligent vitaLED® lighting system and more. Of course, we also showcase several of our Shoplight products which deliver the highest quality lighting.

From the product showroom, you can then go up to a 200 m<sup>2</sup> luxury loft featuring the latest lighting and building management systems. One highlight of the loft is the private spa, equipped with Dornbracht's eSolutions products. Unique wellness solutions such as the horizontal and vertical showers and the Sensory Sky shower experience equipped with vitaLED® can all be tested here in person. To give you plenty of time to check out all of the unique solutions, you can rent the loft for a night or two. Of course, the loft apartment includes bedrooms, bathrooms, a kitchen and a living space so that you can have the entire living and wellness experience.

The entire loft is networked with intelligent building systems that, among other things, control the efficient lighting systems. Different preprogrammed scenarios give the loft's residents the kind of comfort they seek as they immerse themselves in a comprehensive experience for the senses complemented by high-end audio solutions.

The WellnessCube® is also located in the outdoor area of the complex. Surrounded by nature and free of spatial constraints, the WellnessCube® is a personal luxury temple especially designed for outdoor use that combines exclusivity and individuality at the highest level. Like the loft, it too is also equipped with the vertical and horizontal showers so that users of the WellnessCube® can enjoy the benefits of a sauna surrounded by a professionally landscaped garden. Our exclusive vitaLED® lighting system floods the overall space and its wet areas with light controlled by intelligent, networked systems to create any number of relaxing or activating scenarios. Those who invest in such a WellnessCube® will be glad to have such a unique spa experience to call their own. Building permits are not required to set one up (at least in Germany). All you need are a few footings, a power supply and water lines. The cube is delivered in 3 prefabricated parts.

The entire structure is illuminated inside and out with vitaLED®. Even from far away, the showroom complex attracts attention.

## Bathroom and Wellness







# 01 Care Sector



As we age, our eyes transmit less light for short-wavelength spectral components, a fact which has been taken into account with the use of vitaLED®. Lighting with more blues in it can compensate for this, which has a demonstrably positive impact on one's well-being and health.



Ketzberg retirement home, Solingen

# Healthy light with vitaLED®

## More freedom through age-appropriate lighting

As we age, what we require of our living spaces changes. In addition to providing nearly barrier-free access and opportunities to make everyday life easier, a sophisticated lighting concept is another key component to living well as we age. But lighting is more than just about lighting fixtures. A good lighting design gives the rooms an atmosphere where people like to spend time and also provide security and orientation.

The right lighting can also be helpful in care settings, especially for people with age-related disabilities such as dementia and macular degeneration. Often these older persons live isolated lives indoors without sufficient daylight. The consequence: they feel tired and lack energy and sometimes suffer from depression and insomnia. Through the targeted use of light intensity and color based on the color spectrum of natural light, the residents' biorhythms can be positively influenced. They are more active and take more part in daily activities.

With vitaLED®, BRUMBERG has developed a lighting system that does justice to these special requirements while still being very user-friendly. Test subjects at the German Society for Gerontological Technology (GGT) confirmed this and gave the vitaLED® system its quality seal with a score of "very good".

In addition, there are lighting concepts available that not only use energy efficiently but also provide the optimal conditions for age-appropriate lighting. A soothing light in conjunction with easy-to-operate controls helps create appropriate, comprehensive lighting solutions tailored to individual needs.



**PARTNERUNTERNEHMEN  
DER**



**KOMPETENZ & PARTNERSCHAFT**

# Care Sector

Morning and daytime 6,000-7,000 Kelvin,  
evening 2,000-3,000 Kelvin

In order to positively influence the well-being of its residents and to keep those in nursing care in harmony with the natural light cycles, we recommend starting the day with a cold, white light at 6,000-7,000 K, which is maintained throughout the day. This increases activity and promotes communication. By evening, warmer white light in the 2,000 - 3,000 K range is conducive to preparing residents for the resting phase. The right lighting can positively support the sleeping/waking cycles, with more activity during the day having a positive effect on the nightly resting phase. In the night hours, the color temperature should be no more than 3,000 K.



Gib jedem  
Tag  
die Chance,  
der schönste  
deines  
Lebens  
zu werden.

Mark Twain

Essen ist ein Bedürfnis,  
*genießen* ist eine Kunst.  
Carl Neubach

02



## Retail Gastronomy

Special dining and shopping experiences  
Creating a sense of well-being  
Direct customer traffic  
Create specific atmospheres for different brands  
Create purchase impulses

## Work Learning

Increase concentration  
Increase efficiency  
Getting rid of stress  
prevent fatigue  
create an atmosphere that encourages productivity

## Living

Lighting specific to your needs  
Balancing out season-related lack of light  
personalize your smart home's lighting

## Health and wellness

Getting rid of stress  
Increasing energy and performance  
Promoting sociability  
Activating the metabolism

# Education

Vital illumination ensures that students and employees remain efficient and attentive. Lighting that's needs-based can be individually adapted to the respective situation. Thus, the lighting mood can have a calming effect or promote concentration and reduce error rates.

In the morning, energizing light with high blue component and a color temperature of 6,000-6,500 Kelvin energizes the students and workers as they start their day. As the day progresses, the light is a more neutral white light at 4,500-5,000 Kelvin, perfect for concentrated work. Before and during breaks and at the close of the day, warm white, soothing light at 2,500 to 3,000 Kelvin should be chosen.





University of Applied Sciences, Hagen

# Creative Light More Concentration

Optimized working conditions through healthy and individually controllable light with vitaLED®. Dynamic lighting increases the ability to perform and enhances general well-being. It also has a positive effect on the satisfaction and health of workers and students.

vitaLED® makes it possible to increase work efficiency, reduce errors, and achieve lower stress levels. In addition, improved light quality can make a significant contribution to energy savings and reduced CO<sub>2</sub> emissions.



03



## Health Wellness

Getting rid of stress  
Increasing energy and performance  
Promoting sociability  
Activating the metabolism

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Creating a sense of well-being  
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Create purchase impulses

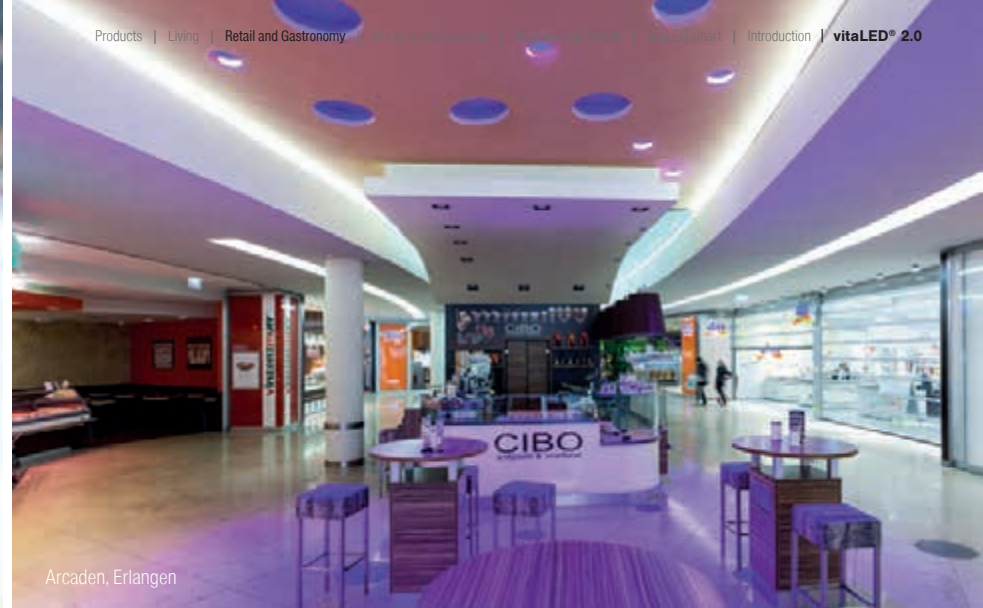
## Living

Lighting specific to your needs  
Balancing out season-related lack  
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Personalize your smart home's lighting

## Work Learning

Increase concentration  
Increase efficiency  
Getting rid of stress  
Prevent fatigue  
Create an atmosphere that encourages  
productivity

Customers will experience vital and compelling focus points or you can highlight different sales areas. Customers are motivated to buy thanks to targeted use of lighting. Where the products are displayed, the light color will need to be adjusted to the products, while quiet areas and check-outs should be bathed in warm, white light in the range of 2,500 - 3,500 Kelvin.



Arcaden, Erlangen

# Driving Sales with Lighting Concepts

## vitaLED® activates the desire to buy

With the right lighting, goods can be presented perfectly and customer buying behavior positively influenced. A sophisticated lighting concept turns the shop window into an experience and makes it stand out from the crowd. Dynamic lighting creates variety, attracts interest, and arouses curiosity.

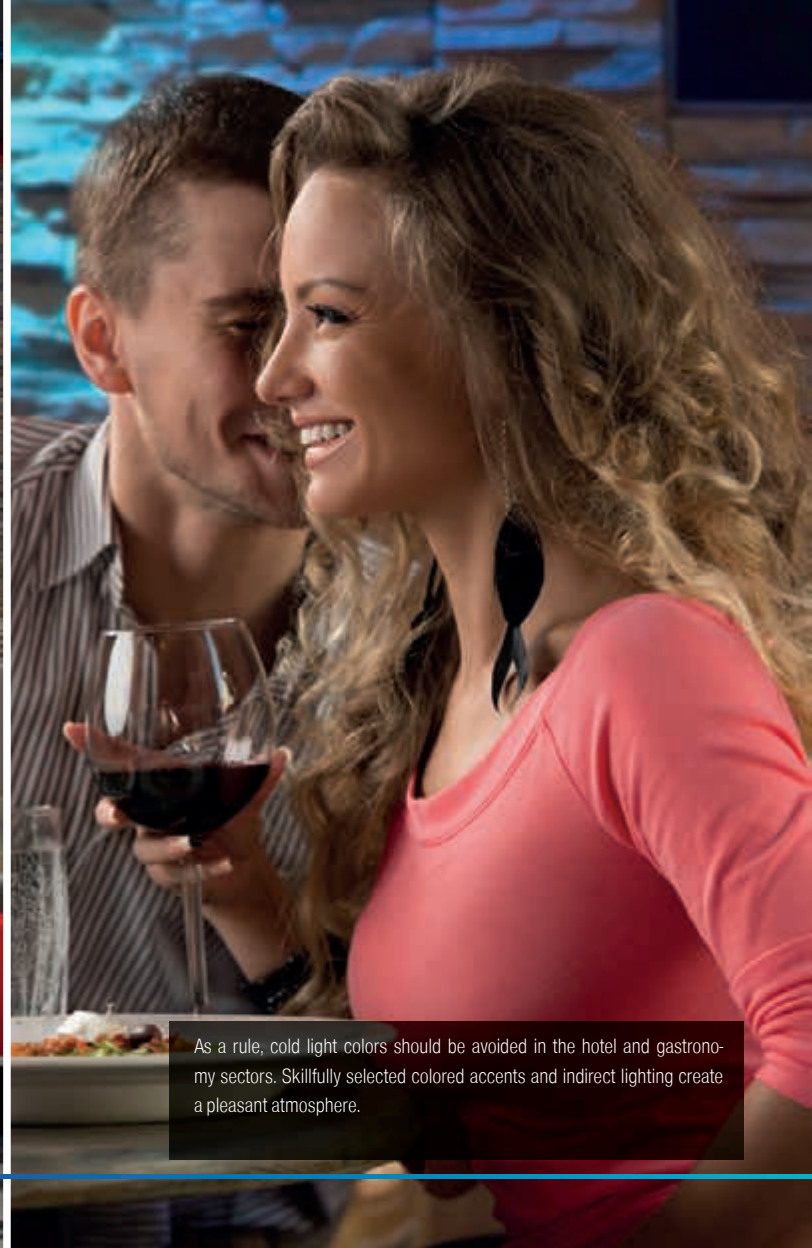
It can be used to stage your brand and changing collections with new and attractive lighting concepts. The combination of light colors and color sequences gives unlimited room for design options that with architectural elements guarantee a first class product presentation.

vitaLED® can optimally present your products in a vital and compelling way. Different light colors simultaneously arouse attention and stimulate the desire to make a purchase. Buyers are motivated by specific lighting choices and potential customers are attracted into your shop. vitaLED® covers all facets for optimal shop window lighting. There are no limits to your creativity.





# Gastronomy



As a rule, cold light colors should be avoided in the hotel and gastronomy sectors. Skillfully selected colored accents and indirect lighting create a pleasant atmosphere.

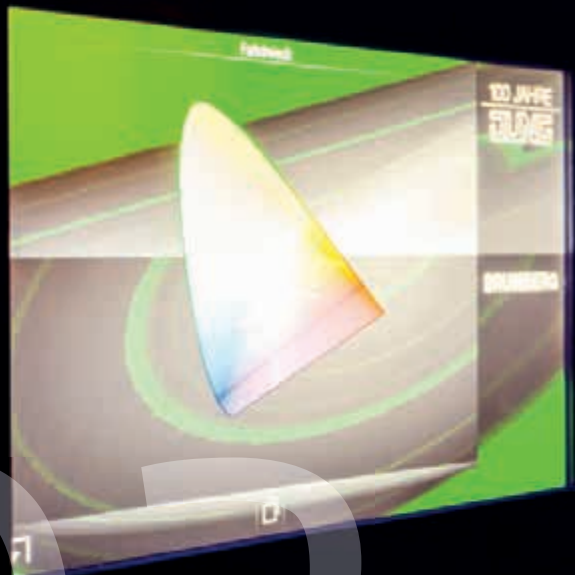


# Creating an atmosphere of well-being

## Needs-Based Lighting Solution

The right lighting is of major importance in the hotel and catering sectors. The first impression will often determine whether guests will feel comfortable and enjoy their stay. Whether they want to enjoy only a meal in a restaurant, are attending a meeting, or taking a vacation and want to be pampered in your attached spa facility, the right light ensures that they feel at home.

With a sophisticated lighting concept, a space can be optically divided into zones and thus provide your guests with a sense of safety, comfort, and orientation. The modern lighting solution vitaLED® makes it possible to realize a number of lighting scenarios in a space. The lighting can be flexibly adapted to any thematic concept. Just one lighting system can be used to support seasonal concepts and theme nights with harmonious lighting and thus create a distinctive atmosphere.



# Gastronomy









04



## Health Wellness

Getting rid of stress  
Increasing energy and performance  
Promoting sociability  
Activating the metabolism

## Living

lighting specific to your needs  
Balancing out season-related lack  
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## Retail Gastronomy

Special dining and shopping  
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## Work Learning

increase concentration  
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For an optimal lighting scheme throughout the day, it is important to energize your body in the morning with cold white light in the range of 6,000 Kelvin. Throughout the day, you should use a neutral white light (4,000-5,500 Kelvin). In the evening, signal to your body that the day is coming to close with warm white light at 2,000-3,500 Kelvin; this cues your body to get ready for sleep. Time to relax.

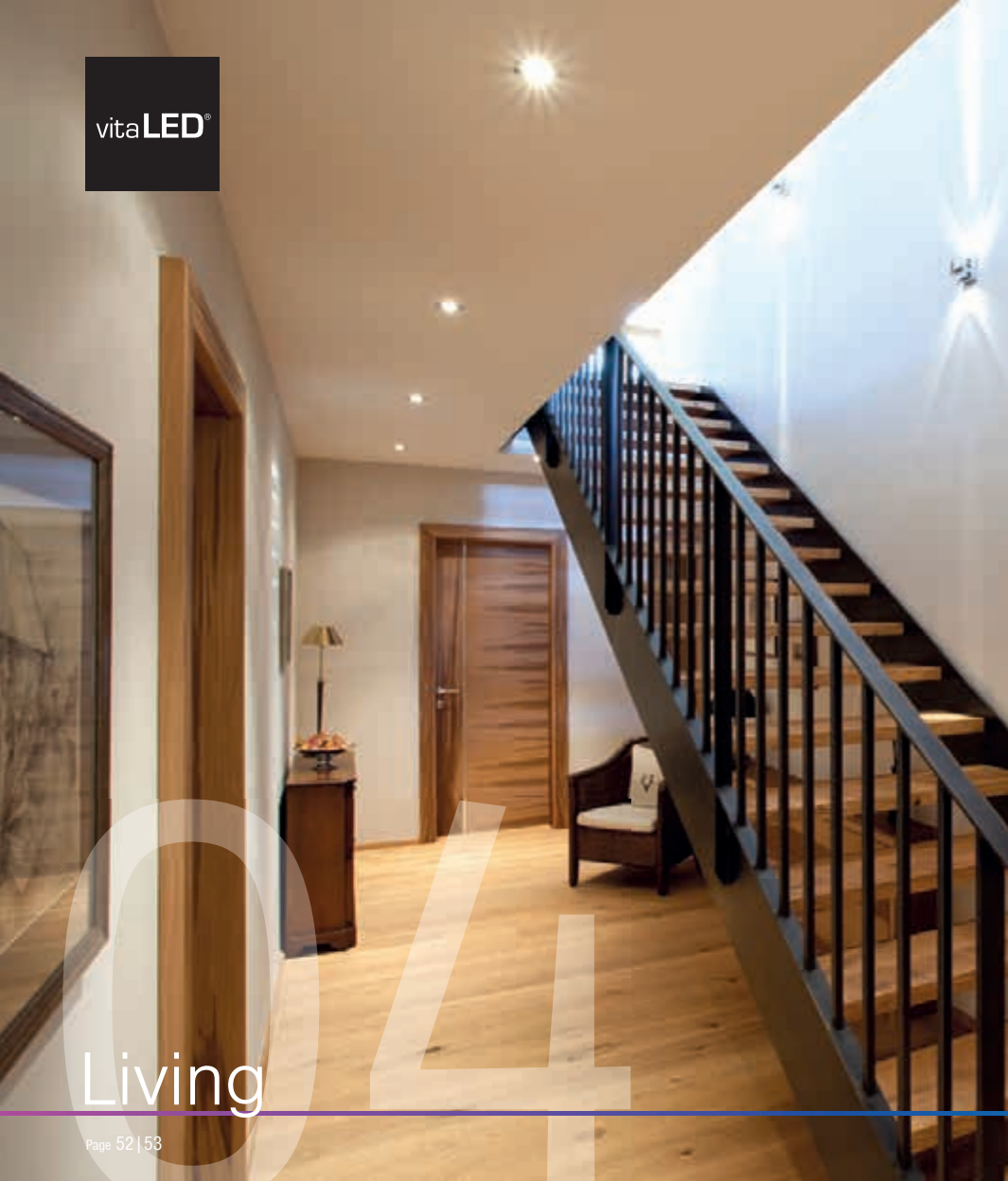


# Better Living through Dynamic Lighting Light according to my wishes.

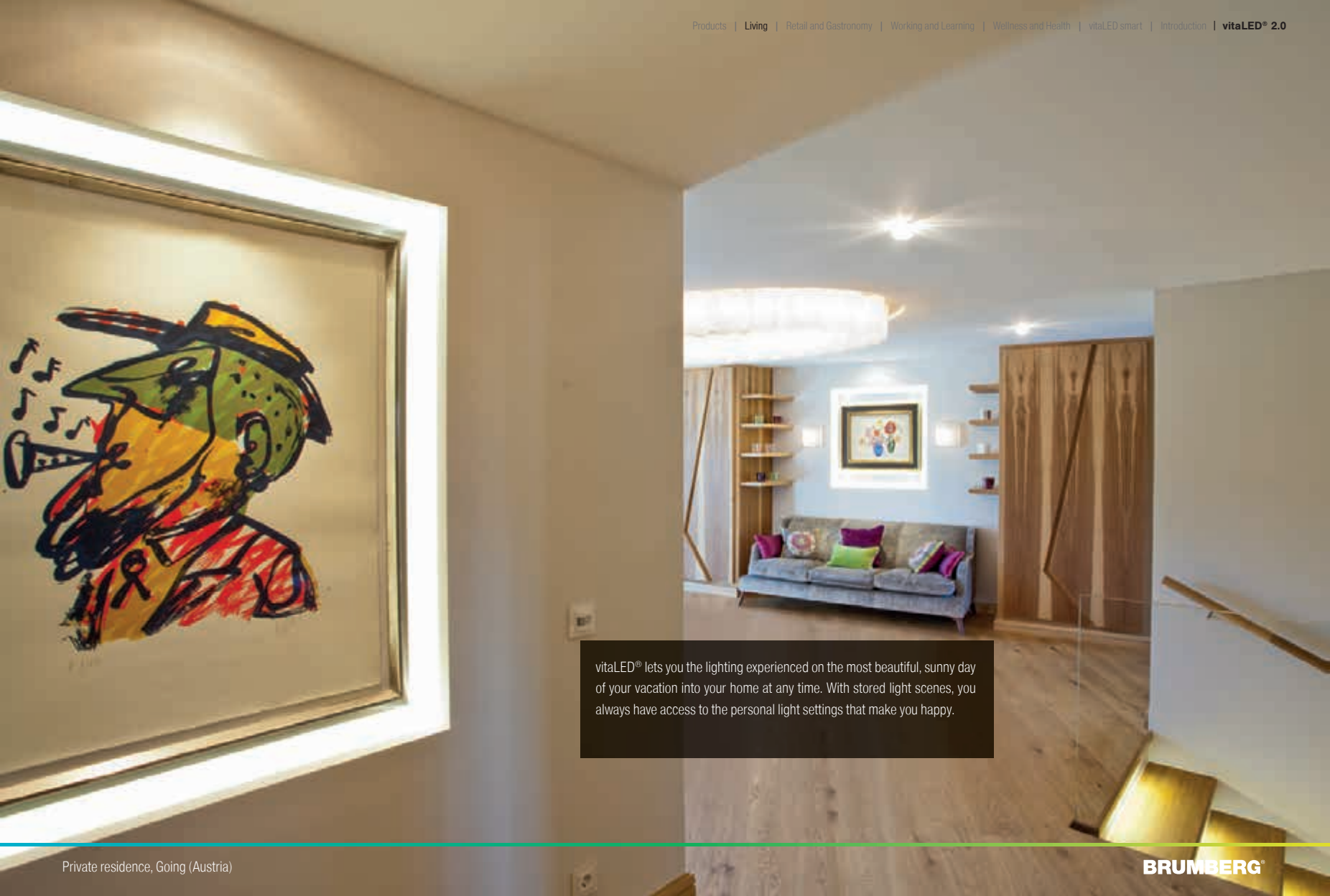
Light creates atmosphere, relaxation, or support with day-to-day tasks. Discover completely new lighting possibilities. Create a home that's all yours with vitaLED®.

Ideally, the main source of light in your home is natural daylight, which can be optimally complemented or even simulated by vitaLED®. Wall lights for a soft background light complementing ceiling lights as the main light are ideal for a harmonious lighting scheme that promotes vitality and well-being. Zones for work, reading or being creative are illuminated by accent lighting and form vantage points in the room to create depth and variety. The right light color supports the functional purpose of lighting schemes and can be flexibly adjusted as desired by changing the color dynamics.









vitaLED® lets you the lighting experienced on the most beautiful, sunny day of your vacation into your home at any time. With stored light scenes, you always have access to the personal light settings that make you happy.



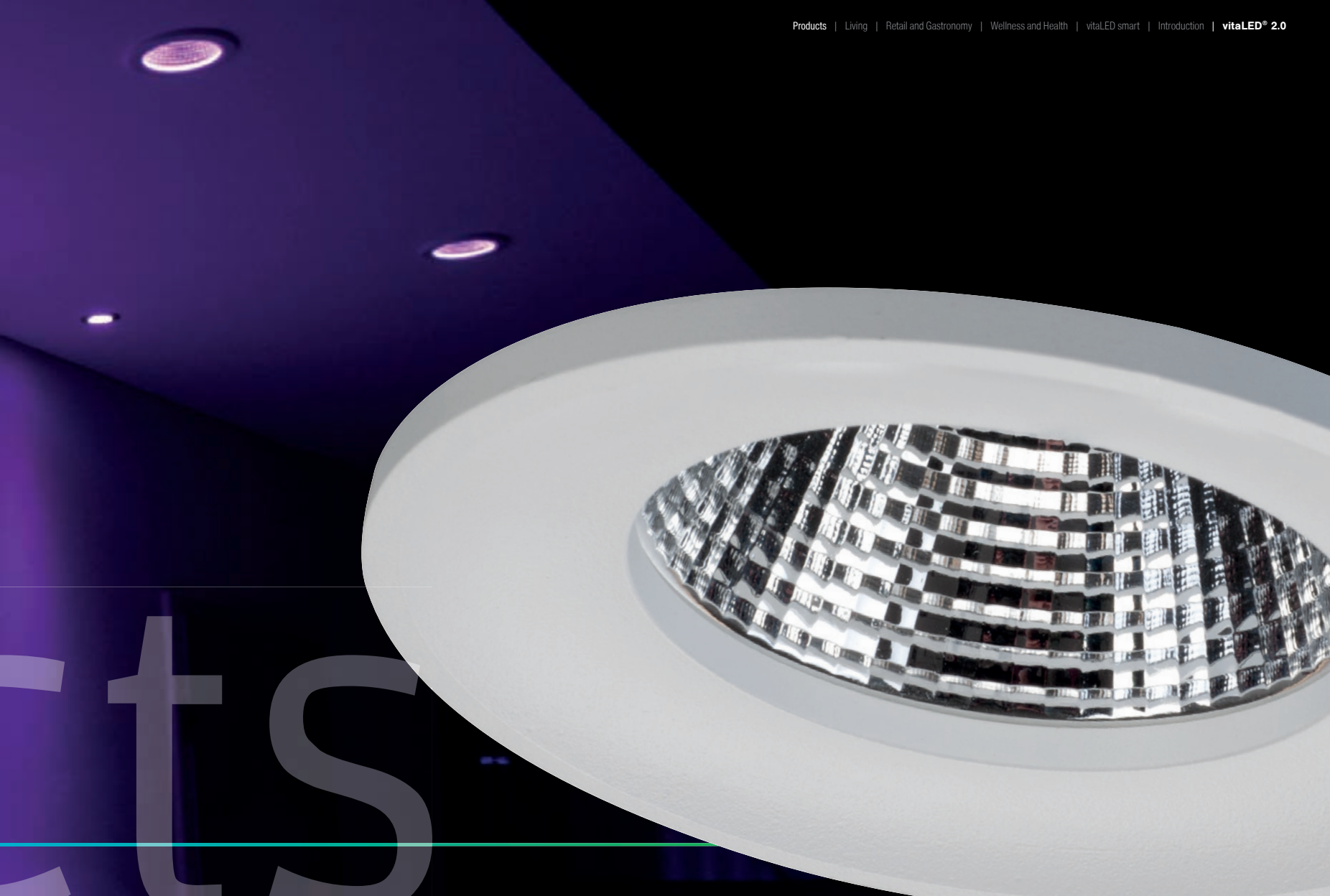
The same lighting concept can transform your own space into a personal oasis of well-being. Your dream home come true – thanks to continuous color settings.



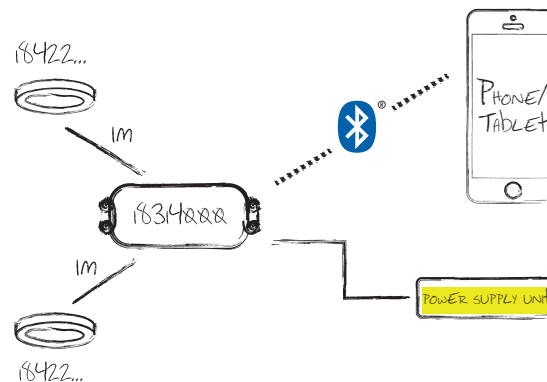


# Produco

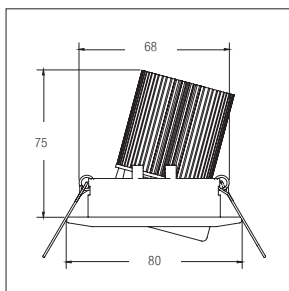




ts



System requirements: min. Android 4.3 or iOS 7.1 / min. Bluetooth 4.0



## Specification

### Twin-light complete set ready for connection incl. 2 lights and accessories

Incl. light source: 3x RGBW LED, output: max. 14W per bulb,  
material: steel/plastic, angle: 40°

#### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

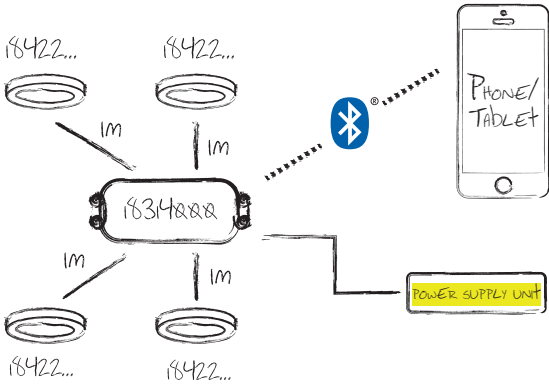
Part No.	Colour of cabinet	Light color	Price €
18333022	chrome	RGBW	839.00
18333152	nickel satin	RGBW	849.00

On request also available in other colors and in V4A  
stainless steel.

Memory function: If the 230 V power supply is  
disconnected, the last light value set is stored.



vitaLED smart 4-fold set  
18334...



System requirements: min. Android 4.3 or iOS 7.1 / min. Bluetooth 4.0



vitaLED<sup>®</sup> smart

Specification

**4 pc Complete Set, ready for connection  
incl. 4 lights and accessories**

Incl. light source: 3x RGBW LED, output: max. 14W per bulb,  
material: steel/plastic, angle: 40°

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be  
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Part No.	Colour of cabinet	Light color	Price €
18334022	chrome	RGBW	1,289.00
18334152	nickel satin	RGBW	1,299.00

On request also available in other colors and  
V4A stainless steel.

Memory function: If the 230 V power supply is  
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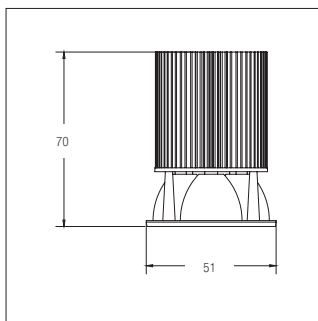




# LED lighting solutions: innovative and efficient

The vitaLED® high-power LED fixtures in BRUMBERG recessed lights feature high-end LED technology and flexible applications.

14 watts power cons



## Specification

Light source: 3x RGBW LED, output: max. 14W,  
material: aluminum/plastic, angle: 40°

### Energy efficiency class: A

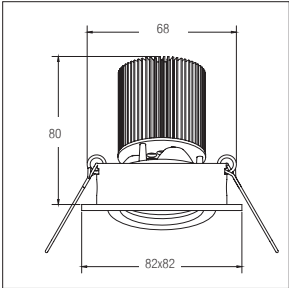
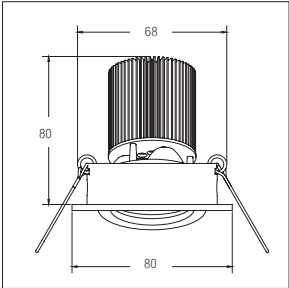
► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Light color	Price €
18408002	RGBW 	203.00





Downlight with 18408002  
18426... / 18427...



Specification

Incl. light source: 3x RGBW LED, output: max. 14W,  
material: aluminum/plastic, angle: 40°

**Energy efficiency class: A++ to A** This lamp contains built-in LED  
lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18426072	white	RGBW	220.70
18426252	alu satin	RGBW	220.70



Specification

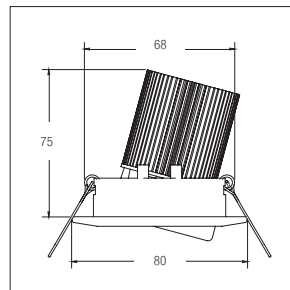
Incl. light source: 3x RGBW LED, output: max. 14W,  
material: aluminum/plastic, angle: 40°

**Energy efficiency class: A++ to A** This lamp contains built-in LED  
lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18427072	white	RGBW	222.90
18427252	alu satin	RGBW	222.90





## Specification

Incl. light source: 3x RGBW LED, output: max. 14W,  
material: steel/plastic, angle: 40°

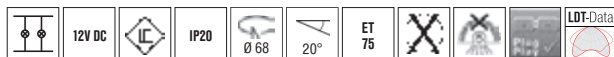
### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

▶ Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

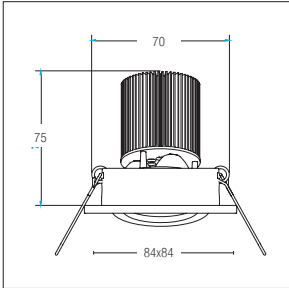
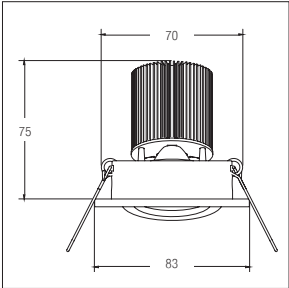
Part No.	Colour of cabinet	Light color	Price €
18422022	chrome	RGBW	223.70
18422152	nickel satin	RGBW	229.70

On request also in other colors and in  
V4A stainless steel.



Downlight with 18408002  
18428... / 18429

vitaLED®



Specification

Incl. light source: 3x RGBW LED, power: max. 14W;  
material: aluminum/plastic, angle: 40°

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18428022	chrome	RGBW	228.60
18428052	gold	RGBW	232.00
18428072	white	RGBW	227.10
18428092	bl-chrome	RGBW	235.70
18428152	nickel satin	RGBW	235.70



Specification

Incl. light source: 3x RGBW LED, power: max. 14W; material:  
aluminum/plastic, angle: 40°

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18429022	chrome	RGBW	229.80
18429052	gold	RGBW	233.50
18429072	white	RGBW	228.40
18429092	bl-chrome	RGBW	237.00
18429152	nickel satin	RGBW	237.00





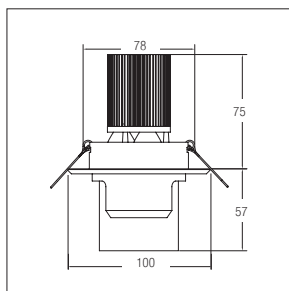


Downlight with **18408002**  
**18412252**

vitaLED®

# vitaLED®: attractive and elegant

This refined aluminum recessed light is an aesthetic object that perfectly complements modern designs or provides a stylish contrast to traditional décor.



## Specification

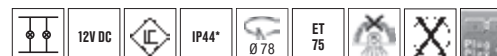
Incl. light source: 3x RGBW LED, material: aluminum / acrylic,  
power: max. 14W, angle: 38°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

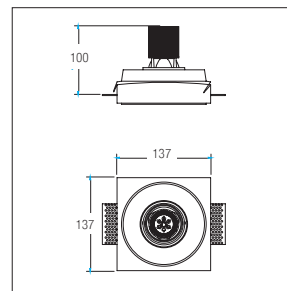
► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18412252	alu satin	RGBW	255.50



\*IP44 if installed in closed ceilings

## Downlight with 18408002 18434002



### Specification

Incl. light source: 3x RGBW LED, frameless, material: plaster/ plastic, power: max. 14W angle: 40°

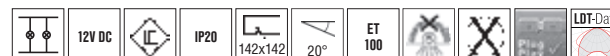
#### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

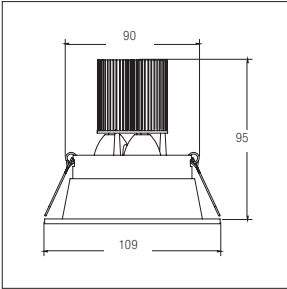
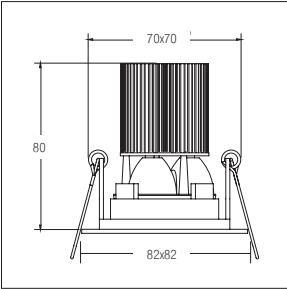
Suitable for plasterboard panels with a thickness of 12.5 mm.

Part No.	Colour of cabinet	Light color	Price €
18434002	white	RGBW	253.90



Downlight with 18408002  
18431252 / 18433...

vitaLED®



## Specification

Incl. light source: 3x RGBW LED, frameless, material: plaster/  
plastic,  
power: max. 14W angle: 40°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18431252	alu satin	RGBW	242.80



## Specification

Incl. light source: 3x RGBW LED, frameless, material: plaster/  
plastic,  
power: max. 14W angle: 40°

### Energy efficiency class: A++ to A

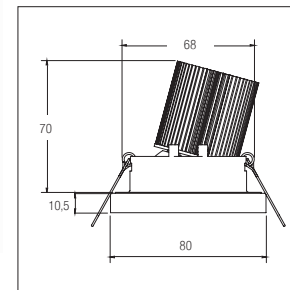
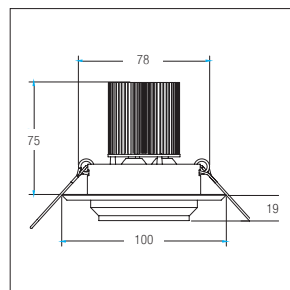
This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18433022	chrome	RGBW	269.80
18433072	white	RGBW	251.30
18433252	alu satin	RGBW	250.40

On request also available in square.





Design by Lounge Design

## Specification

Incl. light source: 3x RGBW LED, material: aluminum/acrylic, power: max. 14W, angle: 40°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18411252	alu satin	RGBW	250.30

## Specification

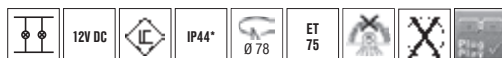
Incl. light source: 3x RGBW LED, material: aluminum/plastic, power: max. 14W, angle: 40°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18420022	chrome	RGBW	276.50
18420052	gold	RGBW	278.80
18420152	nickel satin	RGBW	282.50
18420172	textured white	RGBW	259.80
18420182	textured black	RGBW	259.80
18420672	textured slate	RGBW	259.80



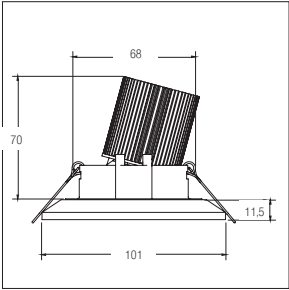
\*IP44 if installed in closed ceilings





Downlight with 18408002  
18421... 18432202

vitaLED®



Design by Lounge Design

### Specification

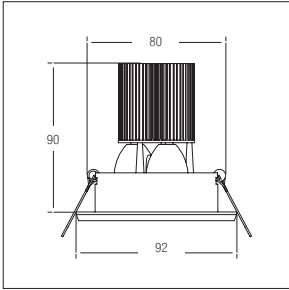
Incl. light source: 3x RGBW LED, material: aluminum/plastic, power: max. 14W, angle: 40°

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000 (p. 90)

Part No.	Colour of cabinet	Light color	Price €
18421022	chrome	RGBW	282.00
18421052	gold	RGBW	283.80
18421152	nickel satin	RGBW	288.00
18421172	structure white	RGBW	265.30
18421182	textured black	RGBW	265.30
18421672	textured slate	RGBW	265.30



### Specification

Incl. light source: 3x RGBW LED, material: stainless steel/glass, power: max. 14W, angle: 40°

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000 (p. 90)

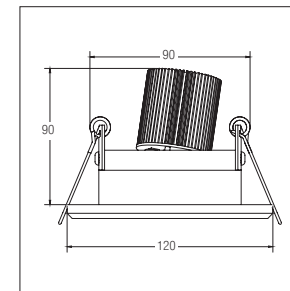
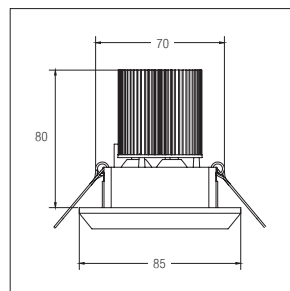
Part No.	Colour of cabinet	Light color	Price €
18432202	stainless steel	RGBW	310.50

Also available in copper (will oxidize naturally).

**Adapted for Outdoor!**



\*IP65 if installed in closed ceilings



## Specification

Incl. light source: 3x RGBW LED, material: aluminum/glass, power: max. 14W, angle: 40°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18423022	chrome	RGBW	253.10

## Specification

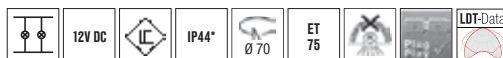
Incl. light source: 3x RGBW LED, material: aluminum/glass, power: max. 14W, angle: 40°

### Energy efficiency class: A++ to A

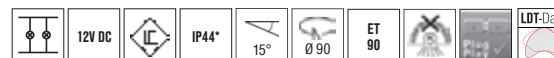
This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18424252	alu satin	RGBW	329.00



\*IP44 if installed in closed ceilings

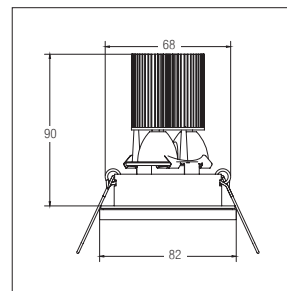
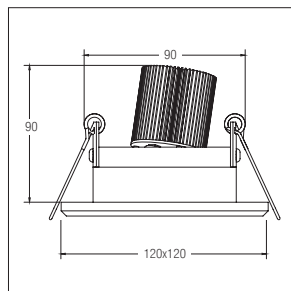


\*IP44 if installed in closed ceilings

## Downlight with 18408002

18425252 / 18430...

vitaLED®



### Specification

Incl. light source: 3x RGBW LED, material: aluminum/glass, power: max. 14W, angle: 40°

#### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18425252	alu satin	RGBW	335.60



\*IP44 if installed in closed ceilings

### Specification

Incl. light source: 3x RGBW LED, material: plaster/plastic, power: max. 14W angle: 40°

#### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

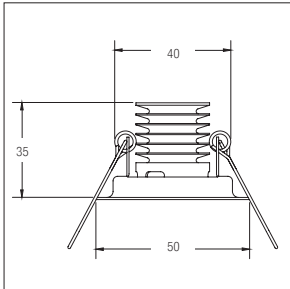
Part No.	Colour of cabinet	Light color	Price €
18430022	chrome	RGBW	231.60
18430072	white	RGBW	228.80
18430152	nickel satin	RGBW	230.40



\*IP65 if installed in closed ceilings



Spot 18435022  
Spot system cable 18907000 + 18908000



Part No.18596000 or Part No.18597000 (p. 73);  
required to put system into service.



### Specification

Incl. light source: 3x RGBW LED, output: max. 4.5W, material:  
aluminum/glass/acrylic, max. 350mA angle: 90°

**Energy efficiency class: A++ to A**

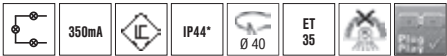
This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

Part No.	Colour of cabinet	Price €
18435022	chrome	88.30

### Specification

System cable for connecting spots  
Part No.18435022 to the converter  
Part No.18596000/18597000  
or between the spots Part No.18435022

Part No.	length	Price €
18907000	1,000mm	13.90
18908000	2,000mm	14.70



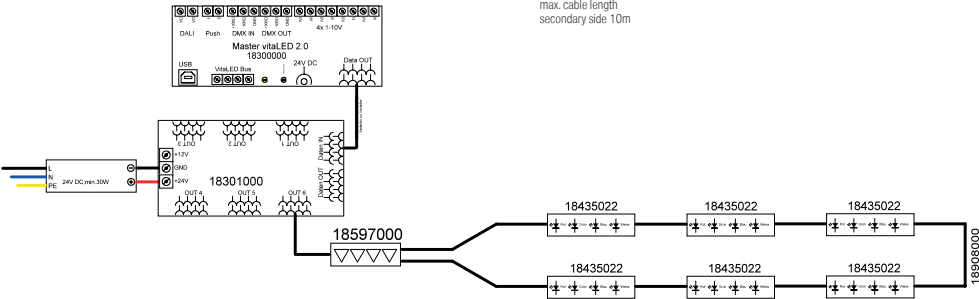
\*IP44 if installed in closed ceilings



Spot converter  
18596000 / 18597000



Serial switch,  
max. cable length  
secondary side 10m



Specification

To convert from 12V or 24V at 350mA  
Colour of cabinet: aluminum

To connect spot 18435022 to distributor 18301000.

Articles 18301000 and 18314000 can only be connected with  
system cables 18900000 - 18902000 (p. 90).

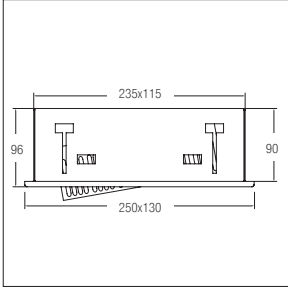
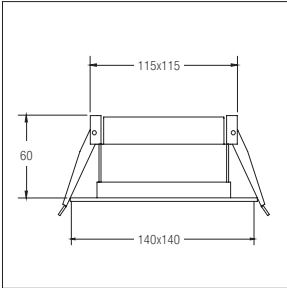
Part No.	Voltage	Specification	Price €
18596000	12V	for connecting 1-3 spots 18435022	78.80
18597000	24V	for connecting 4-6 spots 18435022	78.80





Recessed spot  
18419252 / 18418072

vitaLED®



## Specification

Incl. light source: 3x RGBW LED, output: max. 19W, material: aluminum/plastic, angle: 45°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 - 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18419252	alu satin	RGBW 	416.90



## Specification

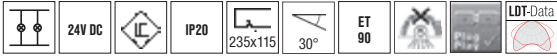
Incl. light source: 3x RGBW LED, output: max. 19W, material: steel/aluminum, angle: 60°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 - 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18418072	white	RGBW 	460.30

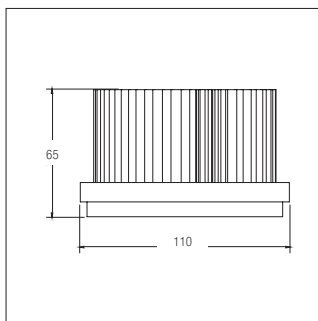




## LED lighting solutions: powerful & attractive

The particularly powerful vitaLED® recessed lights handle lighting needs in large spaces, rooms with high ceilings, and high-performance situations. The high-quality LED recessed light provides outstanding energy efficiency and luminance.

28 W power consumption




### Specification

Light source: 6x RGBW LED, power: max. 28W, material: aluminum/plastic, angle: 34°

#### Energy efficiency class: A

► Distributor 18301000 or 18314000 can only be connected via system cable from 18900000 – 18902000 (p. 90)

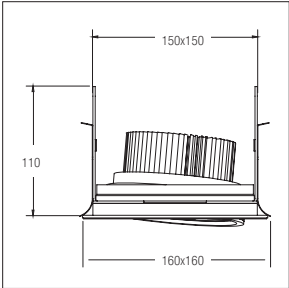
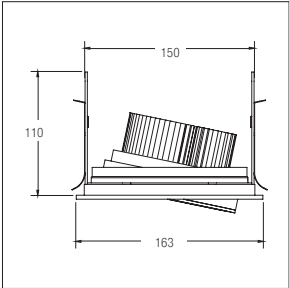
Part No.	Light color	Price €
18409002	RGBW 	435.70





Downlight with 18409002  
18413252 / 18414252

vitaLED®



Specification

Incl. light source: 3x RGBW LED, output: max. 28W, material: aluminum/plastic, angle: 34°

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18413252	alu satin	RGBW	510.30

On request also available in white.



Specification

Incl. light source: 6x RGBW LED, output: max. 28W, material: aluminum/plastic, angle: 34°

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

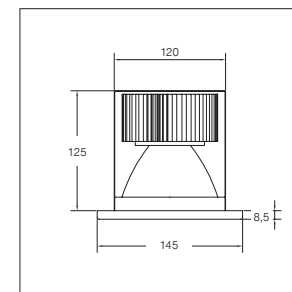
Part No.	Colour of cabinet	Light color	Price €
18414252	alu satin	RGBW	514.70

On request also available in white.





## Recessed spot 18415072



### Specification

Incl. light source: 3x RGBW LED, output: max. 24W,  
material: steel/aluminum, angle: 45°

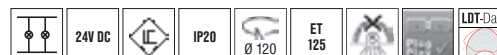
#### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 - 18902000  
(p. 90)

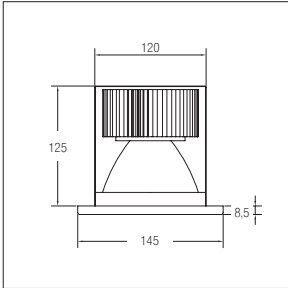
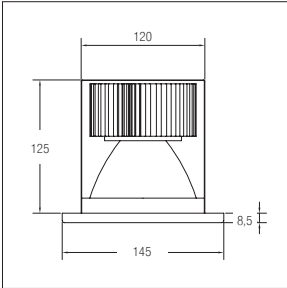
Part No.	Colour of cabinet	Light color	Price €
18415072	white	RGBW	470.50

On request mounting ring in any RAL color available.



Recessed spot  
18416072 / 18417072

vitaLED®



## Specification

Incl. light source: 5x RGBW LED, output: max. 24W,  
material: steel/frosted glass, angle: 45°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18416072	white	RGBW	501.30

On request mounting ring in any RAL color available.



## Specification

Incl. light source: 3x RGBW LED, output: max. 24W,  
material: steel/frosted glass, angle: 45°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

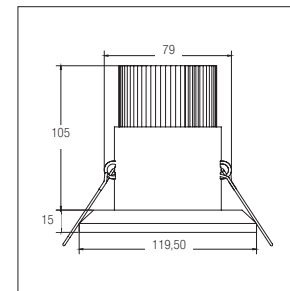
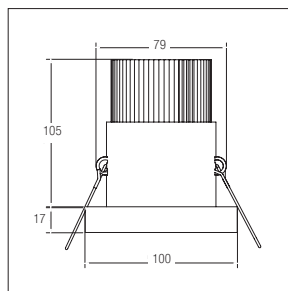
► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18417072	white	RGBW	501.30

On request mounting ring in any RAL color available.



\*IP44 if installed in closed ceilings



Design by Lounge Design

Design by Lounge Design

## Specification

Incl. light source: 4x RGBW LED, output: max. 27W,  
material: steel/aluminum/glass, angle: 44°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18402022	chrome	RGBW	438.90
18402052	gold	RGBW	434.80
18402152	nickel satin	RGBW	438.90
18402172	structure white	RGBW	419.90
18402182	textured black	RGBW	419.90
18402672	textured slate	RGBW	419.90

## Specification

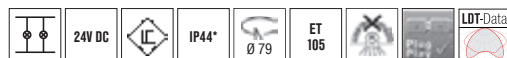
Incl. light source: 4x RGBW LED, output: max. 27W,  
material: steel/aluminum/glass, angle: 44°

### Energy efficiency class: A++ to A

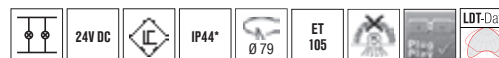
This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18403022	chrome	RGBW	438.40
18403052	gold	RGBW	438.50
18403152	nickel satin	RGBW	438.40
18403172	structure white	RGBW	419.50
18403182	textured black	RGBW	419.50
18403672	textured slate	RGBW	419.50



\*IP44 if installed in closed ceilings

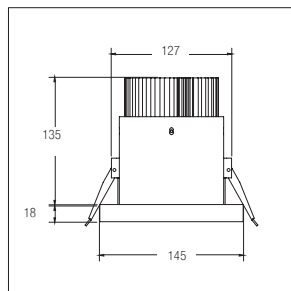


\*IP44 if installed in closed ceilings



Downlight  
18406... / 18407

vitaLED®



Design by Lounge Design

## Specification

Incl. light source: 3x RGBW LED, output: max. 39W,  
material: steel/aluminum/glass, angle: 44°

### Energy efficiency class: A++ to A

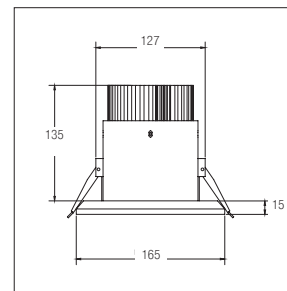
This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

Part No.	Colour of cabinet	Light color	Price €
18406022	chrome	RGBW	540.60
18406052	gold	RGBW	548.90
18406152	nickel satin	RGBW	538.50
18406172	structure white	RGBW	517.90
18406182	textured black	RGBW	517.90
18406672	textured slate	RGBW	517.90



\*IP44 if installed in closed ceilings



Design by Lounge Design

## Specification

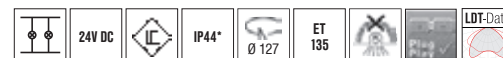
Incl. light source: 6x RGBW LED, output: max. 39W,  
material: steel/aluminum/glass, angle: 40°

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

► Connect to distributor 18301000 or 18314000  
only possible via system cable from 18900000 – 18902000  
(p. 90)

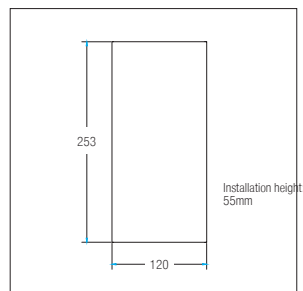
Part No.	Colour of cabinet	Light color	Price €
18407022	chrome	RGBW	545.80
18407052	gold	RGBW	554.30
18407152	nickel satin	RGBW	543.70
18407172	structure white	RGBW	523.10
18407182	black structure	RGBW	523.10
18407672	textured slate	RGBW	523.10



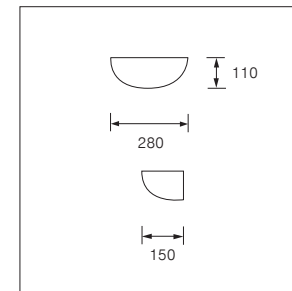
\*IP44 if installed in closed ceilings



**Up+Down**  
Design by Lounge Design



**Up+Down**



## Specification

Incl. light source: 6x RGBW LED, output: max. 9W, material: steel/aluminum, angle: 40° each

### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

Articles 18301000 and 18314000 can only be connected with system cables 18900000 - 18902000 (p. 90).

Part No.	Colour of cabinet	Light color	Price €
18500172	structure white	RGBW	341.00
18500182	textured black	RGBW	341.00

## Specification

Incl. light source: 3x RGBW LED, material: plaster/frosted glass, power: max. 14W, angle: 40°

### Energy efficiency class: A++ to A

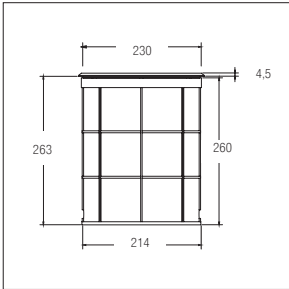
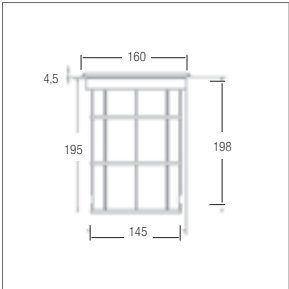
This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

Articles 18301000 and 18314000 can only be connected with system cables 18900000 - 18902000 (p. 90).

Part No.	Colour of cabinet	Light color	Price €
18505002	white	RGBW	444.80



Ground recessed spot  
18501222 / 18502222



Specification

Incl. light source: 3x RGBW LED, output: max. 14W,  
material: stainless steel/glass, angle: 40°

Connection cable: 1000mm

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

Connection only via connection cable (No. 18909000) in  
connection with distributor (No. 18314000)!



Specification

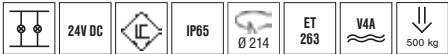
Incl. light source: 6x RGBW LED, material: stainless steel/glass,  
power: max. 28W, angle: 40°

Connection cable: 1000mm

**Energy efficiency class: A++ to A**

This lights contain built-in LED lamps. These lamps cannot be  
exchanged in the light.

Connection only via connection cable (No. 18909000) in  
connection with distributor (No. 18314000)!



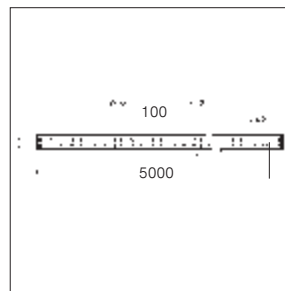
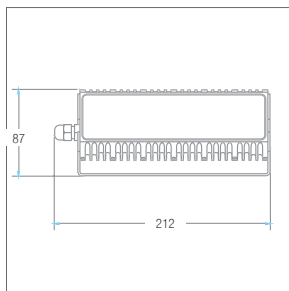




## Profile luminaire outdoor and flexible strip

18504082 / 18503002

vitaLED®



### Specification

Incl. light source: 3x RGBW LED, output: max. 14W,  
material: iron/aluminum, angle: 48° to 25° each (elliptical)

incl. connection cable: 1000mm

#### Energy efficiency class: A++ to A

This lights contain built-in LED lamps. These lamps cannot be exchanged in the light.

Connection only via connection cable (No. 18909000) in  
connection with distributor (No. 18314000)!



Part No.	Colour of cabinet	Light color	Price €
18504082	black	RGBW	460.30

### Specification

Incl. light source: 2+2 SMD-LED: 300 LED (60LEDs/m),  
output: max. 85.0W (17W/m), angle: 120°,  
width: 10mm, length: 5,000mm, divisible every 100mm,  
double sided 3M tape included as an installation aid.

**To dissipate heat, light must be  
mounted on aluminum profiles.**

Planning instruction for system components:  
negative control (common anode).  
Connection to master control only via PWM distributor (No.  
18302000) and system cable (No. 18903000-18905000).



Part No.	Light color	Price €
18503002	RGBW	415.10

Part No.	Light color	Price €
75503002	RGBW	10.00*
75998000	Customization IP00	10.20

\* Segments of 100mm each  
Sample order: for 1m vitaLED® flexible strip, order 10 x  
75503002 (10 x 100mm = 1m) plus 1x 75998000  
(1x factory assembly per special module).



## Accessories Master control/distributor

Part No.	Price €	Voltage	Protection class	Protection	Insulation	Plug & Play
18300000	388.50	12V DC / 24V DC	III	IP20	not suitable	yes



### Specification

#### Master control

Material: Plastic, ambient temperature: 0°C to 45°C, size: 153mm x 102mm x 26mm  
Suitable for rail mounting (9 modules)

The vitaLED2.0 control unit allows individual or pre-configured color and brightness setting of RGBW-LED modules. The controller can be controlled via a probe, a touch panel, a 2-, 4- or 8-way switch, a remote control, or various control protocols. The signals can be divided into a DMX signal (also controlled by Part No. 18308000), a DALI signal, and four independent 1-10V signals. The mode of operation and the details of functionality are based and connected to the corresponding way of addressing the system. The control-protocol has to be provided to the system on site. The relevant address-coding needs to be adapted to the corresponding way of piloting. Our mounting- and installation instruction delivers all relevant information regarding the required coding.

The vitaLED modules can only be addressed via the corresponding vitaLED2.0 distributors 18301000 (for system luminaires) or 18302000 (for flexible strip).

If the connection length between the master and distributor is more than 20m, the master needs power supply No. 18313000.

18301000	173.30	12V DC / 24V DC	III	IP20	not suitable	yes
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#### Distributor plug 'n' play system luminaires

Material: plastic, ambient temperature: 0° to 45°C, power: max. 10A, output: max. 120W at 12V | max. 240W at 24V, size: 126mm x 54mm x 31mm  
Suitable for DIN rail mounting (7.5 modules)

The vitaLED2.0 distributor is used for routing the signal to the vitaLED2.0 luminaire. Max. 6 luminaires or flexible strips can be connected to a Distributor. The vitaLED2.0 distributor can control vitaLED 2.0 products shared anode. The installation of the lights via a vitaLED2.0 connection cable. The max. length of the data cables between the vitaLED2.0 distributors may not exceed 50m.

**Important:** the system does not function without master control 18300000, 18312000 or 18314000!

If the connection length between the master and distributor is more than 20m, the master needs power supply No. 18313000.

accessories  
Distributor/remote control

vitalLED®

Part No.	Price €	Voltage	Protection class	Protection	Insulation	Plug & Play
18302000	142.50	12V DC / 24V DC	III	IP20	not suitable	yes



Distributor PWM flex line

material: plastic, ambient temperature: 0° to 45°C, power: max. 10A, output: max. 120W at 12V | max. 240W at 24V, size: 126mm x 54mm x 31mm  
Suitable for DIN rail mounting (7.5 modules)

The vitalLED2.0 distributor is used for routing the signal to the vitalLED2.0 flex circuit board. Flex circuit boards can be connected to the distributor via the 2 output jacks. The vitalLED2.0 distributor can control vitalLED 2.0 products shared anode. The lights are installed via two separate screw terminals. The max. length of the data cables between the vitalLED2.0 distributors may not exceed 50m. **Important: the system does not function without master control 18300000, 18312000 or 18314000!**

18303000	413.20			IP20		yes
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Remote control

material: plastic, ambient temperature: 0°C to 45°C, voltage: 2x AA 1.5V battery, receiver size: 111mm x 76mm x 27mm (HxWxD)

The following functions can be accessed with the vitalLED2.0 controller 18300000:

- independent brightness control of all four colors (RGBW) • store 3 individual color values • retrieve preset color temperatures (2,000 - 10,000K) • retrieve 11 color sequences/color mood • infinitely variable speed control of 11 color sequences • six color sequences/color mood: 1. RGB (soft) 2. RGB (soft) 3. RGB (abrupt) 4. RGBW (soft) 5. RGBW (soft) 6. RGBW (abrupt)
- five color moods: 1. Freshness 2. Dusk 3. Indian Summer 4. Spring Awakening 5. Biorhythm





Part No.	Price €	Voltage	Protection class	Protection	Insulation	Plug & Play
18312000	255.30	12V DC / 24V DC	III	IP20	not suitable	yes



Specification

**DALI control module**

material: plastic, ambient temperature: 0°C to 45°C, size: 121mm x 54mm x 30mm

The vitaLED2.0 DALI control module is used for individual or pre-programmed color and brightness control via the DALI bus.

The DALI controller protocol must be set up on-site.

The vitaLED modules can only be addressed via the corresponding vitaLED2.0 distributors 18301000 (for system luminaires) or 18302000 (for flexible strip).

If the connection length between the master and distributor is more than 20m, the master needs power supply No. 18313000.

18314000	306.50	12V DC / 24V DC	III	IP20	not suitable	yes
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vitaLED®<sub>smart</sub>



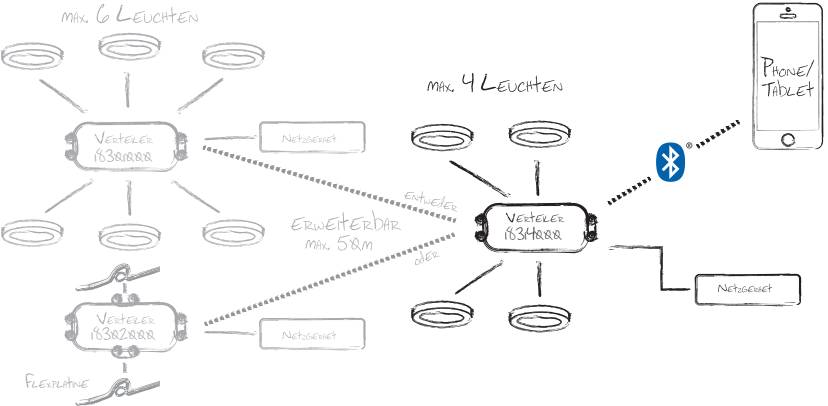
**vitaLEDsmart Bluetooth distributor**

material: plastic, ambient temperature: 0° to 45°C, power: max. 10A, output: max. 80W at 12V | max. 160W at 24V, size: 126mm x 54mm x 31mm  
Suitable for DIN rail mounting (7.5 modules)

The vitaLEDsmart Bluetooth distributor is used for easy and intuitive control of RGBW LEDs. They can be controlled via an app which is available for download.







Control options via the app:

1. Independent control of all four color channels (R / G / B / W)
2. Continuous control of all white light tones from 2,000 to 10,000 Kelvin
3. Controlling a color sequence in saturation, speed and brightness
4. Upload a personal photo to choose a lighting mood
5. Targeted selection of a color value from the RGB color triangle with dimming
6. Selecting and controlling various vitaLEDsmart Bluetooth distributors





## accessories

Part No.	Price €	Voltage	Protection class	Protection	Insulation	Plug & Play	Specification
18310000	306.50	24V DC	III	IP20	not suitable	yes	<b>Bus coupler</b> material: plastic, ambient temperature: 0°C to 45°C, size: 92mm x 52.5mm x 62.5mm Suitable for DIN rail mounting (3 modules)  Used together with the master (Part No.18300000) enables the keypad module and the sensor-touch module (Part No.18304... - Part No.18307 ...) for controlling a vitaLED2.0 system are integrated. 2-core cable (such as J-Y(St)Y) max. 30m to connect to probe or touch sensor module 18304...- 18307 4-core cable (such as J-Y(St)Y) max. 6m to connect to probe or touch sensor module 18300000
							
18309000	36.90	24V DC	II	IP20	not suitable	yes	<b>Power supply for bus coupler</b> material: plastic, primary voltage: 85-260V AC / 50Hz // 120-370V DC, Ambient temperature: 20°C - 60°C, Size: 93mm x 25mm x 56mm  Suitable for DIN rail mounting (1.5 modules)
							
18313000	28.60	24V DC	II	IP20	not suitable	yes	<b>AC adapter for master control</b> material: plastic, primary voltage: 90-260V AC / 50Hz // 130-370V DC, ambient temperature: 0°C - 40°C, Size: 92mm x 52.5mm x 62.5mm  For the power supply of the master controls Part No.18300000 and Part No.18312000
							
18900000	13.90						<b>8-pin connection cable</b> System cable: Distributor for light 18900000 (System cable 1,000mm), 18901000 (System cable 2,000mm), 18,902,000 (connector system for cable 100mm)
18901000	16.90						
18902000	11.20						
18909000	12.80						<b>Cable set for extension</b> Connection set for signal transmission in preinstalled control cables for connecting the control line to the other distributors or to the light (18909000 IN connection cable for Plug and Play Splitter / 18906000 Connection kit (IN / OUT) from the distributor to the light)
18906000	25.60						
18903000	4.70						<b>System cable</b> System cable for signal continuation; master to distributor / distributor to distributor (18903000: 500mm / 18904000: 5,000mm / 18905000: 10,000mm)
18904000	14.80						
18905000	25.60						

accessories  
LAN control

vitaLED®

Part No.	Price €	Voltage	Protection class	Protection	Insulation
18308000	621.30	12V DC / 24V DC	III	IP20	not suitable



## Specification

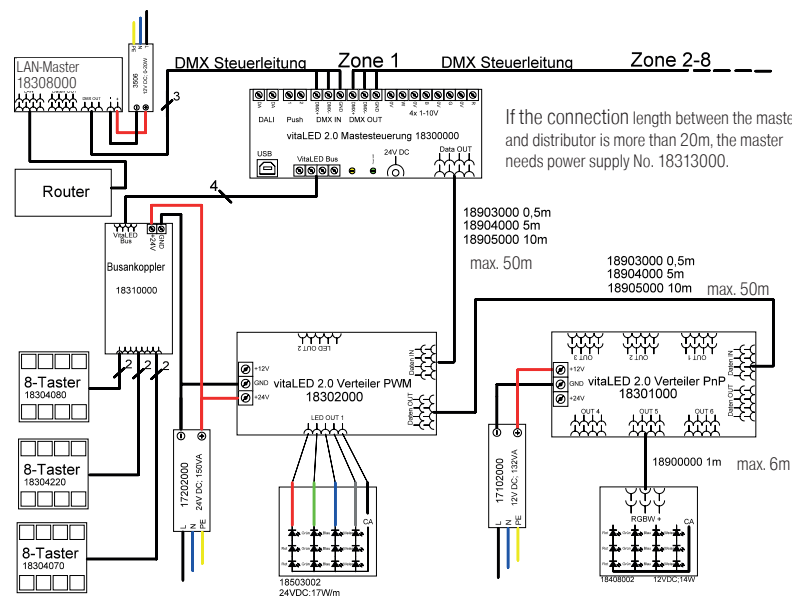
## vitaLED2.0 LAN control

## Functions:

incombination with master device 3581 a single or multi-control of max. 8 areas can be achieved by means of a DMX signal. The following functions can be accessed:

- Independent brightness control of all colors (RGBW)
- Retrieval of preset color temperatures
- Color sequence: RGB / vitaLED(color triangle + color saturation + speed)
- Vital color sequence

LAN via html page (functional for any browser-enable device, such as a PC or tablet with a display size of min. 9.7"). The IP address is assigned to the LAN module via DHCP. The 8 zones can be combined individually in 4 different groups. There is an additional central group that can be controlled via all zones. Ambient temperature: 0°C to 45°C, housing: aluminum, plastic, size in mm: 105 x 85 x 30mm (HxWxD)





## accessories

### Probe components

Part No.	Price €	Colour of cabinet	Protection
18304070	296.30	white	IP20
18304080	296.30	black	
18304220	327.00	stainless steel	
18304250	327.00	alu satin	



#### Specification

##### 8-fold probe element

material: plastic/steel, ambient temperature: 0° to 45°C, suitable for installation in cavity wall and flush-mounted sockets (Ø 68mm), size: 81 mm x 81 mm x 25mm

The following functions can be accessed (the respective control facility varies depending on the setting of the master controller) in conjunction with the vitaLED2.0 controller 18300000 and the bus coupler 18310000:

- Independent brightness control of all four colors (RGBW)
- Saving 2 individual color values
- Retrieving preset color temperatures (2,000K - 10,000K)
- Retrieve 11 color sequences / color moods
- Infinitely variable speed control of color sequences / color moods

Three color sequences: 1. RGB (fast) red, green, blue, turquoise, violet, yellow, white. 2 RGB (soft change) blue, turquoise, violet, red, pink, yellow, green, white, white-blue

3. RGBW (soft change) red, red-white, white-yellow, yellow, green, green-white, white-blue, turquoise, blue, violet, violet-white, white

Four color moods: 1. Freshness | 2. Dusk | 3. Spring Awakening | 4. Biorhythm

2-core cable (such as J-Y(St)Y) max. 30m to connect to probe or touch sensor module 18310000

18305070	255.30	white	IP20
18305080	255.30	black	
18305220	286.00	stainless steel	
18305250	286.00	alu satin	



##### 4-fold probe element

material: plastic/steel, ambient temperature: 0° to 45°C, suitable for installation in cavity wall and flush-mounted sockets (Ø 68mm), size: 81mm x 81mm x 25mm

The following functions can be accessed (the respective control facility varies depending on the setting of the master controller) in conjunction with the vitaLED2.0 controller 18300000 and the bus coupler 18310000n:

- Selection of preset color temperatures (2,000K - 10,000K)
- Selection of 3 color sequences / color moods
- Infinitely variable speed control of color sequences / color moods

two color sequences:

1. RGB (soft) red, green, blue, turquoise, violet, yellow, white

2. RGBW (soft) red, red and white, white-yellow, yellow, green, green and white, white-blue, turquoise, blue, purple, violet and white, white

a colour moods:

1. Biorhythm

- Retrieving preset color values: Cool white, warm white, useful light

2-core cable (such as J-Y(St)Y) max. 30m to connect to probe or touch sensor module 18310000.



## accessories

### Probe components / sensor-touch model

**vitaLED®**

Part No.	Price €	Colour of cabinet	Protection
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18306070	245.00	white	IP20
18306080	245.00	black	
18306220	275.80	stainless steel	
18306250	275.80	alu satin	



18307070	357.80	white	IP20
18307080	357.80	black	
18307220	368.00	stainless steel	
18307250	368.00	alu satin	



#### Specification

##### 2-fold probe element

material: plastic/steel, ambient temperature: 0° to 45°C, suitable for installation in cavity wall and flush-mounted sockets (Ø 68mm), size: 81 mm x 81 mm x 25mm

Together with the vitaLED2.0 Master Control Unit 18300000 and the Bus Coupler 18310000, the following functions are possible:

- Stimulating Morning Freshness
- Soothing Sunset
- The two light scenes can be dimmed continuously

2-core cable (such as J-Y(St)Y) max. 30m to connect to probe or touch sensor module 18310000

##### Touch sensor module

material: plastic/steel, ambient temperature: 0° to 45°C, suitable for installation in cavity wall and flush-mounted sockets (Ø 68mm), size: 81 mm x 81 mm x 25mm

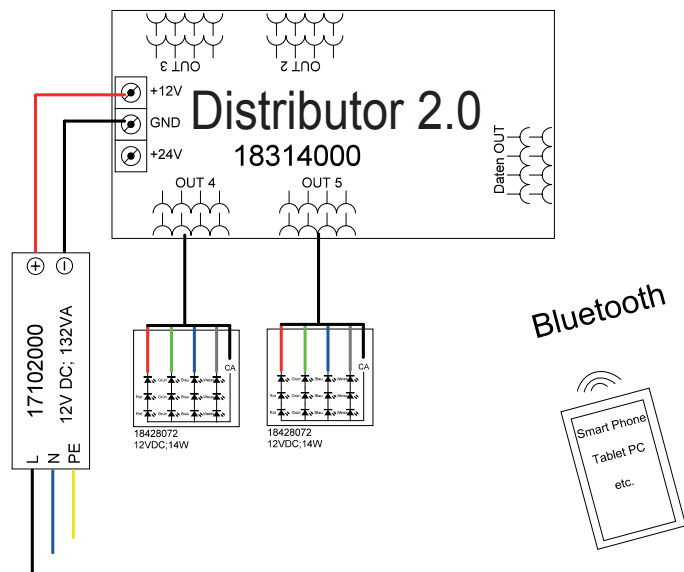
Together with the vitaLED2.0 Master Control Unit 18300000 and the Bus Coupler 18310000, the following functions are possible:

- Independent brightness control of all four colors (RGBW) storing 3 individual color values
  - Selection of preset color temperatures (2.000K - 10.000K)
  - Selection of 11 color sequences / color moods
  - Continuous adjustment of change speed for the 11 color sequences / color moods
- seconds color sequences:
1. RGB (soft change) red, green, blue, turquoise, violet, yellow, white
  2. RGB (soft change) blue, turquoise, violet, red, pink, yellow, green, white, white-blue
  3. RGB (abrupt change) green, red, blue, violet, pink, orange, yellow, white
  4. RGBW (soft change) red, red-white, white-yellow, yellow, green, green-white, white-blue, turquoise, blue, violet, violet-white, white
  5. RGBW (soft change) cold white, white, warm white, yellow, orange, red, violet, turquoise, white-blue, blue, white
  6. RGBW (abrupt) green, red, blue, white, turquoise, purple, violet white, pink, pink and white, yellow, yellow and white, white, white-green

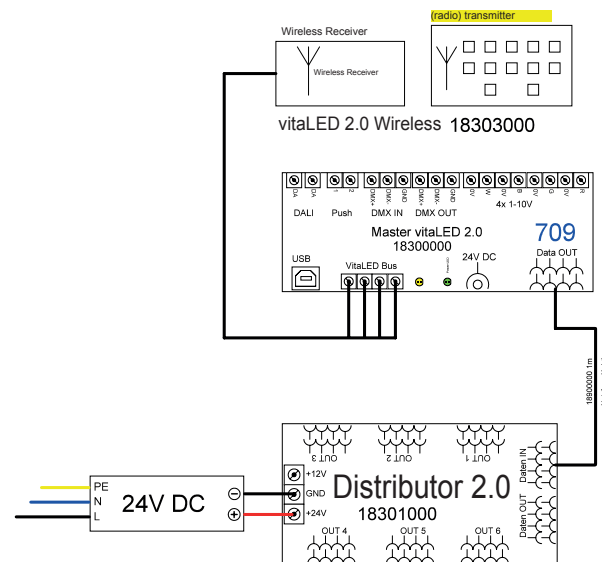
five color moods

1. Freshness | 2. Dusk | 3. Indian Summer | 4. Spring Awakening | 5. Biorhythm

2-core cable (such as J-Y(St)Y) max. 30m to connect to probe or touch sensor module 18310000

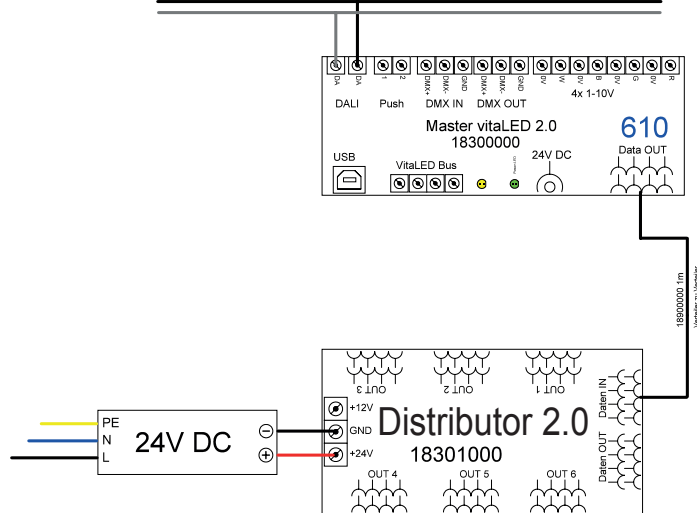


Bluetooth



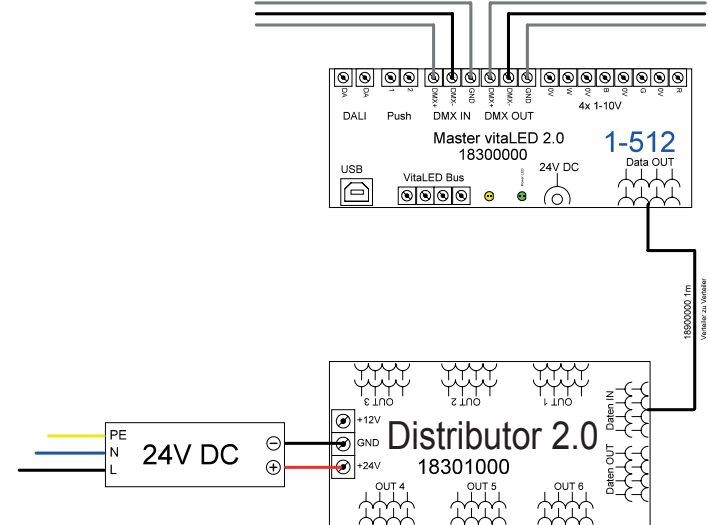
Radio control

## DALI-Bus



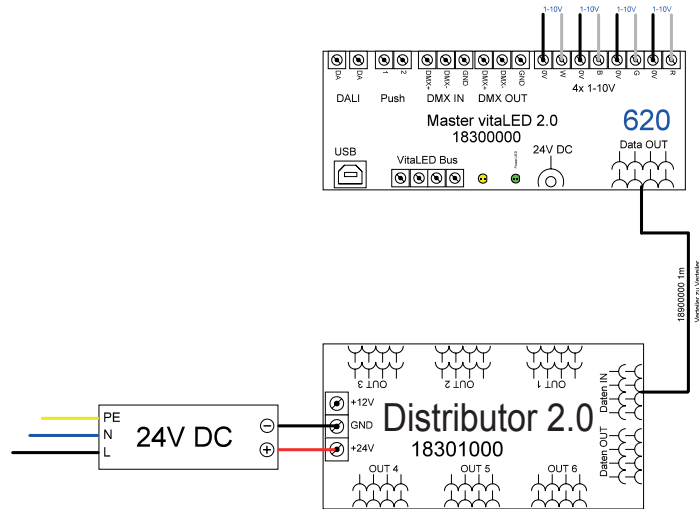
DALI control

## DMX-Bus

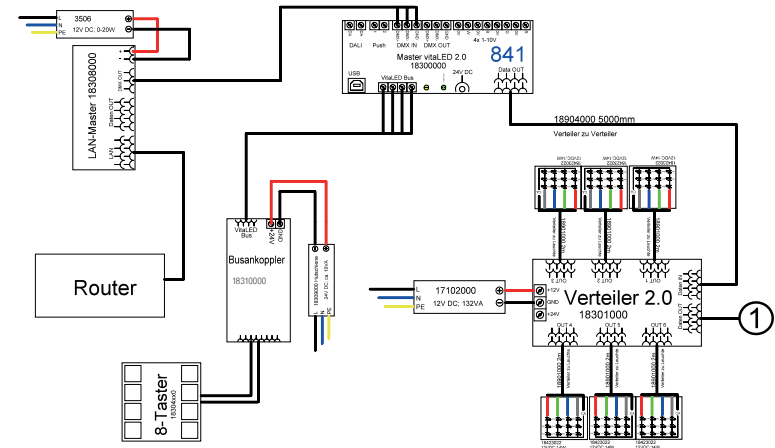


DMX control





1-10V control



LAN & probe control





Art.No.	Page	Price €
18300000	86	388.50
18301000	86	173.30
18302000	87	142.50
18303000	87	413.20
18304070	92	296.30
18304080	92	296.30
18304220	92	327.00
18304250	92	327.00
18305070	92	255.30
18305080	92	255.30
18305220	92	286.00
18305250	92	286.00
18306070	93	245.00
18306080	93	245.00
18306220	93	275.80
18306250	93	275.80
18307070	93	357.80
18307080	93	357.80
18307220	93	368.00
18307250	93	368.00
18308000	91	621.30
18309000	90	36.90
18310000	90	306.50
18312000	89	255.30
18313000	90	28.60
18314000	89	306.50
18333022	58	839.00
18333152	58	849.00
18334022	59	1289.00

Art.No.	Page	Price €
18334152	59	1299.00
18402022	80	438.90
18402052	80	434.80
18402152	80	438.90
18402172	80	419.90
18402182	80	419.90
18402672	80	419.90
18403022	80	438.40
18403052	80	438.50
18403152	80	438.40
18403172	80	419.50
18403182	80	419.50
18403672	80	419.50
18406022	81	540.60
18406052	81	548.90
18406152	81	538.50
18406172	81	517.90
18406182	81	517.90
18406672	81	517.90
18407022	81	545.80
18407052	81	554.30
18407152	81	543.70
18407172	81	523.10
18407182	81	523.10
18407672	81	523.10
18408002	60	203.00
18409002	76	435.70
18411252	68	250.30
18412252	65	255.50

Art.No.	Page	Price €
18413252	77	510.30
18414252	77	514.70
18415072	78	470.50
18416072	79	501.30
18417072	79	501.30
18418072	75	460.30
18419252	75	416.90
18420022	68	276.50
18420052	68	278.80
18420152	68	282.50
18420172	68	259.80
18420182	68	259.80
18420672	68	259.80
18421022	69	282.00
18421052	69	283.80
18421152	69	288.00
18421172	69	265.30
18421182	69	265.30
18421672	69	265.30
18422022	62	223.70
18422152	62	229.70
18423022	70	253.10
18424252	70	329.00
18425252	71	335.60
18426072	61	220.70
18426252	61	220.70
18427072	61	222.90
18427252	61	222.90
18428022	63	228.60

Art.No.	Page	Price €
18428052	63	232.00
18428072	63	227.10
18428092	63	235.70
18428152	63	235.70
18429022	63	229.80
18429052	63	233.50
18429072	63	228.40
18429092	63	237.00
18429152	63	237.00
18430022	71	231.60
18430072	71	228.80
18430152	71	230.40
18431252	67	242.80
18432202	69	310.50
18433022	67	269.80
18433072	67	251.30
18433252	67	250.40
18434002	66	253.90
18435022	72	88.30
18500172	82	341.00
18500182	82	341.00
18501222	83	409.00
18502222	83	716.50
18503002	85	415.10
18504082	85	460.30
18505002	82	444.80
18596000	73	78.80
18597000	73	78.80
18900000	90	13.90

Art.No.	Page	Price €
18901000	90	16.90
18902000	90	11.20
18903000	90	4.70
18904000	90	14.80
18905000	90	25.60
18906000	90	25.60
18907000	72	13.90
18908000	72	14.70
18909000	90	12.80
75503002	85	10.00
75998000	85	10.20

## § 1

### General - Scope

1. Our Terms and Conditions shall apply exclusively; contradicting conditions or conditions of the customer that deviate from our Terms and Conditions will not be accepted by us unless we have expressly agreed to their applicability in writing. Our Terms and Conditions shall also apply when we perform deliveries without objection while being aware of contradicting conditions or Terms and Conditions that differ from ours.
2. Decisive for the content and scope of deliveries and services shall be our written offer and, if we issue an order confirmation, our written order confirmation.
3. Our Terms and Conditions shall only be applicable to companies within the meaning of § 310 Sec. 1 BGB [Bürgerliches Gesetzbuch - German Federal Civil Code].
4. Our Terms and Conditions shall also apply to all future business with the customer. The following Terms and Conditions supersede the customer's Terms and Conditions that differ in content. The customer's waiver of the applicability of any of their own Terms and Conditions shall also not be invalidated by their silence or our performance. A deviation from the following Terms and Conditions in an individual case shall require our written confirmation.
5. All technical data in our catalogues and other sales materials, lists and drawings as well as weight, measurement and mixing information has been carefully prepared; however, we reserve the right to later corrections.
6. It shall be the customer's responsibility to check whether our product is suitable for the customer's specified purpose.

## § 2

### Quote - Quotation Documents

1. If the order is to be qualified as a quote in accordance with § 145 BGB, we shall have the right to accept it within four weeks.
2. We reserve property rights and intellectual property rights in depictions, drawings, calculations and other documents; they must not be made available to third parties. This shall also apply to any written documents labelled as confidential. Their disclosure to third parties by the customer shall require our express written approval. Quotes shall only be valid if in written form. The prices stated shall apply subject to the condition that the order data on which the quote tendered was based remain unchanged.
3. We shall only prepare first samples and first sample test reports upon express written agreement, billed at cost.

4. For products ordered based on customer's drawings or samples, customer shall be obliged to check for possible property rights of third parties and to not infringe upon them. If, due to a breach of this obligation a third party is prohibiting a production claiming a property right belonging to said third party, or if the product can not be used due to a violation of said property right, we shall be entitled - without having to verify the legal status and to the exclusion of any compensation to the customer, no matter what the legal status may be - to stop production and delivery until the facts have been clarified and to demand compensation from the customer, in the amount of at least 15 % of the invoice total for the product ordered. Customer shall already now hold us harmless of any and all claims for damages or other compensation, especially from the holders of right, upon first response. Included in the scope of the damages shall also be such costs as we may incur due to having to defend against claims of third parties.

## § 3

### Prices - Terms and Conditions of Payment

1. Unless the order confirmation specified something else, our prices shall be exworks, incl. packaging typically used for our products, plus the value added tax applicable at the date of the invoice. Requested special packaging or outer packaging or special small packages shall be billed to the customer. The prices shall be applicable, respectively, only to the contractually agreed upon quantity and design. If the customer requests changes that require higher processing than what the contract or typical production process is based on, we shall reserve the right to a reasonable adjustment of the price. We reserve the right to increase our prices - after the contract has been signed - in particular if due to bargaining agreements, increases in the prices of materials, especially increases in the prices of raw materials or increases in costs of energy.
2. The statutory value-added tax is not included in our prices; it will be specified separately on the invoice in the statutory amount applicable on the day the invoice is issued.
3. The deduction of a discount shall require a special written agreement.
4. Unless specified differently in the order confirmation, the purchase price shall be due net (without deduction) free of transaction charges and shall be payable within 10 days of the date of the invoice. If customer is in default, we shall be entitled to demand interest on arrears in the amount of 8 percentage points above the statutory base interest rate per year. If we are able to provide proof of higher damages due to this default, we shall be entitled to claim those.
- The Customer, however, shall have the right to prove to us that we did not incur damages or did incur significantly lower damages as a result of this default.
5. Customer shall be entitled to offsetting only if its counterclaims have been

judicially determined, are uncontested, or have been acknowledged by us. Also, customer shall not have any right to retention on account of contested counterclaims. Furthermore, customer shall only be entitled to exercise a right of retention to the extent that its counterclaim is based on the same contractual relationship. Credit memos are expressly granted for the purpose of offsetting. There shall be no claim to the payment outright.

6. In case of doubt regarding customer's ability to pay, we reserve the right to demand advance payments or that securities be rendered.

If we obtain knowledge that an attachment could not be enforced at the customer or if we receive any indication of a financial collapse of the customer, we shall be entitled to withdraw from the contract subject to a charge for the expenses incurred.

## § 4

### Delivery Schedule - Terms and Conditions of Delivery

1. The start of the delivery schedule stated by us or agreed upon with us presupposes that all technical questions have been addressed, all documents to be supplied by the customer have been delivered, all necessary permits and releases have been obtained by the customer, especially with respect to plans as well as the adherence to the agreed upon Terms and Conditions of Payment and the fulfillment of the other acts of cooperation by the customer.
2. Furthermore, the adherence to our obligation to deliver presupposes the timely and proper fulfillment of the customer's obligation as well as that we received proper delivery of the raw materials necessary for manufacturing the delivery product. The right to objection of non-fulfilled shall remain reserved.
3. If the non-adherence to delivery schedules is due to force majeure, e. g. strike, lock-out, etc., the deadlines shall be reasonably extended. Such a reasonable extension of the delivery deadlines shall also apply if we do not receive our deliveries on time.
4. If customers is defaulting on acceptance or if customer culpably violates other duties of cooperation, we shall be entitled to demand compensation of any resulting damages including any possible extra expenses to the customer. We reserve the right to assert further claims and rights.
- If the delivery or shipment is postponed upon customer's request, we shall be entitled to bill the customer a storage fee in the amount of 0.05 % of the invoice total for each month started, up to a maximum of 5 % of the invoice total, 10 days after notifying customer that the goods are ready for shipment. Both parties to the contract shall have the right to prove higher or lower expenses.
5. If the prerequisites in Sec. 4 exist, the risk of accidental loss or accidental deterioration of the goods shall pass to customer at the moment customer defaults on acceptance or payment.
6. In accordance with the statutory regulations, we shall be liable to the extent

that the underlying purchasing contract is a fixed date transaction in the meaning of § 286 Sec. 2 Nr. 4 BGB or of § 376 HGB (German Commercial Code). In accordance with the statutory regulations, we shall also be liable if customer, due to a delayed delivery due to our fault, is entitled to claim that customer's interest in the continued fulfillment of the contract has ended.

7. Furthermore, in accordance with the statutory regulations, we shall be liable if the delayed delivery is due to a wilful or grossly negligent breach of contract for which we are responsible; culpability of our representatives or vicarious agents shall be attributed to us. If the default in delivery is due to a grossly negligent breach of contract for which we are responsible, our liability shall be limited to the foreseeable, typically occurring damages.
8. We shall also be liable in accordance with statutory provisions, insofar as the delay in delivery that was our fault is based on a culpable breach of a material contractual obligation; in this case, however, the liability for damages shall be limited to the foreseeable, typically occurring damages.
9. We shall be entitled to make partial deliveries within a reasonable scope. Deviations in measurements, weight, technical design, manufacturing and quantity of the goods to be delivered shall be allowed within customary, product-related tolerances. Furthermore deemed as approved by the manufacturer shall be modifications that serve technical advancement and improvement of our products.

## § 5

### Transfer of Risk - Packaging Costs

1. Unless the order confirmation specifies otherwise, the delivery shall be agreed upon ex works.
2. The return of packaging materials shall be subject to special agreements.
3. If requested by the ordering party, we will obtain transport insurance for the delivery; the costs caused by it shall be born by the ordering party.
4. Customer shall be required to name one or more people within a reasonable period before delivery of the goods who are authorised by customer to accept the goods and the accompanying documents, and to sign the delivery papers and accompanying documents on behalf of customer. This shall apply in particular if the goods are delivered to a location other than customer's place of business. If such information is not provided, those persons who actually accept the goods shall be deemed authorised to accept the goods and to sign the transfer papers (delivery note and other accompanying papers).
5. If none of the people named by customer are present at the agreed upon time at the specified location or if this person or other persons are not willing to accept the goods, customer shall be in default of acceptance, with the consequence that the risk transfers to the customer. Furthermore, customer shall

bear the extra costs arising from a renewed delivery.

6. Customer shall not be entitled to reject deliveries due to minor defects.

## § 6

### Liability for Defects

1. Customer's claims for defects presuppose that customer properly fulfilled its inspection and complaint obligations owed in accordance with § 377 HGB.  
2. If the purchased item does have a defect, we shall - at our discretion - be entitled to provide remedy in form of a correction of the defect or to deliver a new defect-free item. In case of a remedy of the defect, we shall be required to bear all expenses necessary for the remedy, in particular transport, travel, work and materials costs, if those are not increased by the fact that the purchased item was brought to a location different from the place of fulfillment.

In any case, in case of a remedy of the defect, we shall only bear the expenses up to the amount of the purchase price.

3. If the remedy fails, customer - at its discretion - shall have the right to demand withdrawal or reduction.

4. We shall be liable in accordance with the statutory stipulations insofar as customer makes claims for damages that are a result of intent or gross negligence, including intent of gross negligence of our representatives or vicarious agents. Unless we are claimed to be in deliberate breach of contract, our liability for damages shall be limited to the foreseeable, typically occurring damages.

5. In accordance with the statutory regulations, we shall be liable if we culpably violated a material contractual obligation; however, even in this case, the liability for damages shall be limited to the foreseeable, typically occurring damages. A material contractual obligation shall exist if the violation of the obligation refers to an obligation in whose fulfillment customer has trusted and could be expected to trust in.

6. Liability for culpable injury to life, limb or health shall remain unaffected; this shall also apply to mandatory liability in accordance with the product liability law (Produkthaftungsgesetz).

7. To the extent not otherwise specified above, any liability shall be excluded.

8. The period of limitation for claims for defects shall be 12 months, as from the transfer of risk.

## § 7

### Joint and Several Liability

1. Liability for damages other than that provided in § 6 shall be excluded - regardless of the legal nature of the claim. This shall in particular apply to claims for damages arising from negligence when entering into the contract, damages because of other breaches of obligations, or damages because of tortious

claims for compensation for damages in accordance with § 823 BGB.

2. The period of limitation for all claims that are not subject to the period of limitation for defects of the item shall be an exclusion period of 18 months. It shall commence upon obtaining knowledge of the damage and of the person causing the damage.

3. The limitation pursuant to Sec. 1 shall also apply, insofar as the customer demands compensation of useless expenses instead of performance.

4. Insofar as liability for damages against us is excluded or limited, this shall also apply with respect to the personal liability for damages of our employees, workers, associates, representatives and vicarious agents.

## § 8

### Securing Retention of Title

1. We shall retain the title to the purchased item until we have received all payments due us from the business relationship with customer. To the extent that we agree with the customer on payment of the purchase price owed on the basis of the check/note payment procedure, the retention shall also extend to the redemption of the note from the customer, accepted by us, and shall not be eliminated by the crediting of the check we received. If customer breaches the terms of the contract, in particular in case of default of payment, we shall be entitled to take back the purchased goods. Our garnishment of the purchased goods shall constitute a withdrawal from the contract. Upon taking back the purchased goods, we shall be entitled to reutilise them; after the deduction of reasonable utilisation costs, the proceeds from the sale shall be offset against the ordering party's liabilities.

2. Customer agrees to handle the purchased goods with care; in particular, the ordering party shall be required to insure them at its own expense against fire, water and theft at their original value. Where maintenance and inspection work is required, customer shall have it performed timely at its own expense.

3. In case of attachments or other encroachments by third parties, customer shall notify us immediately so that we can file a lawsuit in accordance with § 771 ZPO (German Code of Civil Procedure). Insofar as the third party is not able to reimburse us for the judicial and extrajudicial costs of such a lawsuit in accordance with § 771 ZPO, customer shall be liable for any losses we incur.

4. Customer shall be entitled to resell the purchased goods in the ordinary course of business; Customer shall, however, now assign to us all accounts receivables in the amount of the final invoice amount (incl. VAT) of our account receivable that accrue to him against purchasers or third parties on resale, independently of whether the purchased goods were resold without or after processing it. Customer shall remain authorised to collect this account receivable even after assignment. Our authorisation to collect the account

receivable ourselves shall remain unaffected by this. However, we agree not to collect the accounts receivable as long as customer complies with its payment obligations from the collected proceeds, does not default in payment and, in particular, no petition for the institution of insolvency or conciliation procedure is filed or cessations of payment exist. But if this is the case, we shall be entitled to demand that customer inform us about assigned receivables and the debtor of same, provide us with all information required for collection, hand out the pertinent documents and inform the debtor (third party) of the assignment. The claim already ceded to us in advance shall also apply to the acknowledged balance, as well as, in the case of an insolvency of the customer, to the then existing causal balance.

5. The processing or transformation of the purchased goods by customer shall always be done for us. If the purchased goods are processed together with other items not belonging to us, we shall consequently acquire co-ownership of the new object in proportion to the value of the purchased goods (invoice total, incl. VAT) to the other processed items at the time at which processing took place. Incidentally, for the object resulting from the processing, the same shall apply as for the purchased goods under reservation.

6. If the purchased goods are combined with other objects not belonging to us such that they cannot be separated from one another, we then shall acquire joint ownership of the new object in proportion to the value of the purchased goods (invoice total, incl. VAT) and to the other processed items at the time at which combining took place. If the combining occurs such that customer's object is regarded as the principal item, then it is deemed agreed upon that customer shall transfer co-ownership to us proportionally. Customer shall keep safe the resulting sole ownership or co-ownership for us.

7. As security for our claims against it, customer shall assign to us all claims against a third party resulting from combining the purchased goods with real property.

8. We undertake to release the securities due to us at customer's request as long as the realisable value of our securities exceeds the secured accounts receivable by more than 10 %; the selection of the securities to be released shall be at our discretion.

## § 9

### Place of Jurisdiction - Place of Performance - Severability Clause

1. If the customer has merchant status, the court, which is locally competent for the place of our business, shall have jurisdiction; we shall, however, also be entitled to bring action against customer at its place of business.

2. The laws of the Federal Republic of Germany shall be applicable; the terms of the UN Convention on Contracts for the Sale of Goods shall be excluded.

3. Unless stated otherwise in the order confirmation, place of performance shall be the headquarters of Brumberg Leuchten GmbH & Co. KG.

4. In the event that individual provisions of these General Terms and Conditions of Sale in whole or in part violate mandatory law or are for other reasons invalid or ineffective, this shall not affect the validity of the remaining provisions.

5. The German version of the General Terms and Conditions shall be the authoritative version. In case of translations, it shall prevail over the English translation and is designed based on German law.

Sundern, 01.08.2014









to be installed in parallel connection  
(constant voltage)



to be installed in series connection  
(constant current)



the operating current is as indicated in mA  
(constant current)



Rotation angles for  
different  
directions in °



ceiling cut-out round shape (Ø) or  
angular in mm for the article



operating voltage 12V, constant current  
(DC)



operating voltage 24V, constant current  
(DC)



operating voltage 230V, alternating current  
(AC)



pivoting angle  
in °



protection class III:  
safety extra-low voltage (SELV):  
voltages ≤50V AC; ≤120V DC



installation depth in mm  
The given installation depth refers to the physical dimensions of the recessed part of the luminaire.  
The factually required, overall installation depth is to be found in the mounting instruction



Fitting of illuminant without visible circlip



Article partially consists of stainless steel  
A4/AISI 316 and is recommended for  
shore areas



Article is not appropriate for covering with  
heat insulation material



weight capacity up in kg



LDT data for these articles are available as  
download at [www.brumberg.com](http://www.brumberg.com).



Article is equipped with our plug&play plug-in system. Incorrect wiring is  
impossible.



degree of protection, see explanation on  
page <?>

The degree of protection characterises the protection against the infiltration of foreign bodies and dampness.

The designation follows this scheme: IP XX

The letters IP indicate „degree of protection“ and the double XX has to be replaced as following:

1st place: protection against solid particles

2nd place: protection against the ingress of moisture

#### Ratio for protection against contact/ ingress of objects

IP 0X	No protection
IP 1X	protection against objects sized >50mm diameter
IP 2X	protection against objects sized >12mm diameter
IP 3X	protection against objects sized >2,5mm diameter
IP 4X	protection against objects sized >1mm diameter
IP 5X	protection against harmful dust deposit inside
IP 6X	no ingress of dust

#### ratio for liquid ingress protection

IP X0	not protected against liquid ingress
IP X1	protected against drops of water falling vertically
IP X2	protected against drops of water from angles up to 15°
IP X3	protected against showers up to 60°
IP X4	protected against splash water
IP X5	protected against water jets
IP X6	protected against heavy downpours
IP X7	protected against immersion
IP X8	protected against submersion

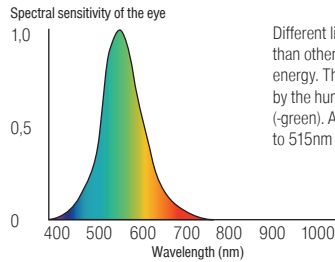
#### Example:

IP 44 means: protected against foreign bodies > 1 mm and against splash water.

## What is light?

Light is that small part of electromagnetic radiation, which can be perceived by the human eye. The actual wavelengths range from 380nm to 750nm.

## Spectral sensitivity of the eye



Different light colours appear lighter than others at the same radiation energy. The maximum perceived by the human eye is about 555nm (-green). At twilight, the maximum falls to 515nm (blue shades).

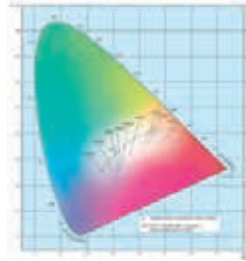
## Weighted light colour

... indicates the light colour of the light source perceived by the eye of the spectator.

## Weighted colour impression

... describes the colour impression experienced by the spectator.

## CIE standard chromaticity diagram



Since 1931, the CIE standard chromaticity diagram has been the most widely used, perception-related colour description system containing all of the perceivable colours. By reference to the colour space coordinates, the system is also called Yxy colour space or CIE Yxy.

## UV light

UV light is electromagnetic radiation with a wavelength shorter than that of light perceivable by the human eye (less than 380nm). This range is further sub-divided into the sub-ranges of UV-A, UV-B and UV-C.

## IR light

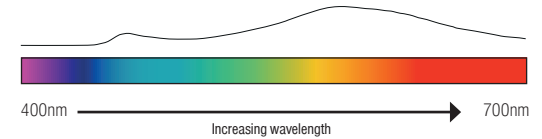
IR (infra-red) light is electromagnetic radiation with a wavelength longer than that of light perceivable by the human eye (more than 780nm). This radiation is also called thermal radiation.

## Colour rendering

Colour rendering describes how natural an object illuminated by an artificial light source appears.

## Lichtspektrum

The light spectrum is the whole of all distinguishable spectral colours. The forms of representation contain information about wavelength and intensity of luminous power.

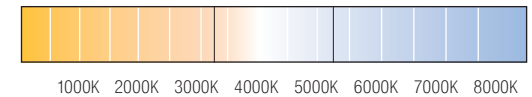


## Light colour

The light colour, also described as spectral colour, specifies a colour impression of light in one single wavelength.

## Colour temperature

Describes the temperature at which a theoretically black body emits a weighted colour impression.



## Planck's law

The black body curve, commonly also referred to as Planck's curve, depicts the colour temperatures as a curve in the CIE standard chromaticity diagram.

## Colour rendering index

The colour rendering index contains light colours determined in accordance (CRI) with DIN 6169 14.

# 1 Light greyish red	# 9 Strong red
# 2 Dark greyish yellow	# 10 Strong yellow
# 3 Strong yellow green	# 11 Strong green
# 4 Moderate yellowish green	# 12 Strong blue
# 5 Light bluish green	# 13 Light yellowish pink
# 6 Light blue	# 14 Moderate olive green (leaf)
# 7 Light violet	
# 8 Light reddish purple	

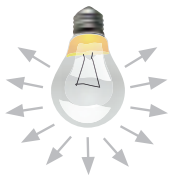
## Rx specification

„x“ specifies the test colours (i.e. 1-12) measured for the determination of the colour rendering index.

## Ra specification

Ra describes the general colour rendering index and specifies that only the first 8 (out of 14) test colours were measured for the determination of the colour rendering index.

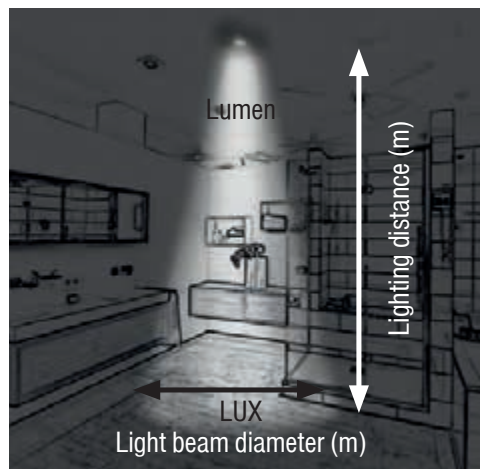
## Light flux



The light flux describes the total radiation power of a light source irrespective of the radiation direction. Light flux is denominated in the unite lumen.

## Light intensity

The light intensity is the measured light that actually reaches the area to be illuminated. Light intensity is denominated in the unite lux.

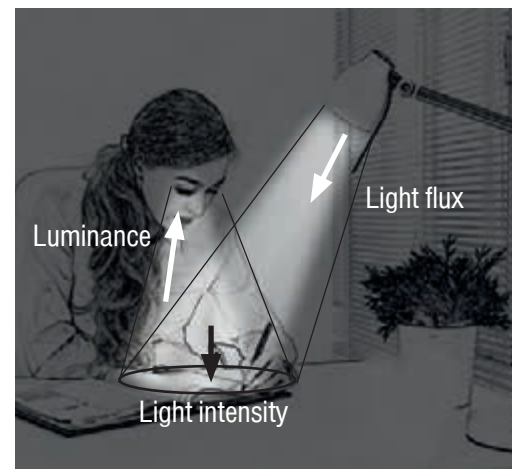


## Reflection

Describes the relation between impinging light and reflected light. Both the amount of reflection and the content of reflection depend on the surface material. The direction of reflection depends on the type of surface.

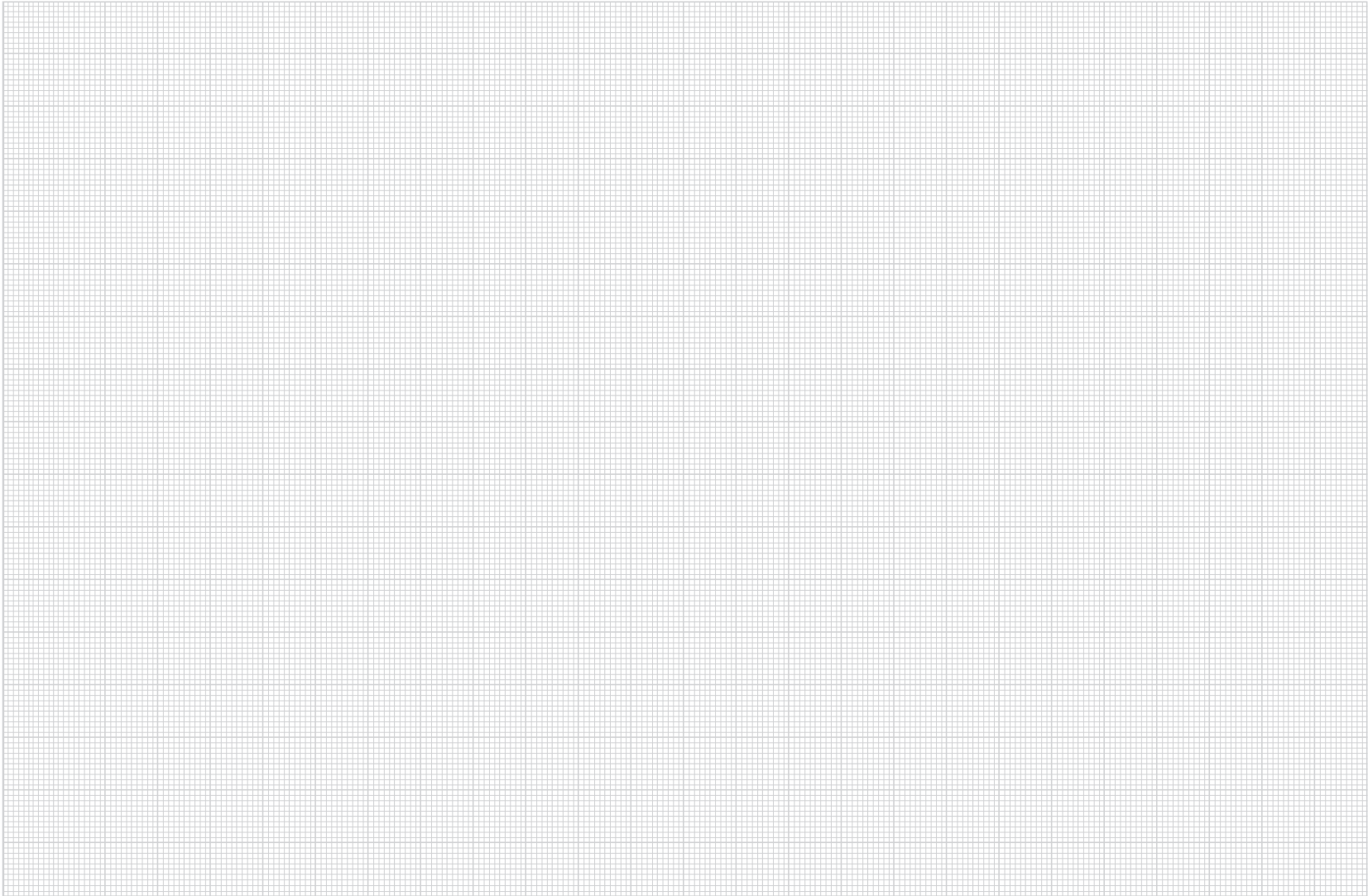
## Luminance

Luminance is the photometric measure for the phenomenon that is perceived by the human eye as brightness of a surface in the unite candela per square meter.



## Absorption

Describes the relation between impinging light and non-reflected light.



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