



LIGHTCARE®
The second best light on earth



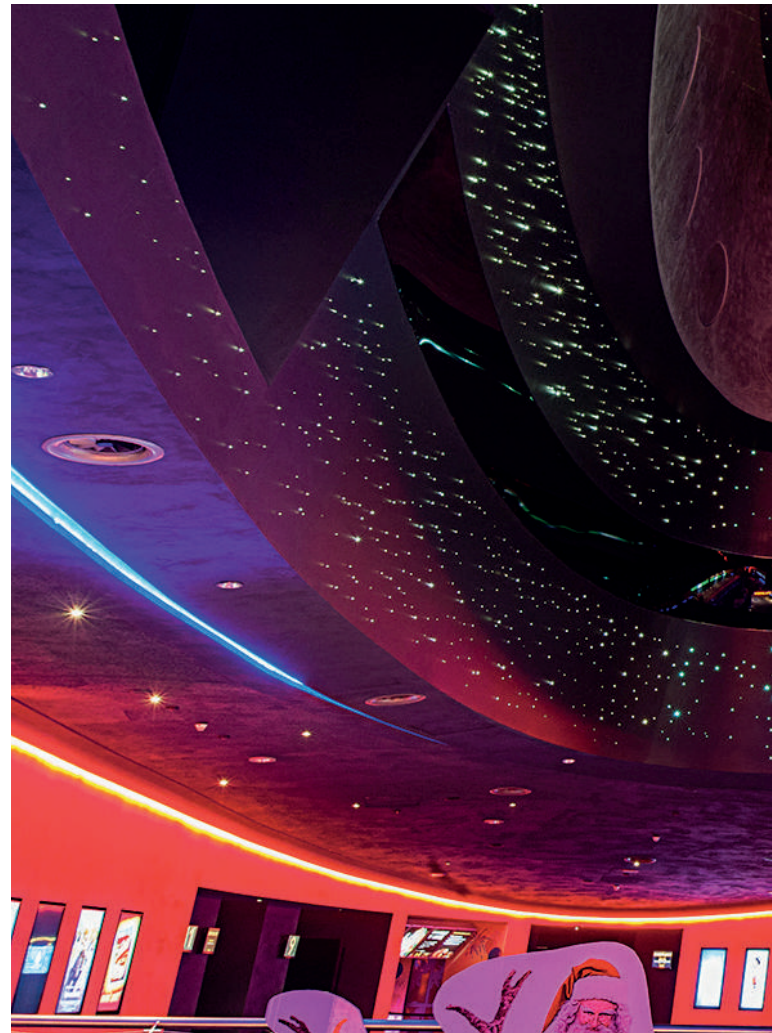
LIGHTCARE®

CRUISES

CIRCADIAN & SENSORY LIGHT

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CONCEPT & SOLUTIONS

LIGHTCARE AN EXPERT IN UNIQUE LIGHTING SOLUTIONS

LIGHTCARE is a leading knowledge-based innovation company specializing in unique light concepts for a wide range of areas, including healthcare and elderly care, trade and office, education and industry.

LIGHTCARE's lighting solutions are based on multiple LED lamps with five diodes: warm white, cold white, red, green and blue. This makes it possible for us to offer light with 15,7 million colour nuances enabling the creation of 1) human centric circadian light and 2) ergonomic light.

Everything we do is inspired by the importance of sunlight for humans and builds on long lasting and unique collaboration between our customers and users as well as leading researchers specializing in circadian rhythm and sleep patterns.



CIRCADIAN LIGHT

FOR OPTIMAL SLEEP, ENERGY AND WELLBEING

- Stimulates the human circadian rhythm by following the natural daylight
- Possibility to choose fixed lighting scenarios such as calming-, therapy- or working light.
- Improving sleep quality, validated effect on the production of sleep hormone melatonin
- User-friendly control systems with simple functions
- Circadian protocol validated by projects in the healthcare industry

SENSORY LIGHT WITH MUSICURE

RELAX WITH A COMBINATION OF AUDIO AND LIGHT

- Evidence based music by Musicure in collaboration with sleep specialist dr. Michael Breus
- Combined with relaxing colored light, free of blue colors
- Inspires to better sleep, slow pulse, heartrate and breathing
- Used at 15 cruise ships around the world
- Make room to relax from a day full of impressions and discoveries

ERGONOMIC LIGHT

LIGHT OPTIMISED FOR EVERY SITUATION

- Supports and sustains the atmosphere and mood in different parts and situations on the ship with tunable multi coloured light
- Tailored light that ensures optimum light for staff and guests at the same time
- Prevents reflection of screens and monitors
- Less fatigue and headaches during screen work
- Better results, increased quality and fewer errors
- Improves overall work environment

STRETCH CEILING

CREATE UNIQUE AND ELEGANT ENVIRONMENTS

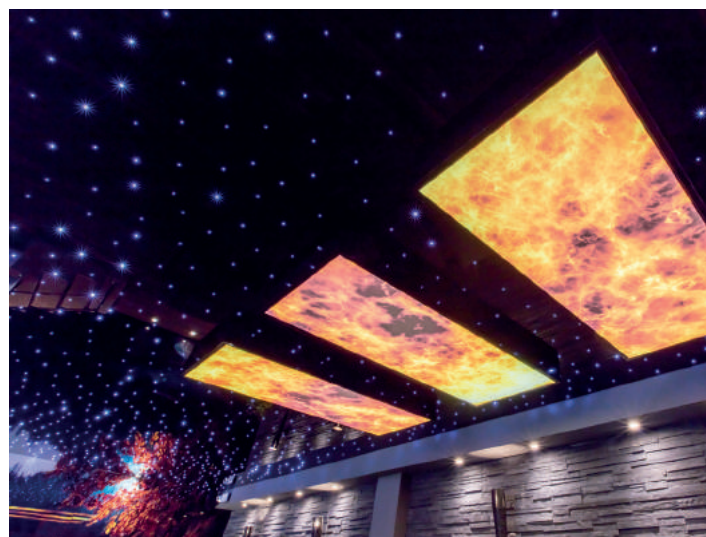
- Create unique environments with light, 3D and printed effects
- Can be used in all environments restaurants, common areas, indoor pool areas, etc.
- Made in fire proofed fabrics
- A safe way of making ceilings in a cruiseship

CREATE A DYNAMIC AND VIBRANT ATMOSPHERE

GIVE YOUR GUESTS A UNIQUE EXPERIENCE

STRETCH CEILING. With stretch ceiling, it is possible to let an entire room be illuminated by one large ceiling lamp/screen – which at the same time can give the guests a boosting light therapy. It is an ideal system which can supply both

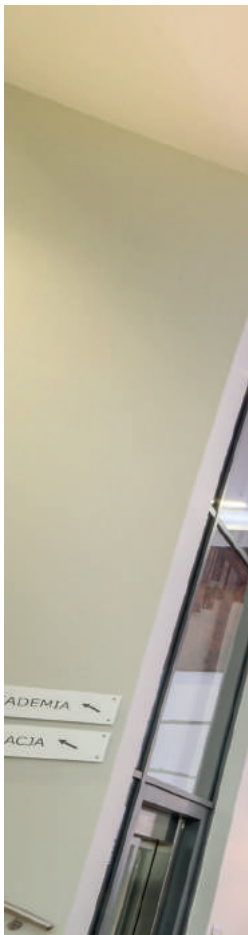
stretch ceilings and stretching walls – which makes it possible to play with different light effects. Stretch Ceilings/walls allow you to play with the lighting. Everything is possible – and only your imagination sets the limits for your design.





Due to the flexibility of the membranes, the system is ideal for easily creating curves, shapes and three-dimensional ceilings, walls and floating elements. The membranes are made from flexible PVC-material and is customly made to fit every need.

The transparent membranes – in different colors and transparencys – are intended to be backlit by any light source you want. By combining two membranes and the use of different light sources allows for unlimited lighting solutions.









FULL DYNAMIC CIRCADIAN LIGHTING

THE KEY TO BETTER SLEEP, INCREASED ENERGY LEVEL AND SENSE OF WELL BEING

FULL DYNAMIC CIRCADIAN LIGHTING from LIGHTCARE is a validated lighting programme following the natural circadian rhythm. When our bodies follow a natural circadian rhythm, we experience a better sleep, increased energy level and well being. The development of LED technology makes it possible to programme different coloured lighting

scenarios that can be operated from a user-friendly system. The light has proved to strengthen peoples mood in a positive way. Sleep patterns and general well-being is improved by the lighting scenarios from LIGHTCARE. At the same time the light can affect the job satisfaction, the efficiency, and the staffs' absenteeism.



LIGHT THAT FOLLOWS THE NATURAL DAYLIGHT

In the morning the boost and therapy function help to activate the body. From the morning the light gradually rises to high intensity and high colour temperatures. It is proved that the blue colours of light help to inhibit the production of the sleep hormone melatonin and stimulate the production of serotonin and cortisol. In short, the blue colour light is there to raise the body's energy and activity level in the beginning of, and during the day.

In the evening the custom evening and night lighting help to create optimal conditions and prepare the body for a good

night's sleep. By removing the blue colours of light and instead use a red-orange light into the evening, it creates the optimal conditions for the production of the sleep hormone melatonin. The red-orange light meanwhile helps creating a secure and tranquil environment for guests as well as staff. The staff is experiencing a better circadian rhythm while undertaking night shifts and they find it easier to fall asleep after their shifts, making them more alert and less prone to making mistakes and possibly causing accidents completing their tasks.



LIGHTCARE CAN OFFER

- Scene selection to create the right ambience
- Fully scalable, from a single cabin to an integrated lighting solution for the entire ship
- Integrated Room Management System
- Integrated Audio Visual System
- Energy Monitoring and Maintenance
- Automated control of Public Spaces

A GREEN AND ENERGY EFFICIENT CHOICE

SAVE ENERGY COSTS WITH FULL DYNAMIC CIRCADIAN LIGHTING

It is commonly known that LED is up to 5 times as energy efficient in comparison with traditional light sources. The Full Dynamic Circadian lighting is an intelligent and automatically controlled light that furthermore is minimizing the

electrical consumption on board by adjusting it to the actual needs at every time of the day/night. This makes it very energy efficient and highly environmentally friendly.

EVIDENCE BASED SLEEP PROGRAM

GIVE YOUR PASSENGERS THE BEST SLEEP CONDITIONS POSSIBLE

LIGHTCARE and MusiCure have been cooperating for several years making sensory experiences in a combination of audio, light and video in the healthcare sector. MusiCure has also great experience with introducing their sensory sleep programme in the cruise ship industry. LIGHTCARE and MusiCure are now proudly presenting the next step in the sensory sleep programme, where our combined experiences from the healthcare sector are implemented in the cruise ship industry.



COMBINING CIRCADIAN LIGHTING WITH MUSICURE

A combination of MusiCure audio and colored light controlled by the LIGHTCARE OS system has a proven positive and relaxing effect on the listener, and induces a faster sleep onset and a deeper sleep for the passenger. The result is a well rested and happier guest ready to explore and enjoy the vacation.

EFFECTS ON GUESTS

- Improves circadian rhythm
- Helps with relaxation and calming down after an eventful day
- Offers a sense of luxury and wellness
- Gives a deeper and better sleep
- Has a positive impact on the mood
- Decreases risk of lifestyle diseases (cancer, cardiovascular disease)
- Works against seasonal affective disorder

EFFECTS ON STAFF

- Improves circadian rhythm
- Creates better working environment
- Increases productivity and alertness
- Increases the sense of well being
- Less fatigue and headaches
- Reduces sick leave
- Decreases risk of lifestyle diseases (cancer, cardiovascular disease)
- Works against seasonal affective disorder

ABOUT MUSICURE

MUSICURE MUSIC AS MEDICINE®



Scandic Health llc is founded by Anne Taylor RN, BSN who was introduced to the evidence-based MusiCure Music as Medicine® from her homeland of Denmark after a close family member was in recovery from a mental health crisis. MusiCure Music as Medicine® by musician and composer Niels Eje, is specially composed music created specifically to have a relaxing positive and mentally stimulating effect on the listener.

With more than 18 years of creative development on a foundation of clinical research results, MusiCure is now being used in a variety of different types of treatments and therapies around the globe. MusiCure has received the prestigious Dr. Blair Sadler Award of the Healing Arts In US Healthcare. The scientific research from the use of MusiCure has been published in many international medical journals and publications. Now MusiCure Sleep program also has been introduced on 15 cruise ships. The music is uniquely designed by composer Niels Eje, and is designed to lull you to sleep. The sleep program was created in collaboration with the well renowned Dr. Michael Breus.

CONTROL THE LIGHT WITH LIGHTCARE OS

OPEN SOURCE SYSTEM WITH UNIQUE USER-FRIENDLY INTERFACE

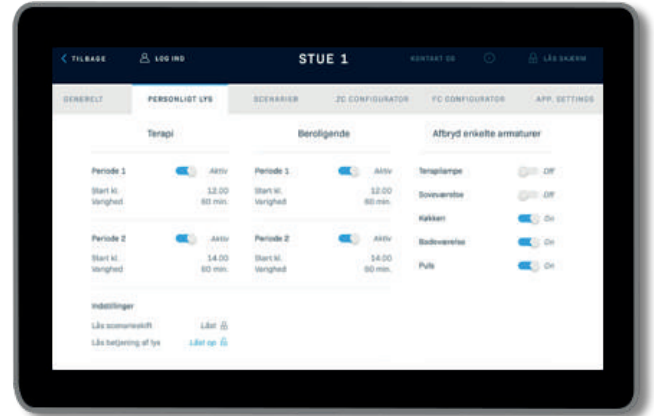
Module-based simplicity makes it easy for users to operate the system. The ease of use on the touch panel ensures that playback can take place easily and comprehensively for the individual user. A single press will play the encoded audio-visual themes with associated light, sound and scent. As a baseline it will only be possible to play the encoded audio-visual themes with associated light, sound and scent. The entire content package with the soothing themes can be purchased as a TV package for the entire care center – also for the individual homes.

EASY ACCESSIBLE MAINTENANCE

Technicians and electricians can be granted additional access to the system service and maintenance through our technical interface.

FUTURE-PROOF

We focus on creating as future-proof a system as possible. The system is continuously adapted according to new inputs from users, new research, experience from previous projects and specific needs of individual situations. The most basic settings can always be adjusted by the technical department and the staff and thereby be tailored to each individual cabin or area.



User-friendly interface for all users ▲

TRAINING AND USER INVOLVEMENT

Bundled with the installation of our Circadian Lighting comes thorough instruction for the staff and training in use of our control units. We are also eager to go into a dialogue about particular desires and functions that are relevant for your exact full dynamic lighting system.



ASSORTMENT

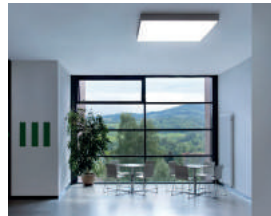
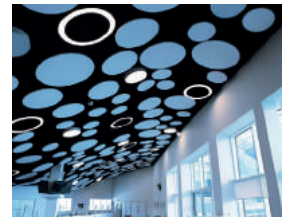
VARIATION, DESIGN, AND QUALITY

We offer a wide range of luminaires with design and quality that can be tailored to individual needs. The intelligent luminaires are found in circular and square luminaires for built-in, mounted and suspended. The luminaires are manufactured in Germany and comply with European quality standards. The manufacturer has its own laboratories and test facilities that ensure the quality and durability of the luminaire, which enables us to offer a 5 year warranty.

- We can deliver recessed luminaires that visually seems like skylights.
- Lines of light along the walls to create an amazing atmosphere with indirect light.
- Fixture designs in several colours and different materials.
- By combining RGBWWA (Red, Green, Blue, warm white (W), cool white (W) and Amber) LED diodes, we have the ability to boost and block the blue colours of light.
- Therapy boost circular luminaire in size Ø950cm with extra high light output and efficacy.
- Stretch ceiling



A selection of new surfaces in wood, metal, carbon, concrete, leather and even pure gold



LIGHT COMMISSIONING DEAL

WE PROVIDE A QUALITY ORIENTED PROCESS WHICH VERIFIES, DOCUMENTS AND TESTS THAT CABINS, WORKSTATIONS AND AREAS MEET THE SPECIFIED REQUIREMENTS

LIGHT COMMISSIONING is a proactive dialogue and qualifying process that focusses on total economics and the installations' interactions. The method is customised to the individual lighting project and enhances focus on the owner's technical demands to all the technical installations in the construction.

LIGHTCARE's light commissioning process makes sure that the technical focus on installations is maintained

through all stages. It has a special focus in the early stages where the owner straightforward leaves us measurable demands. By toughening the phrasing of demands the light commissioning process will make sure that the intentions with all the wanted technical installations and 3rd part products support the lighting operation. It creates safety not only by the owner but also by the counsellor and the contractor.

DIALOGUE & ADVICE



PLANNING



INSTALLATION



DELIVERY



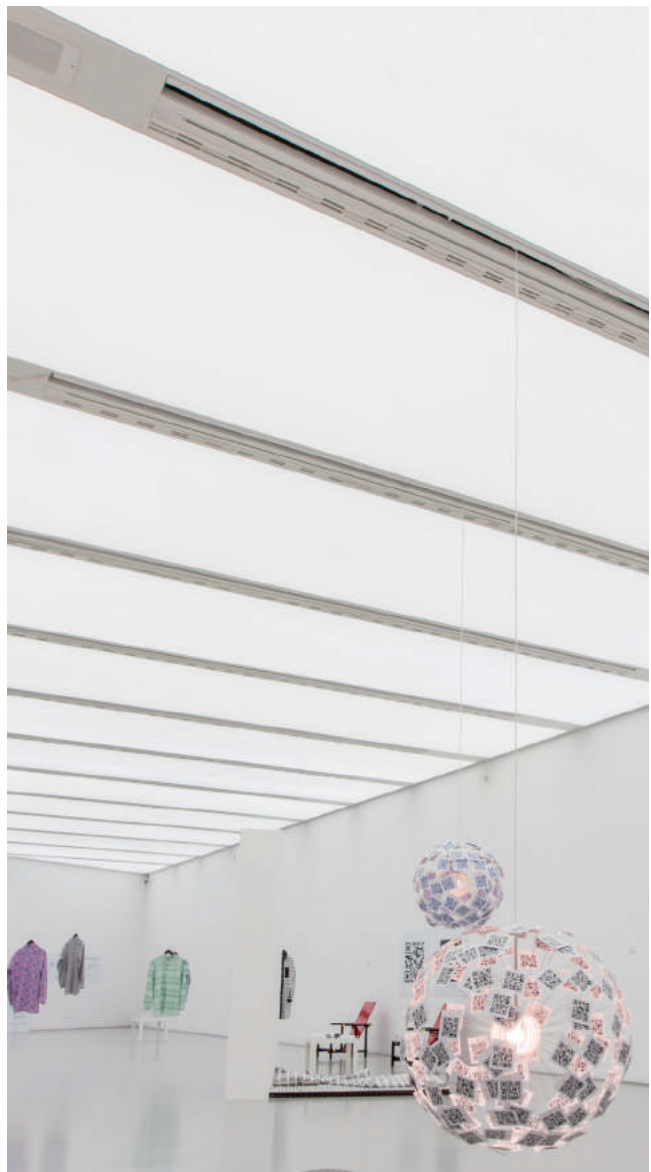
IMPLEMENTATION



EDUCATION



SERVICE & FOLLOW-UP



CRUISES

- and the light on board



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