

# Shops

## Light for the world of shopping

Planning principles and design



# Editorial

Showcasing products – telling stories – corporate lighting

In this era of online shopping the innate strength of over-the-counter retailing is to be found in the real, spatial experiencing of brands and merchandise. To reinforce this sustainable impression of direct shopping experiences, light has established itself as an indispensable medium for creating atmosphere. Light is presented in seductive or tempting ways according to the season to arouse new emotions with regard to merchandise. The unique presentation of the space and its products with use of light provides an essential component of the corporate design in its dialogue with customers.

## Light for brand communication

Consistently communicating brand messages across all media is decisive for offering customers holistic brand experiences. Hardly any area of marketing has such a direct influence on brand perception as specific experiences at the point of sale. The design of sales spaces and lighting as the "fourth dimension" of store architecture are therefore integral components of the brand identity. Corporate designs benefit from equally unique lighting concepts, i.e. the corporate light. Successful corporate lighting concepts are based on two pillars: on the one hand the creation of light atmospheres, lighting methods and light colours that are characteristic for the brand, and on the other the selection of luminaires that with their functional range and design fulfil technical requirements as well as communicating the specific brand character. Our experts are always pleased to provide you with advice – from details such as the brilliance of our ERCO light to spatial aspects such as establishing perception hierarchies.

## Supporting spatial drama with light

A subtle sense of drama that showcases brands in differentiated and user-oriented ways makes individual displays of merchandise and worlds of experience possible. This places the details of finely nuanced designs such as visual comfort and light distribution in the foreground. With ERCO, high-precision optics ensure maximum levels of visual comfort. The designs of our luminaires take a step back, allowing the merchandise itself to come to the fore – efficient lighting technology enables miniaturisation without needing to

compromise in terms of performance and efficiency. Elegant mounting methods such as ceiling channels mean the lighting tools themselves almost disappear. Interchangeable light distributions enable anybody to conveniently modify the presentation of decorative highlights according to the particular sales season. Potentiometers on the spotlights allow finely graded nuances in the lighting levels to specifically attract the view onto products.

## The impressive showcasing of merchandise

Accent lighting is an indispensable component in retail design that creates a sense of excitement in the store and guides the attention of customers onto appealing offers. Only in this way is it possible to effectively display shapes and forms using high-contrast plays of light and shadow. Brilliance is also created on shiny surfaces to emphasise the premium-quality finish of products. Using flexible lighting tools such as track luminaires, the alignment and light distribution can be simply and perfectly matched to the merchandise displayed. Differing LED module performance packages also provide efficient accenting, ranging from small displays in boutiques to the presentation of vehicles in car dealerships flooded with daylight.

## Efficient visual comfort for any shop

By using sustainable lighting solutions, ERCO pursues the notion of creating attractive experiences for customers, strengthening the identity of brands, offering economical solutions for operators and providing design flexibility for lighting designers. This is the reason why we place importance on the strategy of efficient visual comfort. This attitude focuses on user-oriented lighting design that brings together visual comfort with efficient lighting technology. In this regard we align ourselves to human perception in optimally matching our light to the needs and desires of shoppers. This gives you a high-performance strategy for increasing both the quality of light and energy efficiency in your store with use of innovative concepts.



Right:  
Duvetica Flagship Store, Milan /  
Italy. Architecture: Tadao Ando  
Architects & Associates, Osaka.  
Photography: Thomas Mayer,  
Neuss.

# Forms of presentation in shops

## Light sells

Invisible itself but unarguably effective – light supports and promotes sales. Contrasts in brightness attract the view of customers and effects of brilliance render interaction with products irresistible – an important step in the decision to purchase. Within the wide diversity of brand concepts a variety of different strategies have now established themselves in the creation of individual shopping experiences using light. With a nod to minimalism, the luminaires almost completely disappear from the field of view and just a few light accents are sufficient. With decorative concepts, striking luminaire designs are becoming increasingly important although effective accent lighting remains indispensable for the high-impact showcasing of merchandise. Urban concepts also integrate accent lighting, but with a significantly more technical look to the lighting installation as an inherent part of the corporate design.



### Decorative interiors

Rich details with furniture, accessories and in the colour surroundings trigger diverse associations. Brands make use of these elements to create individual narrations for their customers. With decorative interiors the focus is shifted from pure product offers to a more unique and sensuous world. Product displays and hierarchies in perception are discreetly implemented using precise lighting tools. Luminaires blend unobtrusively into the ceiling in the form of spotlights in ceiling channels for example, or as directional spots. More noticeable for customers on the other hand are decorative light effects or nostalgic luminaires for storytelling purposes.

### Urban retail spaces

Making the location of a shop tangible targets authentic shopping experiences within their historical and urban context. The interior design aims neither for unemotional minimalism nor for opulently decorated accessories. The presence of existing wall materials and visible technical details such as air-conditioning purposefully contributes to the raw and authentic atmosphere. Visible track, luminaires and cable routing are some of the typical features of urban retail concepts.



### Minimalist architecture

A purist interior, discreet colours and simple details serve to tone down the visual stimuli within the space to make way for the striking display of merchandise. With this approach, store owners intelligently create a contemplative oasis for relaxing shopping experiences. The calming impact of wallwashing or individual accents together

with discreet mounting methods such as the flush-mounting of luminaires consistently support this minimalist aspiration.



# The grammar of light

## Qualitative lighting design for worlds of shopping

ERCO lighting tools offer the design flexibility needed for differing shop segments and versatile methods of display. The basis for this purpose during product development is a perception-orientated lighting approach. The American lighting designer Richard Kelly (1910-1977) subdivided light into three categories for qualitative lighting design: light for seeing (ambient luminescence), for looking at (focal glow) and viewing (play of brilliants). This "grammar of light" enables boutiques, car dealerships and shopping malls to be optimally illuminated. Experience shows that lighting concepts are judged to be particularly successful if all three components – general lighting, directed accent light and decorative light – are combined in a balanced ratio. The "grammar of light" offers a proven method of analysing rooms, structuring lighting concepts and selecting suitable lighting tools. The luminaire system applied in the ERCO product spectrum consists of various light distributions, colour temperatures, construction sizes and lumen classes and is ideal for the implementation of highly differentiated shop concepts.

### For further information see:

[www.erco.com/shop](http://www.erco.com/shop)



### Richard Kelly (1919-1977)

The American Richard Kelly was a pioneer of qualitative lighting design, combining facets of perception psychology and stage lighting to create a single concept. Kelly replaced the issue of light quantity with the approach of qualities of light. In his profession as a lighting designer he worked on important buildings such as the Glass House (Philip Johnson), the Seagram Building (Mies van der Rohe) and the Kimbell Art Museum (Louis I. Kahn).



### Light for seeing

designates simple general lighting. This lighting method, using uniform vertical or horizontal lighting for example, is ideal for illuminating products on shelving and also supports orientation in the room.



### Light for looking at

designates accent light that highlights products, surfaces and spatial zones and creates hierarchies in perception. It is a central means of guiding the attention of observers when displaying merchandise and architectural elements.



### Light for viewing

is decorative light, light for admiring or an aesthetic end in itself. It also includes light effects with coloured light and decorative luminaires.

# Displaying with light

Five topics that survive any trend

Trends change, but human perception remains the same. This is presumably the reason why the concept of perception-orientated lighting, as formulated by the lighting designer R. Kelly in the middle of the last century, has lost none of its relevance. The approach aims at attention-grabbing light, a high level of visual comfort, the effective displaying of merchandise and brands and a subtle guidance function for customers through the store. By focusing on the customers and merchandise, retail lighting brings together general lighting components, accent light and decorative effects as hardly any other lighting application does. Here are some examples:

For more shop projects see:  
[www.erco.com/shop](http://www.erco.com/shop)



## Providing orientation

Light creates hierarchies in perception, guiding customers within the space and leading them through the various merchandise sectors. Different lighting levels establish zones and thus provide orientation. Uniform vertical illumination on the rear walls of a space serves for example to draw customers into the less prominent areas of the retail outlet.

## Telling stories

Well thought-out spatial drama achieves a subtle sense of suspense in shop displays. Light is an integral part of this concept, and as a consequence the brightest point in the room gains the most attention. Associated products or themes can also be grouped together using differing light beams. In this way brand messages and product stories can be communicated in an emotional and sustainable way.



## Creating a sense of drama

When drawing up shop concepts, the contrast ratios and specific light distribution determine the spatial impression. Pin-point accents create a sense of drama and suspense, whereas wallwashing achieves a transparent, airy atmosphere. Uniform general lighting without distinct differentiation into zones on the other hand communicates openness but usually lacks impact.



## Modelling brand identity

Emphasising the identity of a brand is one of the most important tasks assumed by retail lighting. In addition to formal factors, this also includes a uniform lighting concept throughout the store that significantly determines the spatial atmosphere. For example by specifying the light colour – warm light colours, e.g. 2700K or 3000K, create a cosy, comfortable atmosphere whereas cooler light colours such as 4000K achieve a fresh and realistic appearance.

## Presenting merchandise as art

To strengthen a product image or brand image, communicate a sense of value and symbolically charge merchandise, retail designers have frequently taken inspiration from the differentiated toolbox of museum design and its lighting methods: narrow accents create focused, individual attention on objects whilst uniform wallwashing gives the merchandise space to breathe.



# Lighting functions

## Which tasks does light adopt in shops?

Retail lighting needs to comply with a variety of requirements: in every project designers are faced with the challenge of bringing together the display of products, cost-efficiency targets, organisational framework conditions and the design aspects of a brand into a single concept. This spectrum of tasks also extends beyond the merchandise on tables and shelving. It begins with the facade and illumination of the entrance area and shop windows to also include the selling space, changing rooms and the cashpoint area as the conclusion of the purchase process.

A theoretical model of lighting functions helps to evaluate the quality of lighting not just according to purely quantitative criteria such as illuminance figures. It distances lighting from the static room cubature to focus on the utilisation of a spatial situation, both indoors as well as on the facade.

This form of zoning allows individual tasks to be identified: should a particular area welcome customers, communicate a brand message, display products, invite to stay and look around or provide information?

The model enables designers to flexibly respond to a high diversity of shop concepts and architectural situations as well as modularly grouping lighting solutions and scaling these according to needs.

At the start of each lighting project it makes sense for lighting designers to ask the following three questions for each required functional area:

- 1 Which architectural and functional importance does the room or spatial zone have?
- 2 Which tasks in a shop can lighting adopt to optimise the display of products?
- 3 Which individual lighting strategy and methods of lighting are suitable as the basis for lighting design?



## Presenting

Bringing out the best in the sculptural and haptic characteristics of merchandise is vital for achieving appealing product presentations. Suitable lighting with narrow distribution accents communicates the intrinsic value of products to customers and paves the way for purchases. High colour rendering completes the effective showcasing of the displays.

- Accent lighting achieves rich-contrast modelling to facilitate the visibility of shapes and details. The directed light creates an impressive brilliance especially on shiny surfaces.
- Authentic and nuanced colour rendering is achieved by a balanced spectrum and by specifying a suitable colour temperature.



## Welcoming

Shop windows create attention and curiosity. They communicate to passers-by an initial impression of the brand and the latest products on offer. Light attracts people. This is why lighting is an indispensable medium for guiding visual attention to the shop window and drawing customers into the interior. Accents strikingly emphasise products and decoration. Wallwashing in the background also lends the brand an impressive appearance.

- Accent lighting creates appealing points of interest in the shop window, and with its high impact from a distance it emphasises the importance of the location.
- Vertical lighting achieves a generous spatial background for shop windows and entrance zones, thereby attracting customers into the store.



## Relaxing

In addition to the display areas for merchandise, ancillary areas provide the chance to communicate brand messages in relaxation zones and to extend the length of stay in the store via these zones. Warm light colours have a calming effect in such conditions. Pendant luminaires are ideal for creating private zones in large sales areas as these subtly lower the impression of room height.

- Zones can be differentiated between by designing with differing luminaire mounting heights. Private areas can be created with pendant luminaires with low suspension.
- Different light colours enable the light spectrum to be optimally matched to the corresponding materials. Warm colour temperatures have a calming effect whereas cool light colours have a fresh, technical appeal.



## Experiencing

Unique shopping experiences that far exceed mere displays of merchandise are some of the most important components of brand presentation, and understanding light as a dimension of brand communication marks an essential step towards holistic marketing. The application of radiant light via a visual hierarchy of illuminance levels enables fascinating shop concepts to be developed for the target group.

- Accent lighting with different lighting levels creates hierarchies of perception. This allows the creation of nuanced scenarios, whilst orientation is simultaneously supported.
- Interchangeable light distributions mean that a luminaire can be used for a variety of applications, e.g. for precise accent lighting, wide-area general lighting or uniform wallwashing.



## Informing

Individual advice is part of an all-round customer service. Quickly locating consultation zones is just as relevant as the communication of brand messages. Good illumination of the counter and sufficient brightness on faces significantly contribute to the harmonious exchange of information. Vertical lighting in the background provides orientation and a prestigious backdrop.

- High visual comfort with use of shielded luminaires creates a pleasant atmosphere for discussions between the seller and customer.
- Vertical lighting achieves a deep and friendly spatial impression. Walls with printed motifs can be uniformly illuminated in the shop.

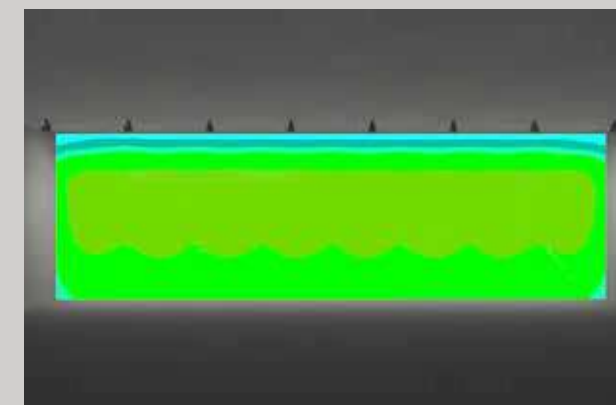
# A comparison of lighting technology

## Projection and reflection: what is the difference?

Spotlights, floodlights and wallwashers are flexible and efficient lighting tools for the effective presentation of products. The quality of lighting technology is not only decisive for the precise distribution of light and an appealing shopping experience, but also for the long-term cost-efficiency of the lighting installation. When comparing the technical performance of luminaires, key figures need to be evaluated based on comparable lighting tasks. ERCO's Spherolit lens technology provides very economical solutions compared to conventional reflector products with LED modules because the optic directs all light beams emitted by the LEDs in a controlled way onto the specific target plane. This for example enables wider luminaire spacing, minimising the quantity of luminaires needed or else achieving higher brightness.

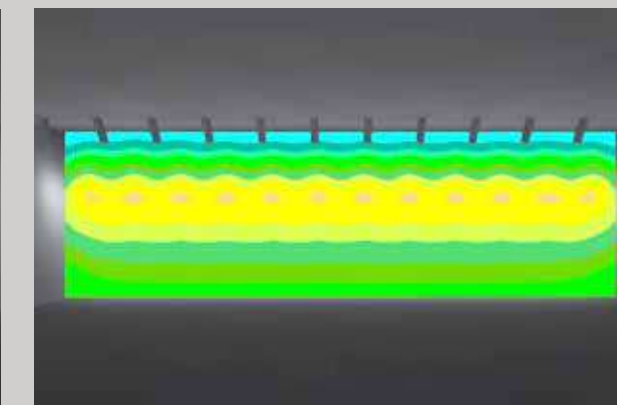
### Wallwashing

Uniformly illuminated vertical surfaces in shops are suitable for the effective display of a wide range of products. Only a few luminaires are needed for this purpose. This is demonstrated by a direct comparison of lens technology and reflector technology on a shelf with a width of 5m and identical illuminance (200lx) and uniformity.



**ERCO Spherolit lens technology**  
The special light distribution of the ERCO lens wallwasher achieves high levels of uniformity even with wide luminaire spacing.

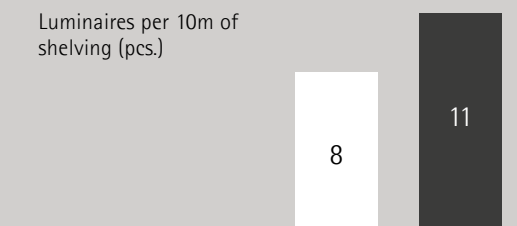
Wallwash	Wattage per area (W/m <sup>2</sup> )	4.0
	Uniformity (E <sub>min</sub> /E)	0.66
	Luminaires per 10m of wall	8



**Conventional reflector technology**  
With reflector-based luminaires, the application requires more luminaires to achieve comparable horizontal and vertical uniformity.

Wallwasher reflector	Wattage per area (W/m <sup>2</sup> )	8.4
	Uniformity (E <sub>min</sub> /E)	0.5
	Luminaires per 10m of wall	11

**Summary**  
ERCO lens wallwashers enable uniform vertical lighting with wide spacing between the luminaires. Despite the spill light component, a higher number of wallwashers with conventional LED reflector technology is needed to achieve comparable uniformity and illuminance.



27% savings

■ ERCO Spherolit lens technology  
■ Conventional LED reflector technology

### Accenting

Spotlights effectively accent merchandise displays and emphasise the individual products and also create perception hierarchies in the shop. ERCO Spherolit lens technology also guides the light of the LEDs precisely onto the target plane – without any spill light. Compared to luminaires with reflectors this enables highly efficient lighting solutions.



**ERCO Spherolit lens technology**  
A range of light distributions such as oval flood enable light beams to be specified according to the exhibit.

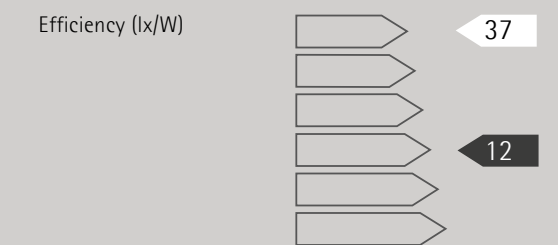
Oval flood	Connected load (W)	15
	Efficiency (lx/W)	37
	No. of luminaires	1



**Conventional reflector technology**  
With a limited selection of light distributions, several luminaires may need to be installed in sequence for one object.

Flood reflector	Connected load (W)	46
	Efficiency (lx/W)	12
	No. of luminaires	2

**Summary**  
Precise Spherolit lens technology enables accent lighting with high efficiency (lx/W). The energy converted into light is projected onto the target plane and does not escape uncontrolled into the room in the form of spill light.



68% savings

■ ERCO Spherolit lens technology  
■ Conventional LED reflector technology

### Flexibility

Changes in decorations and seasonally-based merchandise demand individual, flexible lighting solutions. Thanks to ERCO's interchangeable Spherolit lenses, only a few luminaires are required for this purpose. Compared to luminaires without interchangeable optics, investment overheads are reduced due to the lower number of luminaires.



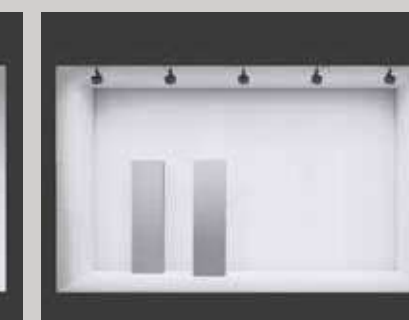
**Decoration 1**  
Luminaires (Spot) 5  
Lenses (Spot) 5

Professional shop window illumination requires individual light distributions. If the displays change, other light distributions may be needed.



**Decoration 2**  
Luminaires (Oval flood) 5  
Lenses (Oval flood) 5

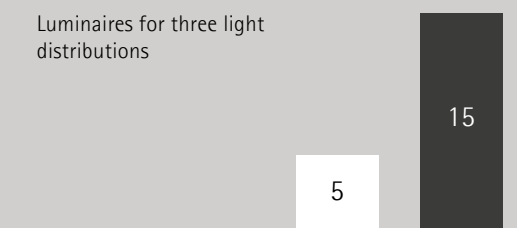
With interchangeable lenses the light can be simply modified via the accessory. With non-interchangeable optics however, a higher investment of five further luminaires is required.



**Decoration 3**  
Luminaires (Wallwash) 5  
Lenses (Wallwash) 5

Each further seasonal change in the displays again requires high investments if non-interchangeable optics are used. With ERCO only the interchangeable lenses are needed as accessories.

**Summary**  
Interchangeable lenses cut the investment costs for flexible shop window lighting with changing displays. No further luminaires need be purchased for other displays but only the lenses as accessories.



66% savings

■ ERCO interchangeable lenses  
■ Non-interchangeable optics

# Light is the fourth dimension of architecture

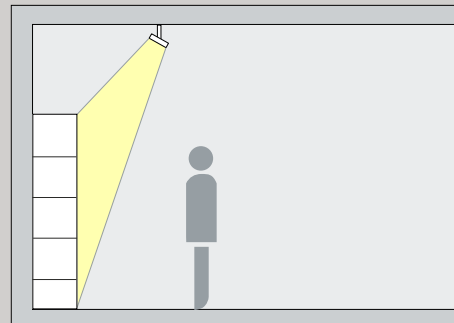
## Efficient visual comfort as a strategy in retail lighting

ERCO comprehends light as the fourth dimension of architecture. Our vision consists of making a positive contribution to society and architecture with our activities. We develop and manufacture lighting solutions for this purpose that create a high quality, authentic environment. The basis for this is Efficient Visual Comfort (EVC) – our strategy for seamlessly connecting sustainable design approaches with innovative product technology. To implement this ambitious task in practice we have formulated five quality criteria.



### Qualitative lighting design

The central component of storytelling in shops is establishing coherent scenarios with light. The interplay between bright and dark, foreground and background and vertical and horizontal planes serves to guide customers and present merchandise. This in turn puts human perception into the focus of retail designers, and concurrently lighting design that targets perception-based psychological needs such as vertical lighting and accenting.



### Vertical lighting

Vertical lighting determines the spatial perception of people to 80% – and therefore influences our sensitivity to brightness much more strongly than light on horizontal planes: vertical lighting on the outside already achieves the recognition of shop windows from afar, and within the shop an illuminated rear wall draws customers into the rear zones. At the merchandise level, wallwashing is also the ideal tool for the uniform display of products.



### Effective lighting technology

Only high-performance, precise optical systems enable striking accents. Not only the luminaire luminous flux but also the actual illuminance on the target plane is decisive. ERCO utilises self-developed Spherolit lens technology for this purpose. The result – projected light has no spill light losses. To enable maximum flexibility in exhibition design, ERCO's luminaire portfolio for tracks features seven interchangeable light distributions ranging from narrow spot to wallwash.



### Intelligent control

With in-house developed control gear, ERCO provides interfaces for various control technologies such as DALI and Casambi Bluetooth. Phase dimmable spotlights, floodlights and wallwashers are dimmed either via external dimmers or a potentiometer directly on the luminaires. The high lumen-output packages in spotlights designed with a separate housing for their control gear also provides shops with the possibility of setting striking accents with use of compact luminaires.



### Efficient LED technology

The leading role adopted by ERCO in lighting with LEDs is based on the decision to expand the company's optoelectronics expertise. Due to in-house development ranging from LED PCBs and electronics to thermal management, ERCO always has complete control over the features of its products. In practice this means perfect quality of light, high illuminance levels coupled with low connected loads, and lumen maintenance that exceeds market standards for maximum longevity.

# Summary: Holistic designs with ERCO



Light sells – ERCO supports interior designers, shopfitters and owners in developing holistic lighting solutions for retail lighting. We accompany you in your striving for characteristic corporate lighting and provide professional advice in technical issues and cost efficiency considerations. Lighting from ERCO in the retail trade, in shopping malls and also in car dealerships means:

- 1 Accent lighting for diversified storytelling.
- 2 Lenses instead of reflectors – for maximum precision, high illuminance and low connected load.
- 3 Interchangeable light distributions for ever-new shop scenarios.



### ERCO Services worldwide

Whether you require lighting for a small boutique or corporate lighting for a major international brand, we support you in transforming your ideas with light into a lighting concept, and together with you we develop precisely the right lighting solution. For this purpose we offer a global network of ERCO lighting consultants that are familiar with the local situation and understand how to accompany projects with several participants spanning national borders. Our services for your design and planning process includes:

- Trainings, samples and application workshops
- Light and control concepts
- Lighting calculations and energy balance data
- Delivery management
- Support commissioning and lighting up
- 5-year warranty, retrofitting concepts, maintenance and service contracts

# ERCO lighting tools

A consistent system of luminaires for shopping environments

In this era of online shopping, credibility is the strength of the over-the-counter retail sector. In addition to achieving authentic and appealing product displays, light also creates atmosphere in shops – ranging from the shop window and sales space to the cash desk. To achieve consistent levels of quality and appearance, ERCO adopts a consistent system in its luminaire program. The most obvious feature of this is the clear, functional design of the product ranges that enables any combination of products and types. The core of the luminaire system however consists of photometric features: various light distributions compliant with retail needs, brilliant LED light with very good colour rendering, identical light colours and high illuminance levels coupled with low connected load. During commissioning the lighting tools provide further benefits, e.g. tried and trusted mounting methods such as the ERCO track and predefined control interfaces. Lighting designers can randomly combine ERCO LED lighting tools to also solve complex lighting tasks without needing to compromise in terms of quality of light, flexibility and shop design.

For an overview of products suitable for the retail sector, shopping malls, food retail and car showrooms, see: [www.ercos.com/shop](http://www.ercos.com/shop)

## An optimum infrastructure

Recessed, surface-mounted or suspended and with or without an indirect light component, the ERCO track is the basis for variable and flexible lighting design in shops. Tracks enable luminaires to be optimally positioned and quickly exchanged without tools when redecorating. Accessories such as picture hooks and sockets can be universally used.



## Efficient LED technology

ERCO implements light control via lenses. Lighting designers are provided with up to seven interchangeable light distributions. Optec for example combines this feature with a luminaire head tiltable through 270° to offer maximum flexibility for the illumination of products and shop architecture.

## Suitable for ceiling channels

With centred rotational axes, luminaire families such as Oseris can be very tightly rotated and tilted. This makes them ideal for installing in compact ceiling channels. The flexibility of a track spotlight is maintained.

## Extremely slim

Shops with lower ceilings need spotlights that despite their high wattages hardly intrude into the room. For this reason the ERCO luminaire spectrum contains lighting tools with constructions designed for specific applications. As in Opton with its three construction sizes designed for low ceiling heights.



## Lighting tools according to your needs

We offer you extensive options for individualising standard products with our "ERCO individual" service, as well as providing support for the development of sophisticated special luminaires.

Do you have special needs? Simply contact us! [www.ercos.com/individual](http://www.ercos.com/individual)

## Providing orientation

The intended use of different luminaire mounting heights provides designers with subtle design options. As an example, pendant luminaires such as Starpoint achieve spatial orientation above a cashpoint counter for example. The quality of light is identical to that of spotlights and recessed luminaires, thus creating a uniform light atmosphere.



## Different light colours for customer-specific requirements

Fashion, automotive and fresh food – retail concepts in all segments thrive from the authentic display of merchandise. Light and the colour of materials must be matched for this purpose. ERCO thus offers a wide variety of spectra and also enables individual spectra.



## Spotlights and downlights

Directional spotlights such as Gimbal with its cardanically adjustable light head bring together the appearance of a recessed luminaire with the flexibility of a spotlight. The luminaire disappears into the ceiling or can be mounted into ceiling channels with mounting brackets. The arrangement of luminaires therefore follows the lines of the architecture – this creates a clean and tidy ceiling appearance.



## General lighting for wide rooms

Efficient visual comfort in shopping malls supports the customers' acceptance of the building. This includes efficient general lighting that enables soft illumination transitions between the upper daylight-flooded storeys and the lower levels as well as low-maintenance operation – e.g. with Skim recessed and surface-mounted luminaires.

## Visible from afar

The shop window is the communication channel of the shop within the streetscape. Similarly, facade lighting serves to facilitate the physical access. Using identical quality of light and nuanced light distributions, facade luminaires such as Kubus enable lighting concepts matching the interior and exterior of the store.







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