



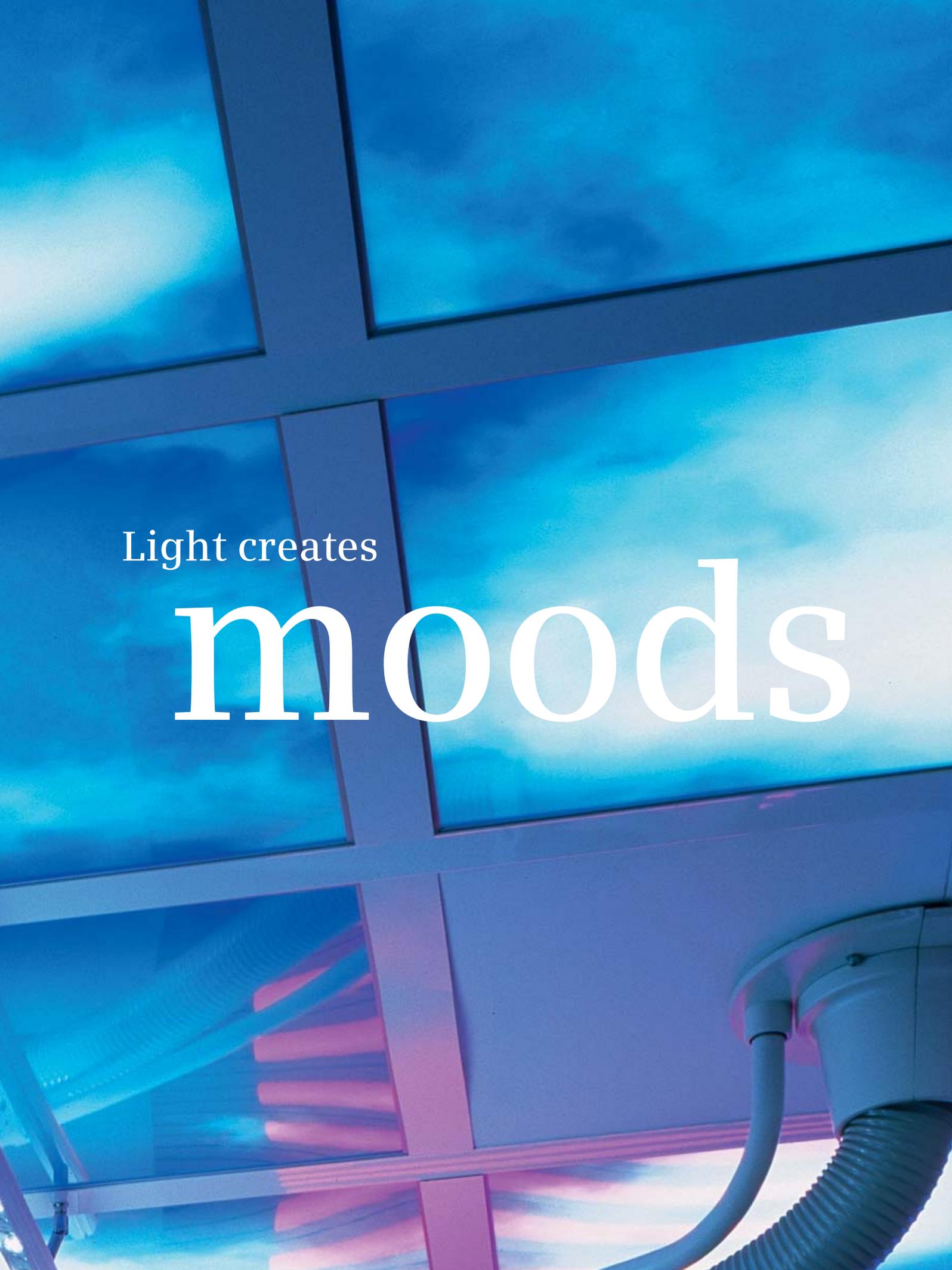
# Lighting Solutions by Siemens Healthcare

Change colors. Create moods.  
Care about patient experience.

[www.siemens.com/healthcare-lighting](http://www.siemens.com/healthcare-lighting)

**SIEMENS**





Light creates

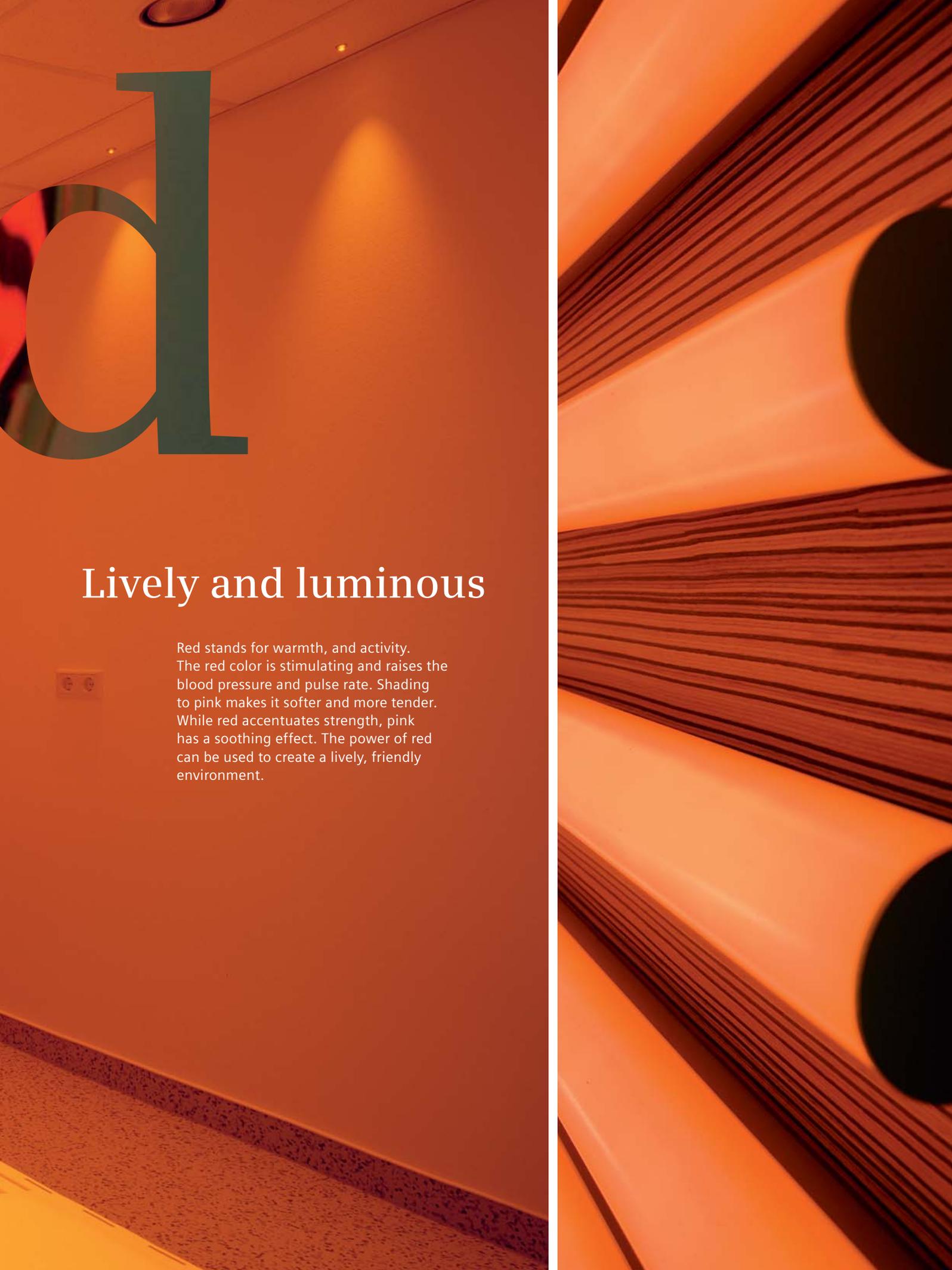
moods

warm

# free

MAGNETOM **Espreo**  
Tim [32x8]





# d

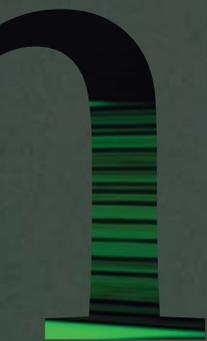
## Lively and luminous

Red stands for warmth, and activity. The red color is stimulating and raises the blood pressure and pulse rate. Shading to pink makes it softer and more tender. While red accentuates strength, pink has a soothing effect. The power of red can be used to create a lively, friendly environment.

fresh

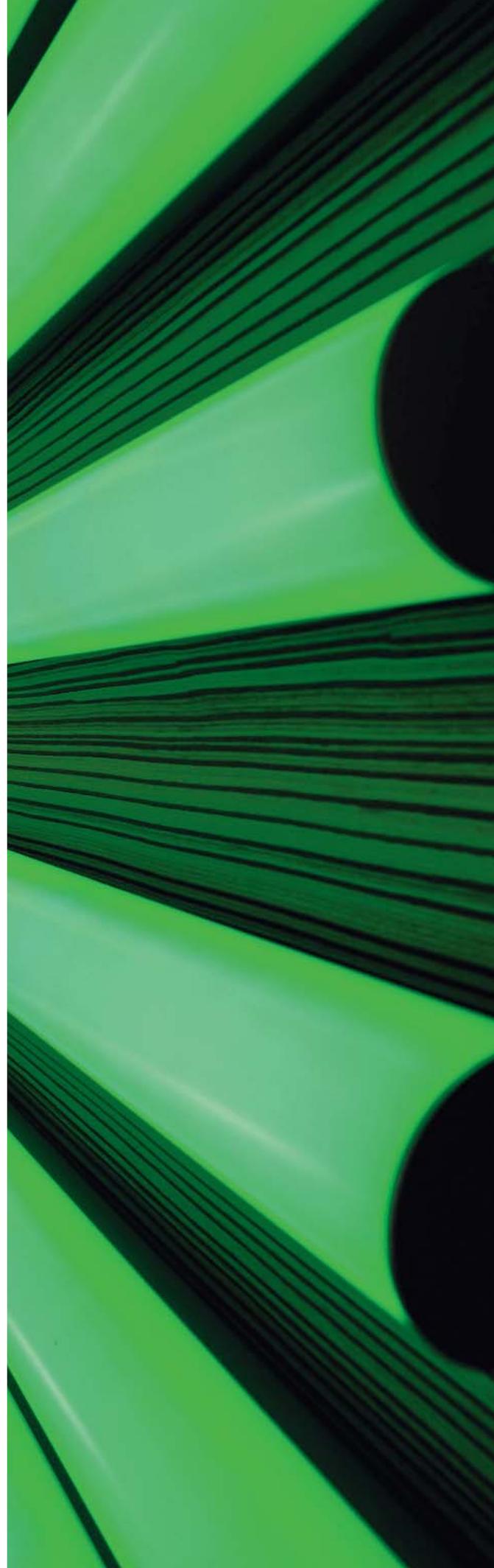
# green





# Peaceful and patient

Green, the color in the center of the spectrum, allows the mind to relax. It is the color of balance and harmony. Therefore green is one of the most reassuring colors. Green is used to balance stressful situations.





wide

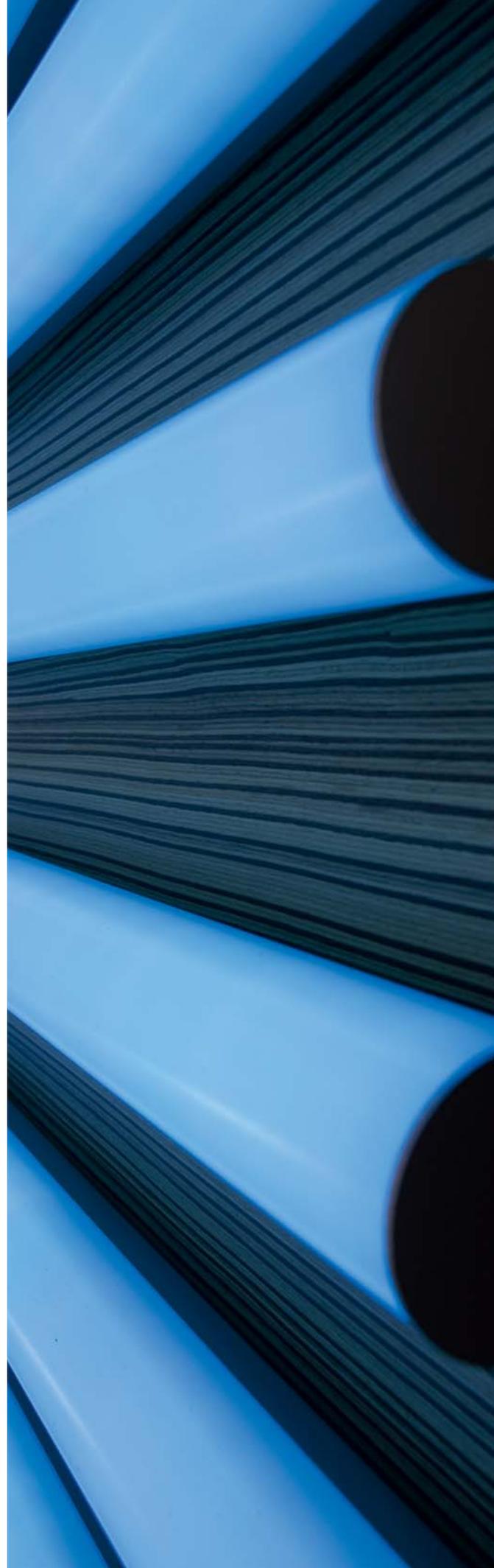
101

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# Inspiring and clear

The color of inspiration is calming and cooling. Strong tones of blue stimulate clear thought, while lighter, soft blue shapes calm the mind and aid concentration. To soothe anxiety, warmer tones of blue suit perfectly.





# Colors and patient care

## A brief insight into color psychology

Psychologist Angela Wright established links between patterns of color and patterns of behavior. She developed the “Colour Affects System” to apply color psychology objectively. In her London-based consultancy, Colour Affects, Wright applies her system to major international companies, government institutions, and individuals.

### **Mrs. Wright, why are colors so important for human existence?**

WRIGHT: Color means light. It is the source of life; it touches and expresses the soul of mankind. We are constantly under its influence, whether conscious or unconscious. People tend to see color only as mere visual delight. But color is far more than that. It has a biological relevance that was developed over many million years of evolution. So, it is hardly surprising that we have innate and intense responses to color.

### **Is there a universal pattern of response to each color or does each individual feel different about the same color?**

WRIGHT: Each color focuses on a particular part of the body, evoking a specific physiological response which in turn produces a psychological reaction – a feeling of ease, for example. And this unconscious effect – which makes 80 percent of the whole impact – is the same for everyone. Red, for instance, is physically stimulating because it is the longest wavelength and requires the most adjustment in the eye. Blue is the color of the intellect – it is a soothing, calming color and encourages reflection. However, the conscious sensa-

tions about colors, the preference for certain colors vary from person to person. This doesn't mean that colors affect people in different ways, but that they perceive the same effect differently on the level of consciousness.

“ Color means light. It is the source of life. ”

### **Can you recommend hues that are good to use for particular situations in healthcare?**

WRIGHT: It is important to apply color carefully. Given that there are only perceptions, I am generally reluctant to recommend colors in an absolute sense. There are only relative perceptions and no such thing as good colors and bad colors. As green is the most reassuring color, it is effective in situations where we are talking about a suspected life-threatening illness. Used in the right shade and harmoniously combined with other hues, green can make you feel good.

# Lighting Design for modalities.

Further lighting options are an integral part of covers for various modalities

The MoodLight™ option can easily be set according to personal preferences. You may choose a setting that changes the color of the light dynamically or select one constant color that matches the environment best.

## MAMMOMAT Inspiration

The MoodLight panel lights up the mammography system to make the screening situation less intimidating for the patient.



## MAGNETOM® Aera

The illumination MoodLight panel provides a more comfortable scanning environment during an MRI scan.



## UROSKOP® Omnia

The MoodLight element of the multi-functional urology workstation helps to reduce the nervousness and fears of patients.



# Customer experience

Ceiling Module in PET•CT Suite



Cove light in Angiography Suite



MRI suite with Lighting Solution



### **Tawam Molecular Imaging Centre (MIC), Al Ain, Abu Dhabi, United Arab Emirates**

The Tawam Hospital, a benchmark in the Gulf region with the latest diagnostic possibilities through PET•CT and the first cyclotron, focuses on a unique patient-friendly experience including ambitious design and architecture, infrastructure, and technology. In line with this approach, the interior design of the PET•CT room features a holistic lighting concept, including a round ceiling module and a cove light. Additionally, a sound module and a complete system control were installed to create a comfortable examination environment.

### **Sana Hospital Benrath, Germany**

The Sana Clinic Benrath assigned Siemens Healthcare to implement a lighting solution within the existing infrastructure for its first cardiology suite. Cove light modules consisting of integrated RGB LED light strips that illuminate the room passing through all colors of the color spectrum offer indirect illumination in the angiography suite. "Our patients are highly satisfied. The installation meets exactly our expectations," recapitulates Prof. Dr. Wolf-Dieter Schoppe, M.D.

### **Center for Diagnostic Radiology, Butzbach, Germany**

Dr. Farschad Tabesch, M.D., chief radiologist, reports first-hand his Lighting Solutions experience from his CT and MRI installations: "It is a great competitive advantage since it eases patient fears and contributes to their relaxation. In MRI examinations, the use of sedatives could be reduced by 20 percent. Examinations run more smoothly because the patients are more relaxed. We also save time since there are no serious positioning problems due to nervousness and fear."





# Discover the impact of Lighting Solutions

## Create a feeling of care

In a clinical environment, patients often feel confronted with unknown and anxiety-provoking situations and may perceive the surrounding to be cold and impersonal. The Lighting Solutions are designed to create a relaxed hospital stay. They ease patient anxiety and enable faster examinations.

Moreover, lighting positively influences the healing process of patients. The improved hospital interior design helps to improve the patient's stay in the hospital.

## Your benefits at a glance:

- Relaxed examinations in a comfortable environment
- Reduced usage of sedative drugs for your patients
- Increase of efficiency through less recurring examinations

## Invest in a bright future

The Lighting Solutions feature a well-thought-out concept that gives your patient a feeling of comfort and safety. This translates to better examination and imaging results, less retakes, and less use of sedation. The soothing atmosphere results in patient's well-being.

Of course, the lighting mood also poses a positive effect on care provider's work efficiency. Furthermore, the higher patient satisfaction will help elevate your hospital's reputation.

- Optimized working surroundings for healthcare professionals
- Boost of image based on innovative technology
- Increase of patient satisfaction and recommendations

# The technology: LED

## All eyes on LED

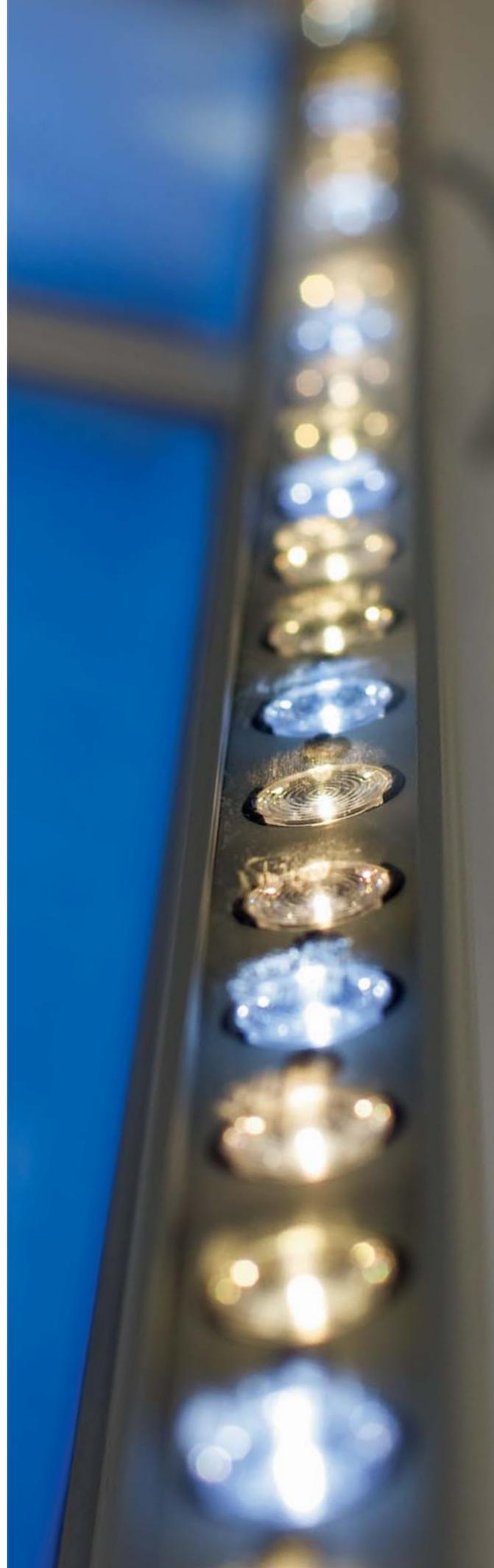
Various modules of the Lighting Solutions are based on LED technology, the latest innovation in lighting. Light-emitting diodes (LEDs) are compound semiconductor devices that convert electricity into light. LED technology is brilliant and colorful, robust, environmentally friendly, and cost-saving.

## Sustainable Lighting Solutions

With LED technology, the Lighting Solutions fulfill Siemens' commitment to sustainability: supplying environmentally compatible and climate-friendly products and solutions that make a change for the planet – and for your patients.

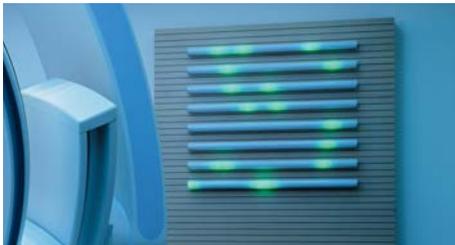
## LED – your advantages

- **Low consumption of electricity**  
LED users save up to 80% energy.
- **High durability**  
LEDs can be operated up to 50,000 hours or approximately 6 years continuously.
- **Insusceptible to shock and vibration**  
LEDs are particularly safe for a busy hospital environment.
- **Environmentally compatible**  
There is no usage of polluting substance such as mercury in LED production.
- **Small and flexible**  
High quality gives freedom of design for lighting application.
- **Efficient direct colored light**  
RGB LEDs offer the whole color spectrum.



# Portfolio of Lighting Solutions

All products represented are available for MRI and non-MRI specifications



## Decorative wall modules

Wall modules consist of wall constructions with RGB LED light strips and provide decorative light scenarios that make an examination room attractive. The easily controllable LEDs ensure a high degree of flexibility.



## Illuminated ceiling modules

Illuminated motif modules enhance the interior design in examination rooms. This decorative motif ceiling offers practical advantages, such as an even distributed light and a uniform, continuous illumination, giving a pleasant color temperature via sky modules installed selectively in the ceiling.



## Effective workplace and patient lighting

The long-lasting and efficient LED strips perfectly control "white light", allowing directed illumination of the working and patient areas with warm-white or cool-white light.



## Colorful backlit motifs

The LEDs can light virtual windows and enhance the interior design in examination rooms with virtual backlit windows and graphic images. More than 200 images are available, including seascapes, landscapes, botanic, and moods.



## Special MRI solutions

These Lighting Solutions provide variable color schemes to enhance the environment in the MRI examination room. With optical fiber and optical outlets, the MRI room is transformed into a colorful stage. This solution provides a color-variable setting during the entire examination.

For more information on Lighting Solutions please go to: [www.siemens.com/med-accessories](http://www.siemens.com/med-accessories)

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