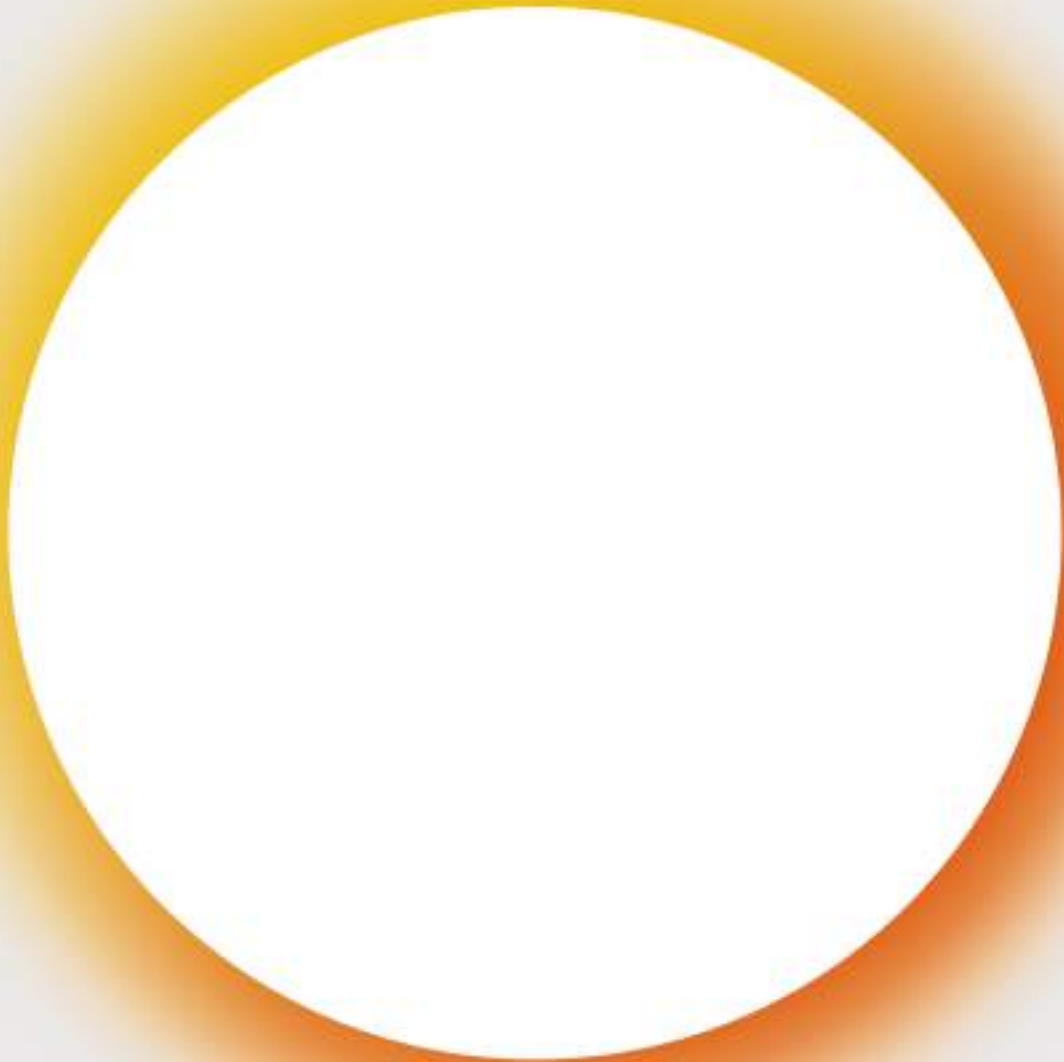**HÄFELE**

**LOOX5**

The LED lighting system
for furniture and rooms.

**5**

Dear Customer,

Häfele has pioneered the way interior fittings are sold across the globe for many years now. Being a German company our foremost concern has always been to offer our customers products that are at the cutting edge of functionality and design; and backed by the highest standards in Customer Service. In our markets, we are increasingly being recognized as a one-stop interior specialist brand that can enable functionality for any interior design through a holistic solution offering, be it door hardware, furniture or kitchen fittings, sliding systems, built-in appliances, bathroom solutions, furniture lighting and interior surfaces.

Keeping this proposition in mind, we are happy to introduce to you our one-of-its-kind, comprehensive lighting catalogue that will enable you to effectively plan the lighting needs for your home. Through this catalogue, we share with you our knowledge and expertise in understanding the functionality of different types of lighting options and how they work effectively to enhance your interior spaces. This catalogue takes you through the entire range of Häfele's 5th Generation Furniture Lighting Solutions – Loox5 that encapsulates the essence of four generations of lighting systems that have redefined home ambience and ergonomics over the last 10 years.

Loox5 takes lighting to the next level. Inspired by the demands of time, Loox5 makes lights easy, logical and linear. These lights have not just been designed but in fact have been engineered keeping the utmost comfort for the consumers in mind. The range presents itself as a unique combination of elegant design and state-of-the-art technology making it the perfect choice for any home furniture application; be it Task Lighting for Kitchen Cabinets and Plinths, Decorative Lighting for Living Room Showcases, Mood Lighting for Bedroom Applications or pure Functional Lighting in Wardrobes.

Häfele's Loox Lighting System meets the increasing demands for lighting in furniture and rooms just as well as the growing need for networking, digitalisation and maximum simplicity, and flexibility. It answers the questions that are driving our time. It's easier, better and above all, much smarter than its predecessors. It pays tribute to the demands of the furniture industry with its high reliability, even with around-the-clock operation. The Loox5 lighting system features a significant increase in performance, indispensable for linear lighting that is in great demand in the LED sector.

The planning of light in furniture and furnishings puts a multitude of demands on architects, electricians, contractors and finishers, and even developers and operators. The practical, aesthetic and emotional aspects of lighting ensure that the proposed concepts contribute to unique and flexible room design; in residential, commercial, office and display settings as well as in hotels and serviced apartments. We at Häfele put this important element of light planning at the centre of a comprehensive collection of ideas; it comes as no surprise, therefore, that we are the pioneers of 'furniture lighting' with the widest range of lighting solutions for furniture.

So, go through the many solutions presented in our Loox5 catalogue and visit our Design Showrooms for an informed dialogue with me or the Häfele team. We look forward to partnering with you and assisting every need you may have to make your dream homes a reality.

Enjoy.

**Jurgen Wolf.**
Managing Director
Hafele South Asia.

# Hafele
# Reassuring Expertise



 *"For over 9 decades, we've been helping people make more of their homes.*

Established in Germany, and now operating worldwide, we specialise in the fittings, hardware and systems that improve the way your home, works. So when you choose our products as part of your new or reformed home, you know you're getting the benefit of extensive knowledge and decades of experience.

And we're still a family business, owned and managed by family members who really care about the products and service we provide. You can rely on our commitment to the highest standards of quality and reliability, founded on a long tradition of German engineering where attention to detail is second nature.

*All our home improvement ideas are built to last – day in, day out – we want you to get the very best from every corner of your home, for many years to come."*

# Hafele Worldwide



With its origin in 1923 in a small town named 'Nagold' from the Swabian region of Germany that nurses a passion for hardware technology, it is no surprise that Häfele has lived up to its roots through a successful presence in the architectural and furniture hardware industry for over 9 decades now. Today, Hafele's worldwide penetration includes 38 subsidiaries across Europe, America, Asia, Australia and New Zealand. With these subsidiaries and numerous other sales organisations, Häfele operates in over 150 countries. The Häfele headquarters, 4 manufacturing units and 10 sales offices are located within Germany; while 1 manufacturing unit is located at Budapest, Hungary. The company also owns one of the largest and most sophisticated warehouses in its home country. The Häfele worldwide workforce is empowered by a base of over 7800 employees.

The group services over 150,000 customers across the globe through its extensive range of hardware products and a comprehensive logistics system. In addition to this, Häfele also provides consultative services to its customers, educating and advising them about buying the correct hardware as per their requirements. With this level of market penetration and ability to handle worldwide demand, it comes as no surprise that the company is an authority in the segment of home interior solutions; what is pleasantly surprising, though, is that in spite of its size, Häfele still remains a family owned and run business with a unique, friendly and value-centric work culture which is strongly followed among all its subsidiaries.

# Hafele India
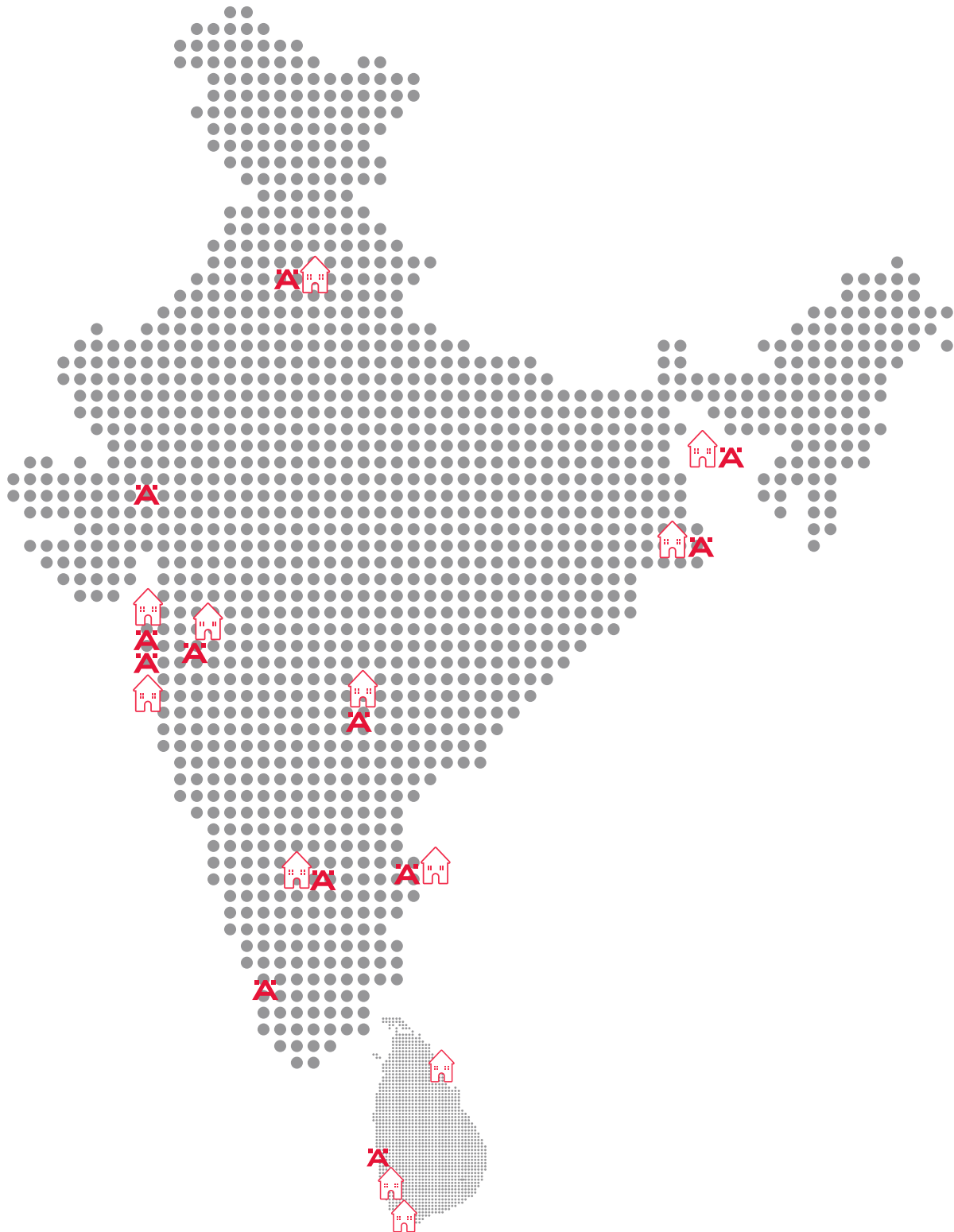


Head Office & Regional Offices

Hafele Design Showrooms

Häfele India is a wholly-owned subsidiary of the Häfele Global network and has been operating in India since 2003 under the leadership of Mr. Jürgen Wolf (Managing Director). The ability of the company to understand the diverse Indian market has made it an authority in the field of architectural hardware, furniture and kitchen fittings and accessories. The company also has a strong presence in synergized product categories namely Appliances, Lights, Sanitary and Surfaces catering to the focused demand from these industries.

The subsidiary has a strong nation-wide presence with offices in Mumbai, Pune, Ahmedabad, Bangalore, Chennai, Hyderabad, Delhi, Kolkata and Cochin. It has full-scale operations in Sri Lanka and Bangladesh with Regional offices and Design Showrooms in both the countries; and has also spread its operations to other regions of South Asia including Nepal, Bhutan and Maldives.

Häfele's design showrooms are hubs of international home interior trends and cutting edge designs presented in a world-class environment, where customers can see home solutions in their inherent applications. These showrooms function as a one-stop-shop for all home interior and improvement needs - from providing in-depth technical advice to kitchen and wardrobe designing services through a team of experts stationed at the showroom.

Häfele India services its customers with a base of over 850 employees, a well-networked Franchise base of over 130 shops along with over 1000 dealers situated across South Asia. The subsidiary has a sophisticated Logistics centre in Mumbai along with distribution centres in Delhi, Bangalore, Kolkata and Colombo respectively.

# Contents

LOOX5
LIGHT HAS IMPACT

# on.

# LOOX5

04

03

02

01

We have spent about 100,000 hours working with LED lights, we have developed and researched, we have had many valuable discussions with partners in trade and industry – and we have learned a great deal. The market is demanding digital answers.

The result after four generations of Loox LED lights is therefore not simply further development, but a new level. Our development has accelerated. Because the world is accelerating, and the demands of our customers are growing at an equally rapid rate.

# The essence of four generations.

We are driven by the same questions
time and time again.

How can it be made easier?
How can it be made better?
How can it be made more intelligent?

**5**

The essence of our experience
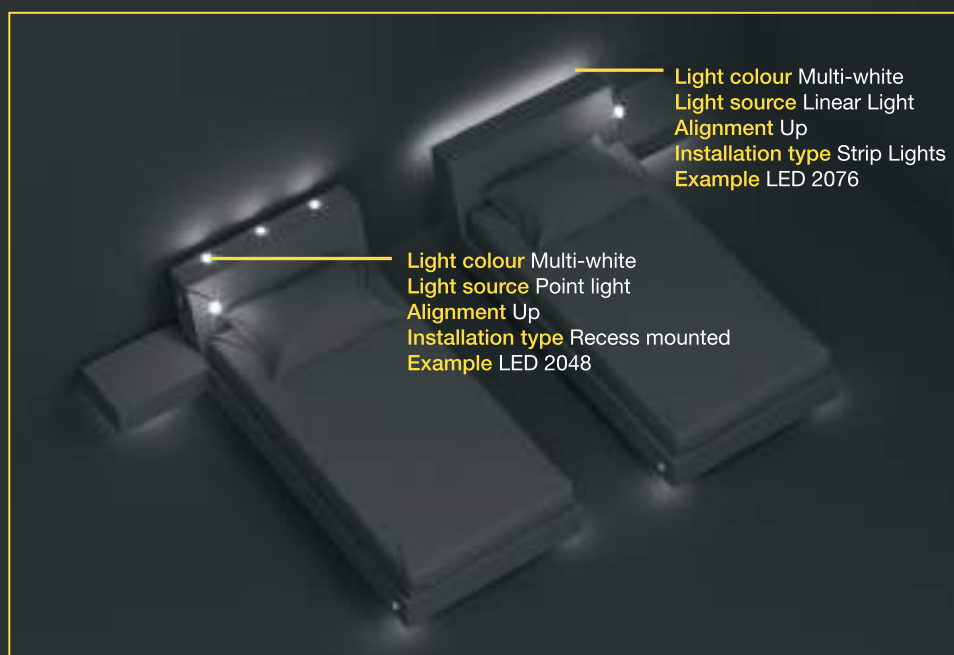therefore has a new face.

Welcome to Loox5.

# Easy.
# Logical.
# Linear.

# Light is easy.

## Few criteria.
## Many solutions.

| | |
|---|---|
| **Light colour** | Monochrome \| Multi-white \| RGB |
| **Light intensity** | Task light \| Ambient light \| Accent light |
| **Light source** | Linear light \| Point light |
| **Alignment** | Directly or indirectly \| Up or down \| Forward or backward \| To the side |
| **Position on the cabinet** | Outside \| Inside |
| **Installation type** | Recess mounted \| Surface mounted |

**Light colour** Multi-white
**Light source** Linear Light
**Alignment** Up
**Installation type** Strip Lights
**Example** LED 2076

**Light colour** Multi-white
**Light source** Point light
**Alignment** Up
**Installation type** Recess mounted
**Example** LED 2048

## Light in the sleeping area.
Ambience full of atmosphere for rest areas.

## Light in the kitchen.
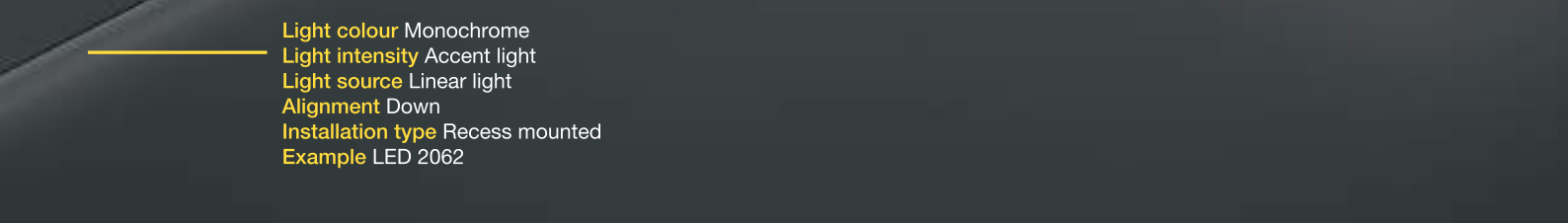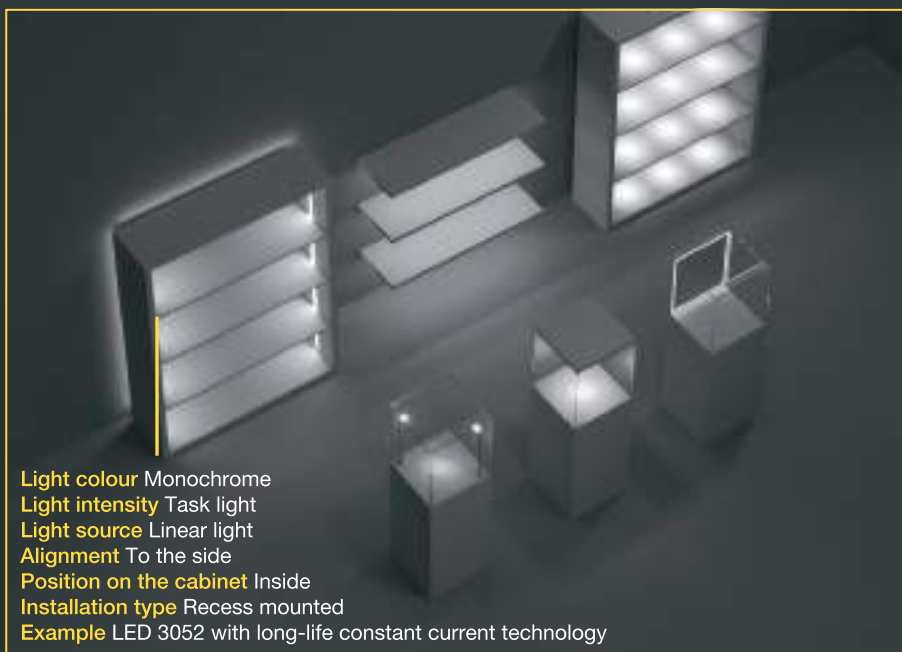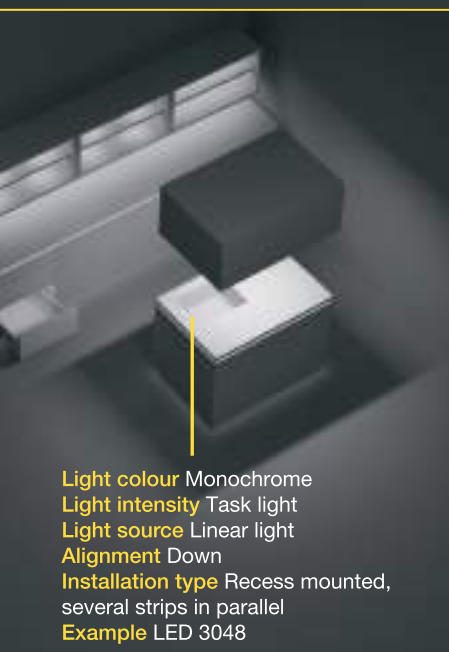Functionality for every action.

**Light colour** Monochrome
**Light intensity** Ambient light
**Light source** Linear light
**Alignment** To the side
**Installation type** Attached at the side to the circular mounting plate behind the mirror
**Example** LED 2061, just 5 mm wide for slim design applications

## Light in the storage space.
Orientation for perfect organisation.

**Light colour** Monochrome
**Light intensity** Accent light
**Light source** Linear light
**Alignment** Down
**Installation type** Recess mounted
**Example** LED 2062

**Light colour** Monochrome
**Light intensity** Task light
**Light source** Linear light
**Alignment** Down
**Installation type** Recess mounted, several strips in parallel
**Example** LED 3048

**Light colour** Monochrome
**Light intensity** Task light
**Light source** Linear light
**Alignment** To the side
**Position on the cabinet** Inside
**Installation type** Recess mounted
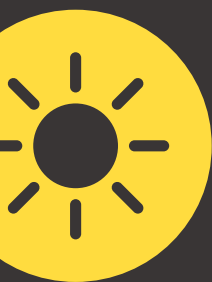**Example** LED 3052 with long-life constant current technology

## Light in store fixtures.
Value for the presentation of goods.

# Light is plannable.

**The need to observe only a few planning steps structures and simplifies the planning of lighting in furniture.**

## Illuminating.

At the start of the development process, determine the lighting purposes of the furniture (multiple choices possible)
> **Task light for pleasant and safe working**
> **Ambient light for highlighting, staging or emotionalising**
> **Accent light for storage spaces or paths**
Also take into account the overall brightness of the room and the finishes to be illuminated: Sufficiently bright ceiling lighting or sunlight makes the orientation light unnecessary during the day, but at night it may be very pleasant if the ceiling lighting does not need to be used and a few furniture pieces provide some orientation light.
For confidence in the planning process, test lighting and finishes or use bright lighting with dimmers to achieve a balance of incident light and reflection.

The form factor of a light (linear, point) and the number used affects the planarity of the illumination. Light colour, installation type, position on the cabinet, and alignment are further criteria to select the perfect light.

## Extending.

Häfele Loox drivers supply not only lights, but also charging stations (inductive and USB), audio systems, as well as electrically operated flap fittings, sliding doors, or TV lifts. Take advantage of the potential of Häfele Loox systems. Create furniture that can do more than simply look good.

The chapter structure of the Loox brochure simplifies the ordering process by using this simple planning process.

Take advantage of the potential of Häfele Loox5 and create furniture that can do more than simply look good.

# Switching.

Plan switch requirements and switch positions. Simple mechanical switches or convenient sensors and dimmers can be grouped together by means of multi driver or multi switch boxes to conveniently operate lights from a single location or from different locations.

# Networking.

The Häfele Connect Mobile App is the central element for controlling monochrome lights, multi-white lights, or RGB lights individually or jointly.

# Distributing.

Plan the concealed cable routing and provide holes, grooves, or panels. An extensive range of extension leads and distributors facilitates suitable cabling of your project.

# Supplying.

Add up the wattage of all lights and other devices.
If necessary, take into account possible later expansions and select a driver of the appropriate performance class. Lights of the same voltage type or current may be connected to a common driver. Converters are also available and are necessary if lights with different voltage types and currents will share a driver.

Choose a distributor for your current needs (with or without switching function or with Häfele Connect). The distributor can be easily replaced at a later time. Therefore, make sure the drivers are accessible in the furniture.

LOOX5

# Linear light

## Task light Illuminate work spaces with > 500 lx at a distance of 500 mm

|          |      |                  |       |          | Illuminance max. at a distance of 500 mm lx |            |
|----------|------|------------------|-------|----------|------|------------|
| LED 3052 | 24 V | Constant current | 8 mm  | 19.2 W/m | 1840 | > Page 32  |
| LED 3048 | 24 V |                  | 8 mm  | 14.4 W/m | 1320 | > Page 30  |
| LED 2068 | 12 V |                  | 8 mm  | 9.6 W/m  | 955  | > Page 30  |
| LED 2061 | 12 V |                  | 5 mm  | 9.6 W/m  | 860  | > Page 28  |
| LED 2074 | 12 V |                  | 5 mm  | 9.6 W/m  | 955  | > Page 34  |

## Ambient light 150–500 lx at a distance of 500 mm

|          |      |       |         | Illuminance max. at a distance of 500 mm lx |           |
|----------|------|-------|---------|------|-----------|
| LED 2062 | 12 V | 8 mm  | 4.8 W/m | 470  | > Page 30 |
| LED 2071 | 12 V | 8 mm  | 4.8 W/m | 470  | > Page 34 |

## Accent light <150 lx at a distance of 500 mm

| LED 2019 | 12 V | Glass edge light | 0.2 W | > Page 66 |
|----------|------|------------------|-------|-----------|

## Multi-white lights

|          |      |       |         | Illuminance max. at a distance of 500 mm lx |           |
|----------|------|-------|---------|------|-----------|
| LED 2073 | 12 V | 8 mm  | 4.8 W/m | 445  | > Page 36 |
| LED 2076 | 12 V | 8 mm  | 9.6 W/m | 875  | > Page 36 |

## RGB lights

| LED 2016 | 12 V | 12 mm | 7.1 W/m | - | > Page 38 |
|----------|------|-------|---------|---|-----------|

HÄFELE

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## Aluminium profiles for recess mounting

| Model | Internal dimension | | |
|---|---|---|---|
| 1104 | 8 mm | For strip lights up to a width of 5 mm | > Page 40 |
| 1103 | 11 mm | For strip lights up to a width of 8 mm | > Page 40 |
| 1105 | 11 mm | Asymmetrical light distribution | > Page 41 |
| | 16 mm | For strip lights up to a width of 12 mm | > Page 42 |
| 1107 | 8 mm | Asymmetric light distribution, for strip lights up to a width of 5 mm | > Page 43 |
| 1106 | 11 mm | Asymmetrical light distribution | > Page 43 |
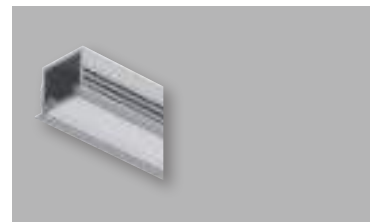
## Poly-carbonate profiles for recess mounting

| | | | |
|---|---|---|---|
| 1102 | 5 mm | For strip lights up to a width of 8 mm | > Page 44 |
| 1101 | 8 mm | For 8 mm strip lights only | > Page 44 |

## Aluminium profiles for surface mounting

| | | | |
|---|---|---|---|
| 2102 | 11 mm | For strip lights up to a width of 8 mm | > Page 45 |
| 2104 | 11 mm | With concealed fixing, asymmetric light distribution | > Page 46 |
| | 16 mm | For strip lights up to a width of 12 mm | > Page 47 |
| | 16 mm | With attached diffuser housing | > Page 47 |
| | 14 mm | Corner mounting | > Page 48 |
| | 14 mm | Drawer profile | > Page 49 |
| | 50 mm | Two-way aluminium profile | > Page 51 |
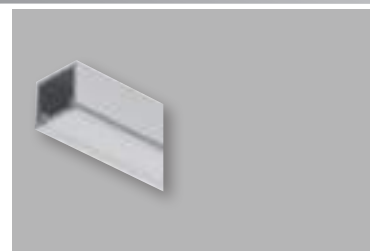
## Aluminium wardrobe rail

| | | | |
|---|---|---|---|
| | 15 mm | Asymmetrical light distribution | > Page 50 |

## Poly-carbonate glass edge profile

| | | | |
|---|---|---|---|
| | 11 mm | For strip lights up to a width of 12 mm | > Page 50 |

## Diffusers

| | |
|---|---|
| For profiles for recess mounting 1103-1107 | > Page 52 |
| For profiles for surface mounting 2104 | |
| For Loox profiles with 16 mm internal dimension | > Page 52 |

# Point light

## Task light

Illuminate work spaces with > 500 lx at a distance of 500 mm

| | | | | | |
|---|---|---|---|---|---|
| LED 2026 | 12 V | Recess mounted/ surface mounted | Drill hole Ø 58 mm | 3.0 W | **>** Page 56 |

## Ambient light

Stage furnishings with 150–500 lx at a distance of 500 mm

| | | | | | |
|---|---|---|---|---|---|
| LED 2047 | 12 V | Recess mounted/ surface mounted | Drill hole Ø 55 mm | 3.0 W | **>** Page 54 |
| LED 2020 | 12 V | Recess mounted/ surface mounted | Drill hole Ø 55 mm | 3.2 W | **>** Page 60 |
| LED 2022 | 12 V | Recess mounted/ surface mounted | Drill hole Ø 26 mm | 1.5 W | **>** Page 62 |
| LED 2039 | 12 V | Recess mounted | Drill hole Ø 58 mm | 2.5 W | **>** Page 64 |
| LED 2027 | 12 V | Recess mounted | Drill hole Ø 65 mm | 2.6 W | **>** Page 67 |
| LED 2036 | 12 V | Recess mounted | - | 3.6 W | **>** Page 70 |

## Accent light

Illuminate non-hazardous traffic areas and corridors or storage spaces with <150 lx at a distance of 500 mm

| | | | | | |
|---|---|---|---|---|---|
| LED 2028 | 12 V | Recess mounted | Drill hole Ø 54 mm | 0.3 W | **>** Page 65 |
| LED 2019 | 12 V | Glass Edge Light | - | 0.2 W | **>** Page 66 |
| LED 4004 | 350 mA | Recess mounted/ surface mounted | Drill hole Ø 28 mm | 1 W | **>** Page 71 |
| LED 4005 | 350 mA | Recess mounted/ surface mounted | Drill hole Ø 28 mm | 1 W | **>** Page 72 |

## Flexible surface mounted lights

| | | | | |
|---|---|---|---|---|
| LED 2034 | 12 V | Surface mounted, with charging station | 1.5 W | **>** Page 68 |
| LED 2035 | 12 V | Surface mounted | 1.5 W | **>** Page 69 |

# HÄFELE

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## Multi-white lights

| | | | | | | |
|---|---|---|---|---|---|---|
| | LED 2048 | 12 V | Recess mounted/ surface mounted | Drill hole Ø 26 mm | 3.0 W | > Page 58 |
| | LED 3039 | 24 V | | | | |

## Shelf Lights

| | | | | | | |
|---|---|---|---|---|---|---|
| Deco shelf light | LED Decorative Box Shelf Light | 12 V | Surface mounted | - | 10/13 W | > Page 73 |
| Deco shelf light | LED Corner Shelf Light | 12 V | Surface mounted | - | 4.5 W | > Page 74 |
| Box shelf light | Box Shelf Light | 12 V | Surface mounted | - | 6/9 W | > Page 75 |

## Other Lights

| | | | | | | |
|---|---|---|---|---|---|---|
| LED drawer light | - | 12 V | Surface mounted | - | 6 W | > Page 76 |
| Two way profile light | - | 12 V | Surface mounted | - | 11/17 W | > Page 76 |

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# Linear light

For universal use in furniture.

## Good reasons.

> Continuous light line with homogeneous light distribution
> Minimalistic design
> Virtually invisible, glare-free light source
> Easy installation

## For every situation.

> Radiant task light for work spaces
> Discreet ambient light for wellness zones
> Poly-carbonate profiles for vertical illumination in storage spaces
> Aluminium profiles in trendy colours for top-of-the-line design demands
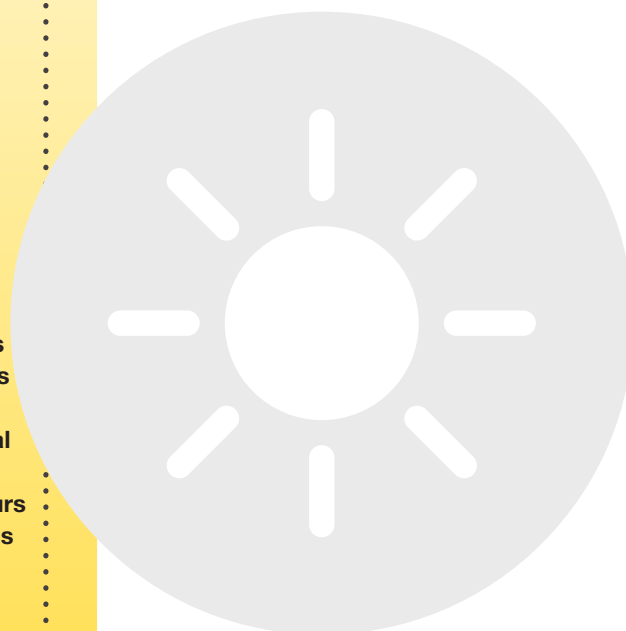
ILLUMINATING

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LOOX5

# LED strip lights
## Monochrome, 5 mm

INDIA's **FIRST**
5 MM NARROW STRIP LIGHT

**EXTRA NARROW 5 mm**

### Häfele Loox5 LED 2061; High Performance

LED 2061

**Equipped with high-quality Samsung LEDs**

> Dimmable: Yes
> Material: Plastic
> Finish/colour: White
> Width: 5 mm
> Height: 1.3 mm
> Life time L80/B10: >50,000 h
> Energy efficiency class: A+
> Degree of protection: IP20
> Mounting: Self-adhesive
> Supplied with: 1 roll

**Illuminance value in lx applies to 1 m strip length:**

| 2700 K | 3000 K | 4000 K | 5000 K | 120° | |
|--------|--------|--------|--------|------|--|
| 1860 lx | 1960 lx | 2000 lx | 2060 lx | | 250 mm |
| 790 lx | 850 lx | 860 lx | 860 lx | | 500 mm |
| 440 lx | 470 lx | 480 lx | 480 lx | | 750 mm |
| 270 lx | 290 lx | 290 lx | 290 lx | | 1000 mm |

LED 2061

(!) Order reference:
Please order lead separately.

―― Cut LED strip light to length
(one contact side remains on the remainder piece; reusable)
―― Connect LED strip lights
(two contact sides required)

C = section length
P = length of contact surface

| Voltage | Quantity | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | | Weight. energy consumpt. per m in kWh/ 1000 h | Section length C | Length of contact surface P | Max. strip length (visual) | Available length |
|---------|----------|--------------------|---------|---------------|-------------------|---------------------------|----|--------------------------------------------|------------------|-----------------------------|----------------------------|-------------------|
| V | LEDs/m | K | W/m | lm/m | lm/W | $R_a$ | $R_9$ | 1000 h | mm | mm | m | 5 m |
| | **Häfele Loox5 LED 2061** | | | | | | | | | | | |
| 5 12V | 120 | 2700 | 9.6 | 870 | 91 | >90 | >50 | 10.56 | 25 | 3 | 3.0 | **833.74.328** |
| | | 3000 | 9.6 | 830 | 97 | >90 | >50 | 10.56 | 25 | 3 | 3.0 | **833.74.329** |
| | | 4000 | 9.6 | 955 | 99 | >90 | >50 | 10.56 | 25 | 3 | 3.0 | **833.74.330** |
| | | 5000 | 9.6 | 990 | 103 | >90 | >50 | 10.56 | 25 | 3 | 3.0 | **833.74.331** |

(!) Maximum visual strip length applies for an imperceptible drop in luminous flux of max. 30%.

**5 YEARS GUARANTEE*** c(UL)us IP20

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## Häfele Loox5 LED 2061; High Performance

> 3.5 A/20 AWG lead for LED strip light
  5 mm

| Voltage | Length mm | Cat. No. |
|---------|-----------|----------|
| 5 12 V | 2000 | 833.72.742 |

> 3.5 A/20 AWG interconnecting lead for
  5 mm LED strip light

| Length mm | Cat. No. |
|-----------|----------|
| 500 | 833.89.195 |

> 3.5 A clip connector for 5 mm LED strip
  light

| | Cat. No. |
|---|----------|
| Clip connector | 833.89.207 |

> Corner connector, 90° rigid, 3.5 A for left or
  right for 5 mm LED strip light

| | Cat. No. |
|---|----------|
| Corner connector rigid | 833.89.190 |

# LED strip lights

## Monochrome, 8 mm

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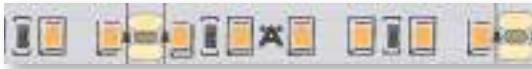### Häfele Loox5 LED 2062 / 2068 / 3048; High Performance

LED 2062

LED 2068

LED 3048

### Equipped with high-quality Samsung LEDs

| | |
|---|---|
| > Dimmable: | Yes |
| > Material: | Plastic |
| > Finish/colour: | White |
| > Width: | 8 mm |
| > Height: | 1.3 mm |
| > Life time L80/B10: | >50,000 h |
| > Energy efficiency class: | A+ |
| > Degree of protection: | IP20 |
| > Mounting: | Self-adhesive |
| > Supplied with: | 1 roll |

**!** Order reference:
Please order lead separately.

**Illuminance value in lx applies to 1 m strip length:**

| 2700 K | 3000 K | 4000 K | 5000 K | 120° | |
|---|---|---|---|---|---|
| 1050 lx | 1090 lx | 1120 lx | 1130 lx | | 250 mm |
| 435 lx | 455 lx | 460 lx | 470 lx | | 500 mm |
| 240 lx | 245 lx | 260 lx | 260 lx | | 750 mm |
| 145 lx | 150 lx | 155 lx | 160 lx | | 1000 mm |

LED 2062

| 2700 K | 3000 K | 4000 K | 5000 K | 120° | |
|---|---|---|---|---|---|
| 2145 lx | 2250 lx | 2300 lx | 2300 lx | | 250 mm |
| 900 lx | 940 lx | 950 lx | 955 lx | | 500 mm |
| 480 lx | 505 lx | 510 lx | 515 lx | | 750 mm |
| 300 lx | 310 lx | 320 lx | 320 lx | | 1000 mm |

LED 2068

| 2700 K | 3000 K | 4000 K | 5000 K | 120° | |
|---|---|---|---|---|---|
| 2870 lx | 3000 lx | 3100 lx | 3100 lx | | 250 mm |
| 1210 lx | 1270 lx | 1310 lx | 1320 lx | | 500 mm |
| 665 lx | 695 lx | 715 lx | 715 lx | | 750 mm |
| 415 lx | 430 lx | 445 lx | 450 lx | | 1000 mm |

LED 3048
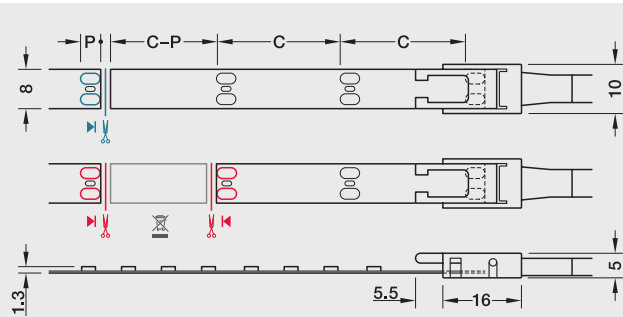
—— Cut LED strip light to length
(one contact side remains on the remainder piece; reusable)
—— Connect LED strip lights
(two contact sides required)

C = section length
P = length of contact surface

5 YEARS GUARANTEE*  c UL us  IP20

## Häfele Loox5 LED 2062 / 2068 / 3048; High Performance

| Volt- age | Quan- tity | Colour temper- ature | Watt- age | Lumi- nous flux | Lumi- nous effi- cacy | Colour render- ing index CRI | | Weight. energy con- sumpt. per m in kWh/ | Section length C | Length of contact surface P | Max. strip length (visual) | Available length |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V | LEDs/m | K | W/m | lm/m | lm/W | $R_a$ | $R_9$ | 1000 h | mm | mm | m | 5 m |
| **5 12V** | **Häfele Loox5 LED 2062** | | | | | | | | | | | |
| | | 2700 | 4.8 | 440 | 92 | >90 | >50 | 5.28 | 50 | 4 | 6.0 | 833.74.336 |
| | 60 | 3000 | 4.8 | 465 | 97 | >90 | >50 | 5.28 | 50 | 4 | 6.0 | 833.74.337 |
| | | 4000 | 4.8 | 490 | 102 | >90 | >50 | 5.28 | 50 | 4 | 6.0 | 833.74.338 |
| | | 5000 | 4.8 | 495 | 103 | >90 | >50 | 5.28 | 50 | 4 | 6.0 | 833.74.339 |
| | **Häfele Loox5 LED 2068** | | | | | | | | | | | |
| | | 2700 | 9.6 | 920 | 96 | >90 | >50 | 10.56 | 25 | 4 | 4.0 | 833.74.362 |
| | 120 | 3000 | 9.6 | 970 | 101 | >90 | >50 | 10.56 | 25 | 4 | 4.0 | 833.74.363 |
| | | 4000 | 9.6 | 1000 | 104 | >90 | >50 | 10.56 | 25 | 4 | 4.0 | 833.74.364 |
| | | 5000 | 9.6 | 1040 | 108 | >90 | >50 | 10.56 | 25 | 4 | 4.0 | 833.74.365 |
| | **Häfele Loox5 LED 3048** | | | | | | | | | | | |
| **5 24V** | | 2700 | 14.4 | 1270 | 88 | >90 | >50 | 15.84 | 50 | 4 | 6.2 | 833.76.352 |
| | 120 | 3000 | 14.4 | 1305 | 91 | >90 | >50 | 15.84 | 50 | 4 | 6.2 | 833.76.353 |
| | | 4000 | 14.4 | 1340 | 93 | >90 | >50 | 15.84 | 50 | 4 | 6.2 | 833.76.354 |
| | | 5000 | 14.4 | 1430 | 99 | >90 | >50 | 15.84 | 50 | 4 | 6.2 | 833.76.355 |

! Maximum visual strip length applies for an imperceptible drop in luminous flux of max. 30%.
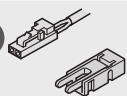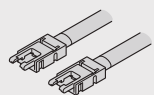
**> 5 A/18 AWG lead for LED strip light 8 mm**

| Voltage | Length mm | Cat. No. |
|---|---|---|
| 5 12V | 2000 | 833.72.716 |
| 5 24V | 2000 | 833.75.705 |

**> 5 A clip connector for 8 mm LED strip light**

| | Cat. No. |
|---|---|
| Clip connector | 833.89.206 |

**> 5 A/18 AWG interconnecting lead for 8 mm LED strip light**

| Length mm | Cat. No. |
|---|---|
| 500 | 833.89.192 |

**> Corner connector, 90° rigid, 5 A for left or right for 8 mm LED strip light**

| | Cat. No. |
|---|---|
| Corner connector rigid | 833.89.187 |

# LED strip lights

## Monochrome, 8 mm

ILLUMINATING

EXTENDING

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NETWORKING

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### Häfele Loox5 LED 3052; High Performance



LED 3052

**Constant current technology**
> Achieves uniform brightness over the entire strip light length
> Increased life time, higher visual strip length, higher luminous efficacy
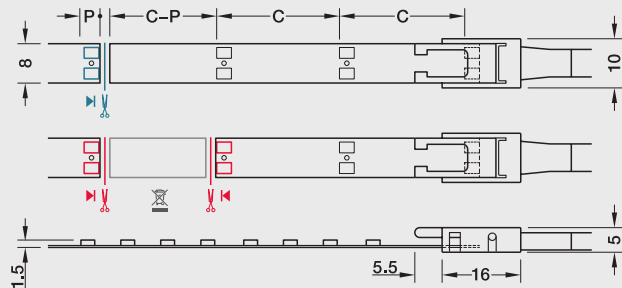
**Equipped with high-quality Samsung LEDs**

**Illuminance value in lx applies to 1 m strip length:**

| 2700 K | 3000 K | 4000 K | 5000 K | 120° | |
|--------|--------|--------|--------|------|------|
| 4070 lx | 4160 lx | 4220 lx | 4260 lx | | 250 mm |
| 1750 lx | 1780 lx | 1800 lx | 1840 lx | | 500 mm |
| 970 lx | 990 lx | 1000 lx | 1020 lx | | 750 mm |
| 600 lx | 620 lx | 625 lx | 630 lx | | 1000 mm |

LED 3052

| | |
|---|---|
| > Dimmable: | Yes |
| > Material: | Plastic |
| > Finish/colour: | White |
| > Width: | 8 mm |
| > Height: | 1.5 mm |
| > Life time L80/B10: | >70,000 h |
| > Energy efficiency class: | A+ |
| > Degree of protection: | IP20 |
| > Mounting: | Self-adhesive |
| > Supplied with: | 1 roll |

⚠ Order reference: Please order lead separately.



Cut LED strip light to length
(one contact side remains on the remainder piece; reusable)

Connect LED strip lights
(two contact sides required)

C = section length
P = length of contact surface

| Volt-age | Quantity | Colour tempera-ture | Wattage | Lumi-nous flux | Lumi-nous efficacy | Colour render-ing index CRI | | Weight. energy consumpt. per m in | Section length C | Length of contact surface P | Max. strip length (visual) | Available length |
|---------|----------|---------------------|---------|---------------|-------------------|------|------|----------------------------------|------------------|----------------------------|---------------------------|------------------|
| V | LEDs/m | K | W/m | lm/m | lm/W | Ra | R9 | kWh/1000 h | mm | mm | m | 5 m |
| | **Häfele Loox5 LED 3052** | | | | | | | | | | | |
| 5 24 V | 140 | 2700 | 19.2 | 1850 | 96 | >90 | >50 | 21.12 | 50 | 3 | 4.6 | **833.76.378** |
| | | 3000 | 19.2 | 2015 | 105 | >90 | >50 | 21.12 | 50 | 3 | 4.6 | **833.76.379** |
| | | 4000 | 19.2 | 2050 | 107 | >90 | >50 | 21.12 | 50 | 3 | 4.6 | **833.76.380** |
| | | 5000 | 19.2 | 2100 | 109 | >90 | >50 | 21.12 | 50 | 3 | 4.6 | **833.76.381** |

⚠ The maximum visual strip length for Loox 5 constant current strips is the length without drop in luminous flux.
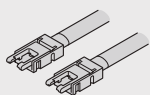
5 YEARS GUARANTEE* · c UL us · IP20

## Häfele Loox5 LED 3052; High Performance
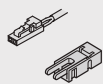
> 5 A/18 AWG lead for LED strip light 8 mm

| Voltage | Length mm | Cat. No. |
|---|---|---|
| 5 24 V | 2000 | **833.75.705** |

> 5 A/18 AWG interconnecting lead for 8 mm LED strip light

| Length mm | Cat. No. |
|---|---|
| 500 | **833.89.192** |

> 5 A clip connector for 8 mm LED strip light

| | Cat. No. |
|---|---|
| Clip connector | **833.89.206** |

> Corner connector, 90° rigid, 5 A for left or right for 8 mm LED strip light

| | Cat. No. |
|---|---|
| Corner connector rigid | **833.89.187** |

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

L◯◻X5

# LED strip lights

## Monochrome, 8 mm

**Häfele Loox5 LED 2071 / 2074; Standard**

LED 2071

LED 2074

**Equipped with high-quality Samsung LEDs**

| | |
|---|---|
| > Dimmable: | Yes |
| > Material: | Plastic |
| > Finish/colour: | White |
| > Width: | 8 mm |
| > Height: | 1.3 mm |
| > Life time L80/B10: | >30,000 h |
| > Energy efficiency class: | A+ |
| > Degree of protection: | IP20 |
| > Mounting: | Self-adhesive |
| > Supplied with: | 1 roll |

**!** Order reference:
Please order lead separately.

### Illuminance value in lx applies to 1 m strip length:

| 2700 K | 3000 K | 4000 K | 5000 K | 120° | |
|---|---|---|---|---|---|
| 1050 lx | 1090 lx | 1120 lx | 1130 lx | ☀ | 250 mm |
| 435 lx | 455 lx | 460 lx | 470 lx | ☀ | 500 mm |
| 240 lx | 245 lx | 260 lx | 260 lx | ☀ | 750 mm |
| 145 lx | 150 lx | 155 lx | 160 lx | ☀ | 1000 mm |

LED 2071

| 2700 K | 3000 K | 4000 K | 5000 K | 120° | |
|---|---|---|---|---|---|
| 2145 lx | 2250 lx | 2300 lx | 2300 lx | ☀ | 250 mm |
| 900 lx | 940 lx | 950 lx | 955 lx | ☀ | 500 mm |
| 480 lx | 505 lx | 510 lx | 515 lx | ☀ | 750 mm |
| 300 lx | 310 lx | 320 lx | 320 lx | ☀ | 1000 mm |

LED 2074
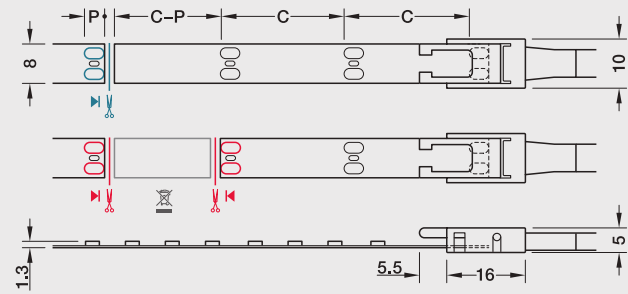
―― Cut LED strip light to length
(one contact side remains on the remainder piece; reusable)
―― Connect LED strip lights
(two contact sides required)

C = section length
P = length of contact surface

5 YEARS GUARANTEE* · c UL us · IP20

HÄFELE

ILLUMINATING
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## Häfele Loox5 LED 2071 / 2074; Standard

| Voltage | Quantity | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | | Weight. energy consumpt. per m in kWh/ 1000 h | Section length C | Length of contact surface P | Max. strip length (visual) | Available length |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V | LEDs/m | K | W/m | lm/m | lm/W | $R_a$ | $R_9$ | 1000 h | mm | mm | m | 5 m |
| 5 12 V | **Häfele Loox5 LED 2071** | | | | | | | | | | | |
| | 60 | 2700 | 4.8 | 440 | 92 | 90 | >50 | 5.28 | 50 | 4 | 6.0 | **833.74.300** |
| | | 3000 | 4.8 | 465 | 97 | 90 | >50 | 5.28 | 50 | 4 | 6.0 | **833.74.301** |
| | | 4000 | 4.8 | 490 | 102 | 90 | >50 | 5.28 | 50 | 4 | 6.0 | **833.74.302** |
| | | 5000 | 4.8 | 495 | 103 | 90 | >50 | 5.28 | 50 | 4 | 6.0 | **833.74.303** |
| | **Häfele Loox5 LED 2074** | | | | | | | | | | | |
| | 120 | 2700 | 9.6 | 920 | 96 | 90 | >50 | 10.56 | 25 | 4 | 3.5 | **833.74.308** |
| | | 3000 | 9.6 | 970 | 101 | 90 | >50 | 10.56 | 25 | 4 | 3.5 | **833.74.309** |
| | | 4000 | 9.6 | 1000 | 104 | 90 | >50 | 10.56 | 25 | 4 | 3.5 | **833.74.310** |
| | | 5000 | 9.6 | 1040 | 108 | 90 | >50 | 10.56 | 25 | 4 | 3.5 | **833.74.311** |

⚠ Maximum visual strip length applies for an imperceptible drop in luminous flux of max. 30%.

> 5 A/18 AWG lead for LED strip light 8 mm

| Voltage | Length mm | Cat. No. |
|---|---|---|
| 5 12 V | 2000 | **833.72.716** |

> 5 A/18 AWG interconnecting lead for 8 mm LED strip light

| Length mm | Cat. No. |
|---|---|
| 500 | **833.89.192** |

> 5 A clip connector for 8 mm LED strip light

| | Cat. No. |
|---|---|
| Clip connector | **833.89.206** |

> Corner connector, 90° rigid, 5 A for left or right for 8 mm LED strip light

| | Cat. No. |
|---|---|
| Corner connector rigid | **833.89.187** |

# LED strip lights

## Multi-white, 8 mm

**Häfele Loox5 LED 2073 / 2076; Standard**

LED 2073

LED 2076

**Optimised light mixture**
> Cool white and warm white LEDs in the smallest of spaces
> Optimal light mixture without flickering

> Dimmable:           Yes
> Material:            Plastic
> Finish/colour:       White
> Width:               8 mm
> Height:              1.3 mm
> Life time L80/B10:   >30,000 h
> Energy efficiency class:  A+
> Degree of protection:  IP20
> Mounting:            Self-adhesive
> Supplied with:       1 roll

**Illuminance value in lx applies to
1 m strip length:**

| 2700 K | 5000 K | 120° | |
|---|---|---|---|
| 1025 lx | 1075 lx | | 250 mm |
| 425 lx | 445 lx | | 500 mm |
| 230 lx | 245 lx | | 750 mm |
| 145 lx | 150 lx | | 1000 mm |

LED 2073

| 2700 K | 5000 K | 120° | |
|---|---|---|---|
| 2040 lx | 2110 lx | | 250 mm |
| 850 lx | 875 lx | | 500 mm |
| 460 lx | 470 lx | | 750 mm |
| 280 lx | 290 lx | | 1000 mm |

LED 2076
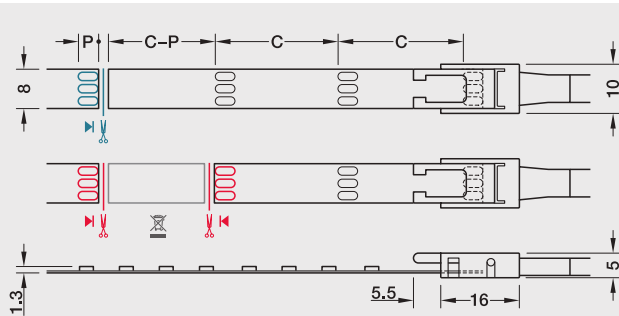
Order reference:
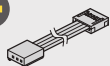Please order lead separately.

—— Cut LED strip light to length
(one contact side remains on the remainder piece; reusable)
—— Connect LED strip lights
(two contact sides required)

C = section length
P = length of contact surface

**5 YEARS GUARANTEE*** c UL us IP20

ILLUMINATING

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SUPPLYING

## Häfele Loox5 LED 2073 / 2076; Standard

| Voltage | Quantity | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | | Weight. energy consumpt. per m in kWh/ | Section length C | Length of contact surface P | Max. strip length (visual) | Available length |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V | LEDs/m | K | W/m | lm/m | lm/W | $R_a$ | $R_9$ | 1000 h | mm | mm | m | 5 m |
| **5 12V** | **Häfele Loox5 LED 2073** | | | | | | | | | | | |
| | 2 x 60 | 2700 5000 | 4.8 | 425 465 | 88 96 | 90 | >50 | 5.28 | 50 | 4 | 4.5 | **833.74.316** |
| | **Häfele Loox5 LED 2076** | | | | | | | | | | | |
| | 2 x 120 | 2700 5000 | 9.6 | 875 940 | 91 97 | 90 | >50 | 10.56 | 25 | 3.5 | 3 | **833.74.318** |

> ⚠ Maximum visual strip length applies for an imperceptible drop in luminous flux of max. 30%.
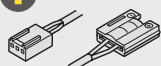
> ➕ > 3.5 A/20 AWG lead for 8 mm multi-white LED strip light

| Length mm | Cat. No. |
|---|---|
| 500 | **833.72.717** |

> > Corner connector 90° rigid, 3.5 A for left or right for 8 mm multi-white LED strip light

| | Cat. No. |
|---|---|
| Corner connector rigid | **833.89.188** |

> > 3.5 A clip connector for 8 mm multi-white LED strip light

| | Cat. No. |
|---|---|
| Clip connector | **833.89.208** |

> > 3.5 A/20 AWG interconnecting lead for 8 mm multi-white LED strip light

| Length mm | Cat. No. |
|---|---|
| 500 | **833.89.198** |

> ➕ Use Häfele BLE Box to operate the multi-white strip lights. See page 88

LOOX5

ILLUMINATING

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SUPPLYING

# LED strip lights

RGB, 12 mm

🔵 RGB

**Häfele Loox LED 2016**

LED 2016

Bright light sources with changing colours are often in demand for lighting. The LED 2016 colour changing strip light meets these requirements easily.

| | |
|---|---|
| > Dimmable: | Yes, via RGB colour mixer with remote control |
| > Material: | Plastic |
| > Finish/colour: | LED board, white |
| > Length: | 5000 mm |
| > Width: | 12 mm |
| > Height: | 2.4 mm |
| > Life time L70/B50: | 30,000 h |
| > Energy efficiency class: | A+ |
| > Degree of protection: | IP20 |
| > RGB color mixers: | Max. 10 with 1-10 remote controls within a radius of 15 m |
| > Installation: | Self-adhesive |
| > Supplied with: | 5 m roll and 2 m lead 2.5 A/22 AWG |

⚠️ Order reference:
Please order lead separately.
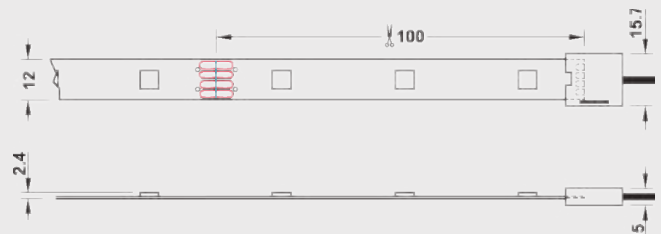
—— Cut LED strip light to length
(one contact side remains on the remainder piece; reusable)
—— Connect LED strip lights (two contact sides required)

> Can be shortened every 100 mm
> Note clip connector width when choosing the aluminium profile

| Volt-age | Quantity | Colour tem-perature | Watt-age | Lumi-nous flux | Lumi-nous efficacy | Colour rendering index CRI | | Weight. energy consumpt. per m in kWh/ 1000 h | Section length C | Length of contact surface P | Max. strip length (visual) | Available length |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| V | LEDs/m | K | W/m | lm/m | lm/W | R_a | R_9 | | mm | mm | m | 5 m |
| 12 V | **Häfele Loox5 LED 2016** | | | | | | | | | | | |
| | 30 | RGB | 7.1 | 1050 | 29 | - | - | - | 100 | - | 3.4 | **833.73.450** |

5 YEARS GUARANTEE* · UL us · RoHS · IP20

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## Häfele Loox LED 2016

> Lead, 2.5 A/22 AWG, with clip for LED RGB strip light

| Voltage | Length mm | Cat. No. |
|---|---|---|
| 12 V | 2000 mm | 833.74.764 |
| | 4000 mm | 833.74.745 |

> Interconnecting lead, 2.5 A/22 AWG, with clip for LED RGB strip light

| | Cat. No. |
|---|---|
| 50 mm | 833.74.766 |
| 500 mm | 833.74.767 |
| 1000 mm | 833.74.779 |
| 2000 mm | 833.74.768 |

> Corner connector, rigid, 2.5 A, for LED RGB strip light

| | Cat. No. |
|---|---|
| Corner connector | 833.74.760 |

> Clip connector, 2.5 A for LED RGB strip light

| | Cat. No. |
|---|---|
| Clip connector | 833.74.761 |

**!** Maximum visual strip length applies for an imperceptible drop in luminous flux of max. 30%.

**!** Use Hafele BLE Box to operate Multi white LED Lights. See page 88

# Profiles for recess mounting

## Aluminium

**Häfele Loox5 profile 1104 / 1103**



### Häfele Loox5 profile 1104
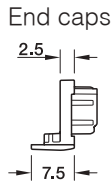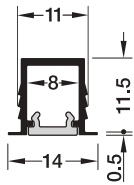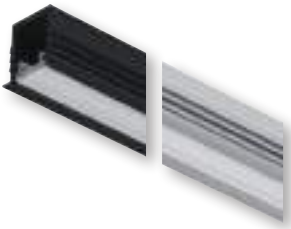


End caps



| > Material: | Profile: Aluminium, Diffuser: Plastic |
| > Finish/colour: | Profile: Anodized, Diffuser: White opal, transmittance 70–80 % |
| > Length: | 3000 mm |
| > Diffuser width: | Profile 1104: 8 mm, Profile 1103: 11 mm |
| > Supplied with: | 1 aluminium profile |
| | 1 diffuser white opal |

| Colour | Profile 1104 | Profile 1103 |
|---|---|---|
| Black | 833.95.725 | 833.95.723 |
| Silver coloured | 833.95.724 | 833.95.722 |

**!** Note
Profile 1104 is usable for LED strip lights up to max. 5 mm width.
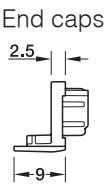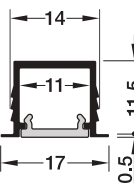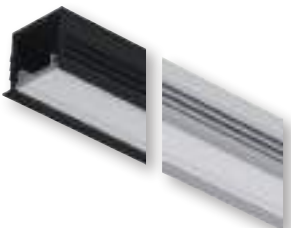
**+** **End caps for Häfele Loox5 profile 1104, 1103**
> Material: Plastic
> Version: With cable outlet
> Supplied with: 5 pairs of end caps

| Colour | End cap 1104 | End cap 1103 |
|---|---|---|
| Black | 833.95.769 | 833.95.767 |
| Silver coloured | 833.95.768 | 833.95.766 |

### Häfele Loox5 profile 1103



End caps



**!** **Diffusers**
The diffuser creates a uniform light.
The LED points are invisible from 120 LEDs/m.
If required, please order alternative diffuser in black opal separately.

**→** Diffusers see page 52

**5 YEARS GUARANTEE***

# Profiles for recess mounting

## Aluminium

ILLUMINATING

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DISTRIBUTING

SUPPLYING

**Häfele Loox5 profile 1105, asymmetric light distribution**

**Häfele Loox5 profile 1105**
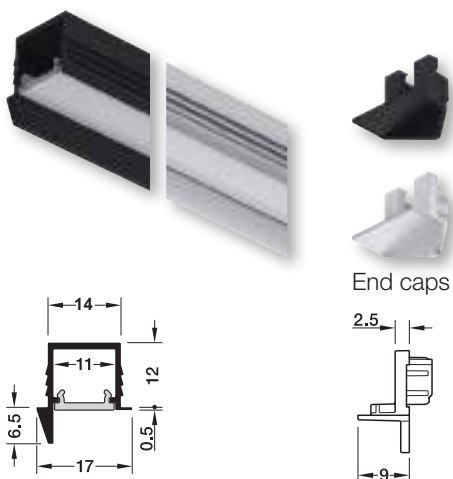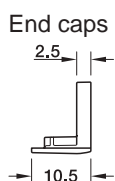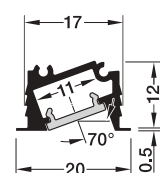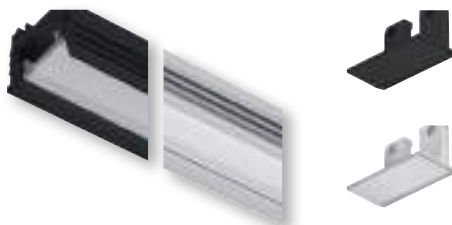
End caps

| | |
|---|---|
| > Material: | Profile: Aluminium, Diffuser: Plastic |
| > Finish/colour: | Profile: Anodized, Diffuser: White opal, transmittance 70–80 % |
| > Length: | 3000 mm |
| > Diffuser width: | 11 mm |
| > Supplied with: | 1 aluminium profile |
| | 1 diffuser white opal |

| Colour | Cat. No. |
|---|---|
| Black | 833.95.727 |
| Silver coloured | 833.95.726 |

**➕ End caps for Häfele Loox5 profile 1105**

| | |
|---|---|
| > Material: | Plastic |
| > Version: | With cable outlet |
| > Packing:: | 10 pieces |

| Colour | Cat. No. |
|---|---|
| Black | 833.95.771 |
| Silver coloured | 833.95.770 |

**Anti-glare shield**
Asymmetric light distribution allows for a glare-free light source.

**⚠ Diffusers**
The diffuser creates a uniform light.
The LED points are invisible from 120 LEDs/m.
If required, please order alternative diffusers in black or transparent separately.

➡ Diffusers see page 52

5 YEARS GUARANTEE*

# Profiles for recess mounting

## Aluminium

### Häfele Loox profile for recess mounting

End cap
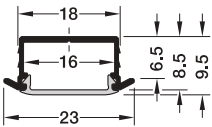
| | |
|---|---|
| > Material: | Aluminium |
| > Finish/colour: | Silver coloured anodized |
| > Length x width: | 2500 x 18 mm |
| > Height: | 8.5 mm |
| > Supplied with: | 1 profile, 1 diffuser |

| Colour | Cat. No. |
|---|---|
| Silver coloured with milky diffuser | 833.72.844 |

**!** LED points are always visible when this profile is used

**✚ End cap with cable outlet for 833.72.844**

| | |
|---|---|
| > Material: | Plastic |
| > Supplied with: | 2 pieces |

| Colour | Cat. No. |
|---|---|
| Silver coloured | 833.72.855 |

**➡** Diffusers see page 52

### Häfele Loox profile for recess mounting
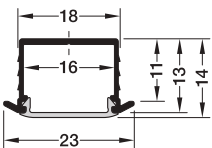
End cap

| | |
|---|---|
| > Material: | Aluminium |
| > Finish/colour: | Silver coloured anodized |
| > Length x width: | 2500 x 18 mm |
| > Height: | 13 mm |
| > Supplied with: | 1 profile, 1 diffuser |

| Colour | Cat. No. |
|---|---|
| Silver coloured with milky diffuser | 833.72.846 |

**✚ End cap with cable outlet for 833.72.846**

| | |
|---|---|
| > Material: | Plastic, silver coloured |
| > Supplied with: | 2 pieces |

| Colour | Cat. No. |
|---|---|
| Silver coloured | 833.72.854 |

**➡** Diffusers see page 52

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# Profiles for recess mounting

Aluminium

## Häfele Loox5 profile 1107 / 1106



**Häfele Loox5 profile 1107,
with asymmetric light distribution**
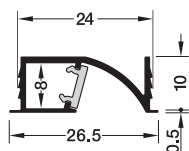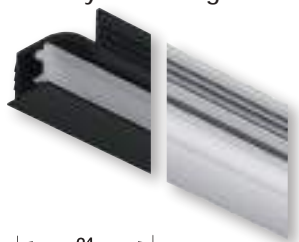




| > Material: | Profile: Aluminium, Diffuser: Plastic |
|---|---|
| > Finish/colour: | Profile: Anodized, Diffuser: White opal, transmittance 70–80 % |
| > Length: | 3000 mm |
| > Diffuser width: | Profile 1107: 8 mm, Profile 1106: 11 mm |
| > Supplied with: | 1 aluminium profile<br>1 diffuser white opal |

| Colour | Profile 1107 | Profile 1106 |
|---|---|---|
| Black | 833.95.731 | 833.95.729 |
| Silver coloured | 833.95.730 | 833.95.728 |

**!** Profile 1107 is usable for LED strip lights up to max. 5 mm width. Glare-free light, ideal for vertical installation in wardrobes.

**Häfele Loox5 profile 1106,
with asymmetric light distribution**





End caps

**+ End caps for Häfele Loox5 profile 1106**

| > Material: | Plastic |
|---|---|
| > Version: | With cable outlet |
| > Mounting: | For screw fixing |
| > Supplied with: | 5 pairs of end caps with screws |

| Colour | Article No. |
|---|---|
| Black | 833.95.773 |
| Silver coloured | 833.95.772 |

**! Diffusers**
The diffuser creates a uniform light.
If required, please order alternative diffuser in black opal separately.

**➡** Diffusers see page 52

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# Profiles for recess mounting

## Poly-carbonate

**Häfele Loox5 profile 1102 / 1101**



**Häfele Loox5 profile 1102**
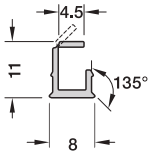




**Häfele Loox5 profile 1101**
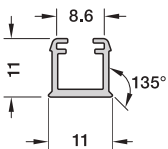




| | |
|---|---|
| > Material: | Poly-carbonate |
| > Finish/colour: | White & Black Opal |
| > Length: | 3000 mm |
| > Supplied with: | 1 Poly-carbonate profile |

| Colour | Transmittance | Profile 1102 | Profile 1101 |
|--------|---------------|--------------|--------------|
| Black | ~20 % | **833.95.741** | **833.72.899** |
| White | 70-80 % | **833.95.740** | **833.72.898** |

**❗ Note**

Profiles 1102 and 1101 are usable for LED strip lights up to max. 9.6 W/m.
Profile 1102 is usable for LED strip lights up to max. 5 mm width.
Profile 1101 is usable only for LED strip lights with a width of precisely 8 mm.
The diffuser creates a uniform light.
The LED points in the white version are invisible from 120 LEDs/m.

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# HÄFELE

# Profiles for surface mounting
Aluminium

## Häfele Loox5 profile 2102



**Häfele Loox5 profile 2102**
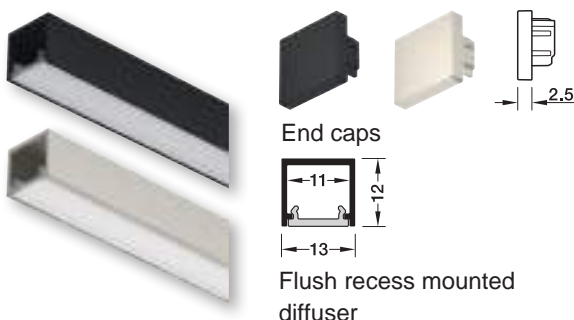


End caps

↦ 2.5

├─11─┤ ⌐12
├──13──┤

Flush recess mounted diffuser

| > Material: | Profile: Aluminium, Diffuser: Plastic |
| > Finish/colour: | Profile: Anodized, Diffuser: White opal, transmittance 70–80 % |
| > Length: | 3000 mm |
| > Diffuser width: | 11 mm |
| > Supplied with: | 1 aluminium profile |
| | 1 diffuser white opal |

| Colour | Profile 2102 |
|---|---|
| Black | 833.95.735 |
| Brushed stainless steel coloured | 833.95.763 |

**!** **Diffusers**
The diffuser creates a uniform light.
The LED points are invisible from 120 LEDs/m.
If required, please order alternative diffuser in black opal separately.

➡ Diffusers see page 52

**✚** **End caps for Häfele Loox5 profile 2102**
| > Material: | Plastic |
| > Version: | With drill mark for cable outlet |
| > Supplied with: | 5 pairs of end caps |

| Colour | End cap 2102 |
|---|---|
| Black | 833.95.778 |
| Brushed stainless steel coloured | 833.95.779 |

## Adhesive tape for Häfele Loox5 profile 2102



| > Area of application: | For fixing aluminium on wood, metals, or plastics |
| > Version: | Double-sided, high instant adhesion, high temperature resistance |
| > Length: | 33 m |
| > Width: | 10 mm |
| > Thickness: | 0.6 mm |

| | Article No. |
|---|---|
| Adhesive tape | 833.89.266 |

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LOOX5

# Profiles for surface mounting

## Aluminium

**Häfele Loox5 profile 2104, with concealed fixing**



**Häfele Loox5 profile 2104, with asymmetric light distribution**
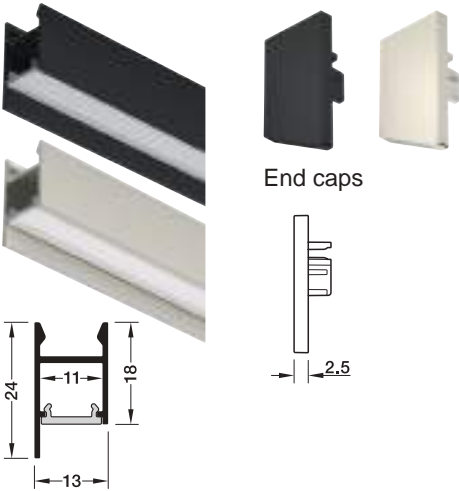


End caps

| > Material: | Profile: Aluminium, Diffuser: Plastic |
| --- | --- |
| > Finish/colour: | Profile: Anodized, Diffuser: White opal, transmittance 70–80 % |
| > Length: | 3000 mm |
| > Diffuser width: | 11 mm |
| > Supplied with: | 1 aluminium profile<br>1 diffuser white opal |

| Colour | Profile 2104 |
| --- | --- |
| Black | 833.95.739 |
| Brushed stainless steel coloured | 833.95.765 |

**!  Order reference**
Please order (mandatory) mounting bracket separately.

**!  Diffusers**
The diffuser creates a uniform light.
The LED points are invisible from 120 LEDs/m.
If required, please order alternative diffuser in black opal separately.

➡ Diffusers see page 52

**+  End caps for Häfele Loox5 profile 2104**
> Material:        Plastic
> Version:        With drill mark for cable outlet
> Supplied with:    5 pairs of end caps

| Colour | End cap 2104 |
| --- | --- |
| Black | 833.95.784 |
| Brushed stainless steel coloured | 833.95.785 |
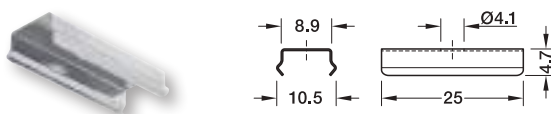


Mounting bracket for concealed fixing

**+  Mounting bracket**
> Material:        Stainless steel
> Mounting:        For screw fixing
> Supplied with:    5 pairs of mounting brackets

| | Article No. |
| --- | --- |
| Mounting bracket | 833.95.761 |

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# Profiles for surface mounting

## Aluminium

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### Häfele Loox profile for surface mounting
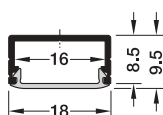
End cap

Retaining clip

| > Material: | Aluminium |
| > Finish/colour: | Silver coloured anodized |
| > Length x width: | 2500 x 18 mm |
| > Height: | 9.5 mm |
| > Supplied with: | 1 profile, 1 diffuser |

| Colour | Cat. No. |
| --- | --- |
| Silver coloured with milky diffuser | 833.72.840 |

**Note**
LED points are always visible when this profile is used.
Permanent operation (≥8 hours/day) only with LED strip lights up to 9.6 W/m.

**End cap for 833.72.840**

| > Material: | Plastic, silver coloured |
| > Supplied with: | 2 pieces |

| Colour | Cat. No. |
| --- | --- |
| Silver coloured | 833.72.852 |

**Retaining clip for 833.72.840**

| > Material: | Stainless steel, silver coloured |
| > Supplied with: | 2 pieces |

| Version | Cat. No. |
| --- | --- |
| Retaining clip | 833.74.832 |

Diffusers see page 52

End cap

Retaining clip

| > Material: | Aluminium |
| > Finish/colour: | Silver coloured anodized |
| > Length x width: | 2500 x 18 mm |
| > Height: | 14 mm |
| > Supplied with: | 1 profile, 1 diffuser |

| Colour | Cat. No. |
| --- | --- |
| Silver coloured with milky diffuser | 833.72.841 |

**End cap for 833.72.841**

| > Material: | Plastic |
| > Supplied with: | 2 pieces |

| Colour | Cat. No. |
| --- | --- |
| Silver coloured | 833.72.853 |

**Retaining clip for 833.72.841**

| > Material: | Stainless steel, silver coloured |
| > Supplied with: | 2 pieces |

| Version | Cat. No. |
| --- | --- |
| Retaining clip | 833.74.832 |

Diffusers see page 52

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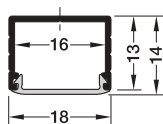
# Profiles for surface mounting

## Aluminium

### Häfele Loox profile for surface mounting, with attached diffuser housing
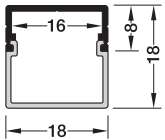
> Material:            Profile: Aluminium
                       Diffuser housing: Plastic
> Finish/colour:       Profile: Silver coloured anodized
                       Diffuser housing: Milky
> Length x width:      2500 x 18 mm
> Height:              18 mm
> Supplied with:       1 aluminium profile
                       1 diffuser housing milky

| Colour | Cat. No. |
|---|---|
| Silver coloured with diffuser housing | 833.74.813 |

End cap

Retaining clip

**End cap for 833.74.813**
> Material:         Plastic
> Version:          With cable outlet
> Supplied with:    2 pieces

| Colour | Cat. No. |
|---|---|
| Silver coloured | 833.74.823 |

**Retaining clip for 833.74.813**
> Material:         Stainless steel
> Application:      For mounting as downlight
> Supplied with:    2 pieces

| Version | Cat. No. |
|---|---|
| Retaining clip | 833.74.832 |

### Häfele Loox corner profile
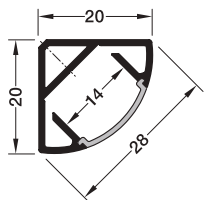
End cap

Holder

Mounting plate

> Material:            Aluminium
> Finish/colour:       Profile: Silver coloured anodized
                       Diffuser: Milky
> Length x width:      2500 x 28 mm
> Height:              20 mm
> Supplied with:       1 aluminium profile
                       1 diffuser milky

| Colour | Cat. No. |
|---|---|
| Silver coloured | 833.74.812 |

**End cap and holder/ mounting plate**
> Material:         End cap and holder: Plastic, silver
                    coloured: Mounting plate: Stainless steel
> Supplied with:    2 pieces

| | Cat. No. |
|---|---|
| End cap | 833.74.822 |
| Holder | 833.74.825 |
| Mounting plate | 833.74.826 |

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# HÄFELE

# Profiles for surface mounting

## Aluminium

### Häfele Loox drawer profile
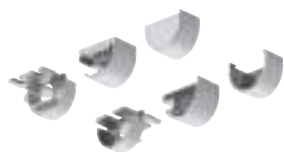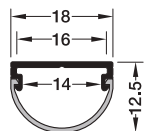




End caps



Retaining clip



Door Sensors

| | |
|---|---|
| > Material: | Aluminium |
| > Finish/colour: | Profile: Silver coloured anodized |
| | Diffuser: Milky |
| > Length x width: | 2500 x 18 mm |
| > Height: | 12.5 mm |
| > Supplied with: | 1 aluminium profile |
| | 1 diffuser milky |

| Colour | Cat. No. |
|---|---|
| Silver coloured | **833.74.835** |

**End cap set**

| | |
|---|---|
| > Material: | ABS plastic, silver coloured |
| > Supplied with: | 5 sets of end caps, fixing screws |

| | Cat. No. |
|---|---|
| End cap set | **833.74.877** |

**Retaining clip**

| | |
|---|---|
| > Material: | Stainless steel, silver coloured |
| > Supplied with: | 2 pieces |

| | Cat. No. |
|---|---|
| Retaining clip | **833.74.893** |

**Door sensor**

| | Cat. No. |
|---|---|
| Door sensors for Loox drawer profile (30W) | **833.89.110** |

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# Profiles
## Aluminium

### Häfele Loox wardrobe rail, asymmetric light distribution

Rail end support,
side panel

Wardrobe rail,
rail centre support
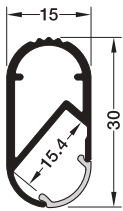
| | |
|---|---|
| > Material: | Aluminium |
| > Finish/colour: | Profile: Silver coloured anodized |
| | Diffuser: Milky |
| > Length x width: | 2500 x 15 mm |
| > Height: | 30 mm |
| > Supplied with: | 1 aluminium profile |
| | 1 diffuser milky |

| Colour | Cat. No. |
|---|---|
| Silver coloured | 833.72.790 |

**!** LED points are always visible when this profile is used.

**+** **Rail end support, side panel**

| | |
|---|---|
| > Material: | Zinc alloy |
| > Mounting: | For screw fixing to side panel |
| > Supplied with: | 1 piece |

| | Cat. No. |
|---|---|
| Rail end support, side panel | 803.33.757 |

**Rail centre support, wardrobe rail**

| | |
|---|---|
| > Material: | Zinc alloy, chrome plated |
| > Mounting: | For screw fixing |
| > Supplied with: | 1 piece |

| | Cat. No. |
|---|---|
| Wardrobe rail, rail centre support | 802.07.200 |

### Häfele Loox glass edge profile
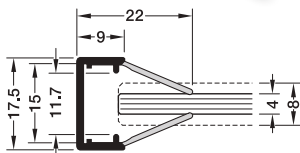
| | |
|---|---|
| > Material: | Poly-carbonate |
| > Finish/colour: | Profile: Silver coloured |
| | Diffusers: Milky |
| > Length x width: | 2000 x 17.5 mm |
| > Height: | 22 mm |
| > Application: | For screw fixing |
| > Supplied with: | 1 aluminium profile |
| | 2 diffusers milky |

| Colour | Cat. No. |
|---|---|
| Silver coloured | 833.74.733 |

**Effect of the glass edge on the light**
> **Glass edge with satin finish = even light line**
> **Clear glass edge = point light**

**!** For manufacturing customised glass edge lighting for glass thicknesses of 4–8 mm.
Without load bearing function.
Only for LED strip lights with max. 9.6 W/m.
Note the dimensions of the clip connector.

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# Profiles

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## Häfele two way aluminium profile

| | |
|---|---|
| > Material: | Aluminium |
| > Finish/colour: | Silver coloured anodized |
| | Diffuser: Milky |
| > Length x width: | 2500 x 50 mm |
| > Height: | 19 mm |

| Colour | Cat. No. |
|---|---|
| Silver coloured | **833.01.720** |

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# Diffusers

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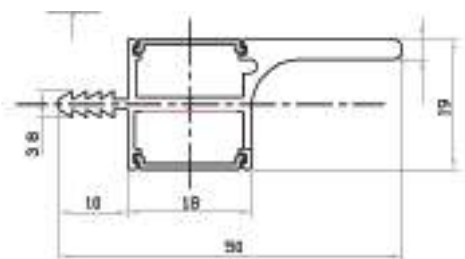
**Häfele Loox5 diffusers for profiles for recess mounting 1103 / 1104 / 1106 / 1107 as well as for profiles for surface mounting 2102 & 2104**

Dimensions
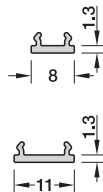
> Material: Plastic
> Length: 3000 mm
> Supplied with: 1 diffuser

| Width mm | Transmittance black, ~25 % |
|---|---|
| 8 | 833.95.758 |
| 11 | 833.95.759 |

⚠ The LED points are invisible from 120 LEDs/m. When using the black diffuser, LED points may be visible.

**Replacement diffuser for Loox profiles with 16 mm internal dimension**
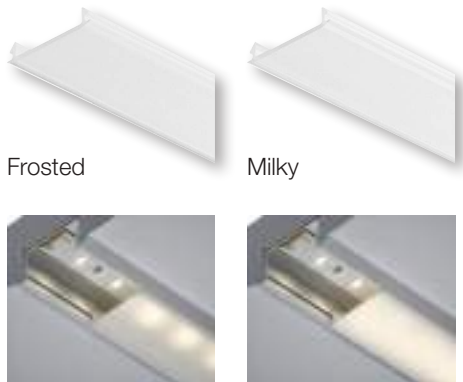
Frosted    Milky

**Diffuser version: Protruding, for push fitting**

> Material: Plastic
> Length: 2500 mm
> Supplied with: 1 diffuser

| Diffuser | Frosted | Milky |
|---|---|---|
| Protruding, for push fitting | 833.74.780 | 833.74.781 |

**Diffuser version: Flush, for sliding in**

> Material: Plastic
> Length: 2500 mm
> Supplied with: 1 diffuser

| Diffuser | Frosted | Milky |
|---|---|---|
| Protruding, flush for sliding in | 833.72.858 | 833.72.859 |

⚠
> Simple replacement of existing diffusers in order to switch from frosted to milky
> Cannot be used for the following aluminium profiles: 833.74.812, 833.74.813 or for aluminium profiles with curved diffusers
> Can be used only with Loox aluminium profiles

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LO●X5

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# Recess/surface mounted downlights

Monochrome, drill hole Ø: 55 mm

**Häfele Loox LED 2047**



**12 V SYSTEM**

> Dimmable:              Yes
> Material:              Steel
> Finish:                Polished chrome plated
> Energy efficiency class: A+
> Degree of protection:  IP20
> Mounting:              For mounting in drilled hole, for clamp fixing or for screw fixing
> Drill hole Ø:          55 mm
> Supplied with:         1 light with 2 m lead

**12 V** Loox 12 V driver see page 92

| 3000 K | 4000 K | 5000 K | 120° |
|--------|--------|--------|------|
| 560 lx | 570 lx | 670 lx | 250 mm |
| 210 lx | 215 lx | 245 lx | 500 mm |
| 115 lx | 115 lx | 135 lx | 750 mm |
| 75 lx | 75 lx | 90 lx | 1000 mm |
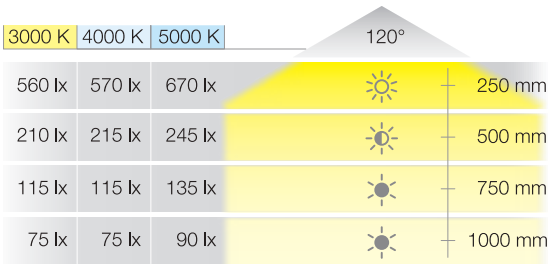
LED 2047

| Voltage V | Number of LEDs | Colour temperature K | Wattage W | Luminous flux lm | Luminous efficacy lm/W | Colour rendering index CRI $R_a$ | Weighted energy consumption kWh/1000 h | Cat.No |
|-----------|----------------|---------------------|-----------|------------------|------------------------|----------------------------------|----------------------------------------|--------|
| **12 V** | **Häfele Loox LED 2047** | | | | | | | |
| | | 3000 | 3 | 210 | 70 | 90 | 3.3 | **833.72.300** |
| | 24 | 4000 | 3 | 216 | 72 | 90 | 3.3 | **833.72.301** |
| | | 5000 | 3 | 240 | 80 | 83 | 3.3 | **833.72.302** |

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## Häfele Loox LED 2047

**Downlight housing**

| Colour | Cat. No. |
|---|---|
| Polished chrome plated | **833.72.802** |

Ø8
14
0.8
Ø55
Ø65

Recess mounting

Ø8
15.5
0.8
Ø66.5
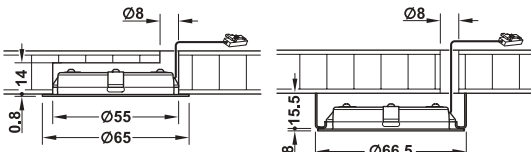
Mounting as downlight

# Recess/surface mounted downlight

Modular, drill hole Ø: 58 mm

**Häfele Loox LED 2026**

**12 V SYSTEM**

> Dimmable: Yes
> Material: Aluminium
> Finish: Polished chrome plated
> Energy efficiency class: A+
> Degree of protection: IP44 as recess mounted downlight; IP20 as surface mounted downlight
> Mounting: For mounting in drilled hole, for clamp fixing or for screw fixing
> No. of LED 6
> Drill hole Ø: 58 mm
> Supplied with: 1 light module

**Note**
The IP44 degree of protection is reduced to IP20 when mounting as downlight or recess mounting with through hole.

**Order reference**
Please order lead and housing separately.

**12 V** Loox 12 V driver see page 92

| 2700 K | 3000 K | 4000 K | 5000 K | 80° |
|--------|--------|--------|--------|--------|
| 1400 lx | 1800 lx | 1850 lx | 1950 lx | 250 mm |
| 400 lx | 500 lx | 520 lx | 550 lx | 500 mm |
| 175 lx | 225 lx | 235 lx | 250 lx | 750 mm |
| 100 lx | 125 lx | 135 lx | 140 lx | 1000 mm |

LED 2026

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HÄFELE

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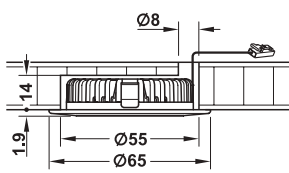
DISTRIBUTING

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## Häfele Loox LED 2026

| Voltage | Quantity | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | | Weighted energy consumption | Cat. No. |
|---|---|---|---|---|---|---|---|---|---|
| V | LEDs | K | W | lm | lm/W | $R_a$ | $R_9$ | kWh/1000 h | |
| **12 V** | **Häfele Loox LED 2026** | | | | | | | | |
| | 1 | 2700 | 3.0 | 185 | 62 | >90 | – | 3.30 | **833.72.360** |
| | | 3000 | 3.0 | 210 | 70 | >90 | – | 3.30 | **833.72.361** |
| | | 4000 | 3.0 | 221 | 74 | >90 | – | 3.30 | **833.72.362** |
| | | 5000 | 3.0 | 260 | 87 | >83 | – | 3.30 | **833.72.137** |

Recess mounted housing

Ø8 · 13.5 · 2.6 · Ø58 · □65
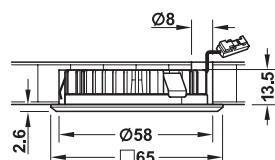
Recess mounting, square

Ø8 · 13.5 · 2.6 · Ø58 · Ø65
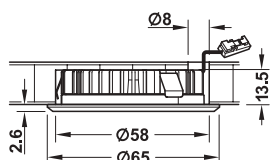
Recess mounting, round

Downlight housing

Ø8 · 16 · □65
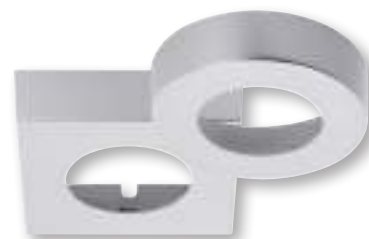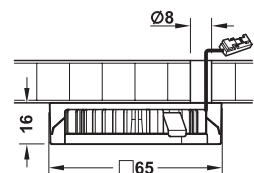
Mounting as downlight, square

Ø8 · 16 · Ø65
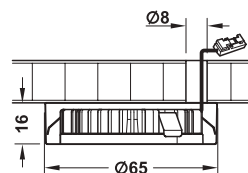
Mounting as downlight, round
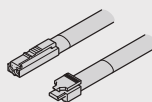
### Lead, 1.5 A/24 AWG, with snap-in connector

| Voltage | Length | Cat. No. |
|---|---|---|
| **12 V** | 500 mm | **833.72.880** |
| | 1000 mm | **833.72.881** |
| | 2000 mm | **833.72.882** |

### Housing for recess mounting, plastic

| Colour | Round | Square |
|---|---|---|
| Silver coloured | **833.72.126** | **833.72.127** |
| Black | **833.72.168** | **833.72.172** |
| Stainless steel coloured | **833.72.382** | **833.72.385** |

### Downlight housing, plastic

| Colour | Round | Square |
|---|---|---|
| Silver coloured | **833.72.124** | **833.72.125** |
| Black | **833.72.160** | **833.72.164** |
| Stainless steel coloured | **833.72.194** | **833.72.197** |

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

LOOX5

# Recess/surface mounted downlights

Multi-white, drill hole Ø: 55 mm

**Häfele Loox LED 2048 / 3039**



12 V/ 24V
SYSTEM

warm white
cool white

| 2700 K | 5000 K | | 120° |
|--------|--------|---|------|
| 290 lx | 345 lx | ☀ | 250 mm |
| 110 lx | 130 lx | ☀ | 500 mm |
| 60 lx | 70 lx | ☀ | 750 mm |
| 40 lx | 45 lx | ☀ | 1000 mm |

LED 2048

| 2700 K | 5000 K | | 120° |
|--------|--------|---|------|
| 335 lx | 350 lx | ☀ | 250 mm |
| 125 lx | 130 lx | ☀ | 500 mm |
| 70 lx | 70 lx | ☀ | 750 mm |
| 45 lx | 45 lx | ☀ | 1000 mm |

LED 3039

| | |
|---|---|
| > Dimmable: | Yes, via Häfele BLE box |
| > Material: | Steel |
| > Finish: | Silver coloured, Polished chrome plated |
| > Energy efficiency class: | A+ |
| > Degree of protection: | IP20 |
| > Mounting: | For mounting in drilled hole, for clamp fixing or for screw fixing |
| > Drill hole Ø: | 55 mm |
| > Supplied with: | 1 light with 2 m multi-white lead |

**!** Use Hafele BLE Box to operate Multi white LED Lights. See page 88

**12 V** Loox 12 V driver see page 92

**24 V** Loox 24 V driver see page 93

5 YEARS GUARANTEE* · c(UL)us · RoHS · IP20 · R36733

## Häfele Loox LED 2048 / 3039

| Voltage V | Number of LEDs | Colour tempera-ture K | Wattage W | Luminous flux lm | Luminous efficacy lm/W | Colour ren-dering index CRI $R_a$ | Weighted energy con-sumption kWh/1000 h | Silver colour-ed | Polished chrome plated |
|---|---|---|---|---|---|---|---|---|---|
| 12 V | **Häfele Loox LED 2048** | | | | | | | | |
| | 60 | 2700 - 5000 | 3 | 255 | 85 | 90 83 | 3.3 | **833.72.311** | **833.72.310** |
| 24 V | **Häfele Loox LED 3039** | | | | | | | | |
| | 60 | 2700 - 5000 | 3 | 258 | 85 | 90 83 | 3.3 | **833.75.131** | **833.75.130** |

**Downlight housing**

| Colour | Cat. No. |
|---|---|
| Silver coloured | 833.72.803 |
| Polished chrome plated | 833.72.802 |
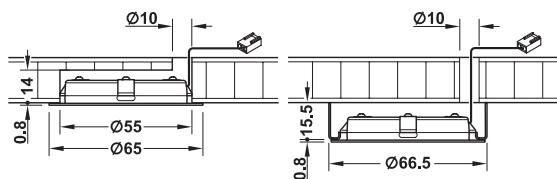
Recess mounting          Mounting as downlight
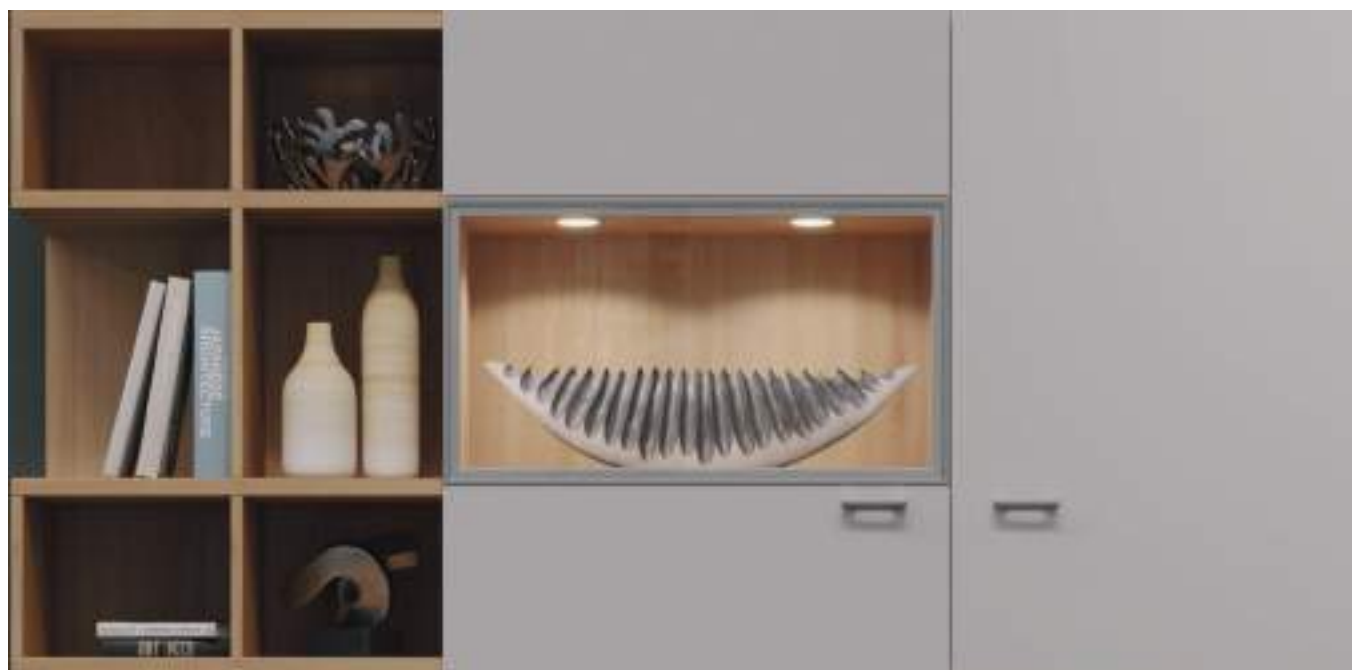
# Recess/surface mounted downlights

Monochrome, drill hole Ø: 55 mm

**Häfele Loox LED 2020**

12 V
SYSTEM

| > Dimmable: | Yes |
|---|---|
| > Material: | Zinc alloy |
| > Finish: | Black, Matt nickel plated, Polished chrome plated |
| > Energy efficiency class: | A |
| > Degree of protection: | IP44 as recess mounted downlight; IP20 with downlight housing (surface mounted downlight) |
| > Number of LEDs: | 6 |
| > Mounting: | For mounting in drilled hole, for clamp fixing or for screw fixing |
| > Drill hole Ø: | 55 mm |
| > Supplied with: | 1 light with 2 m lead, including fixing materials |

| 3000 K | 4000 K | 5000 K | 100° | |
|---|---|---|---|---|
| 760 lx | 860 lx | 840 lx | ☀ | 250 mm |
| 190 lx | 215 lx | 210 lx | ☀ | 500 mm |
| 85 lx | 95 lx | 95 lx | ☀ | 750 mm |
| 48 lx | 50 lx | 50 lx | ☀ | 1000 mm |

🔌 **12 V** Loox 12 V driver see page 92

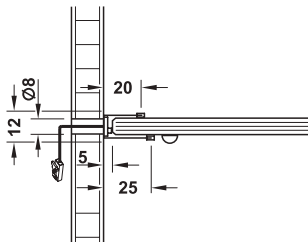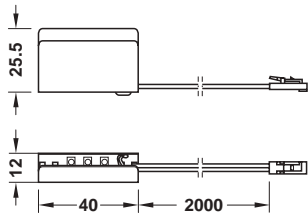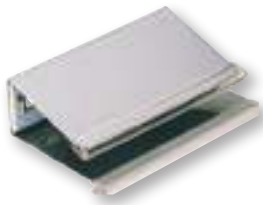❗ The IP44 degree of protection is reduced to IP20 when mounting as downlight or recess mounting with through hole.

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Black | Matt nickel plated | Polished chrome plated |
|---|---|---|---|---|---|---|---|---|---|
| V | K | W | lm | lm/W | Ra | kWh/1000 h | | | |
| 12 V | 3000 | 3.2 | 142 | 44 | 83 | 3.52 | **833.72.281** | **833.72.280** | **833.72.282** |
| | 4000 | 3.2 | 150 | 47 | 83 | 3.52 | **833.72.284** | **833.72.283** | **833.72.285** |
| | 5000 | 3.2 | 150 | 47 | 83 | 3.52 | **833.72.287** | **833.72.286** | **833.72.288** |

5 YEARS GUARANTEE* · c UL us R36733 · RoHS · IP20 IP44

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

## Häfele Loox LED 2020

**Downlight housing**

| Colour | Cat. No. |
|---|---|
| Black | **833.72.801** |
| Matt nickel plated | **833.72.800** |
| Polished chrome plated | **833.72.802** |

Ø8
14
1.9
Ø55
Ø65

Recess mounting

Ø8
15.5
1.9
46
Ø66.5

Mounting as downlight

# Recess/surface mounted downlights

Monochrome, drill hole Ø: 26 mm

**Häfele Loox LED 2022**



**12 V SYSTEM**

| | | |
|---|---|---|
| > Dimmable: | Yes | |
| > Material: | Aluminium | |
| > Finish: | Silver coloured anodized | |
| > Energy efficiency class: | A+ | |
| > Degree of protection: | IP44 as recess mounted downlight; IP20 with downlight housing (surface mounted downlight) | |
| > Number of LEDs: | 3 | |
| > Mounting: | For mounting in drilled hole, for clamp fixing or for screw fixing | |
| > Drill hole Ø: | 26 mm | |
| > Supplied with: | 1 light with 2 m lead | |

| 3000 K | 4000 K | 5000 K | | 90° |
|---|---|---|---|---|
| 650 lx | 650 lx | 650 lx | ☀ | 250 mm |
| 163 lx | 163 lx | 163 lx | ☀ | 500 mm |
| 72 lx | 72 lx | 72 lx | ☀ | 750 mm |
| 40 lx | 40 lx | 40 lx | ☀ | 1000 mm |

**12 V** Loox 12 V driver see page 92

⚠ The IP44 degree of protection is reduced to IP20 when mounting as downlight or recess mounting with through hole.

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Cat. No. |
|---|---|---|---|---|---|---|---|
| V | K | W | lm | lm/W | R$_a$ | kWh/1000 h | |
| 12 V | 3000 | 1.5 | 105 | 70 | 82 | 1.65 | **833.72.040** |
| | 4000 | 1.5 | 105 | 70 | 87 | 1.65 | **833.72.041** |
| | 5000 | 1.5 | 105 | 70 | 88 | 1.65 | **833.72.042** |

**5 YEARS GUARANTEE*** c UL us R36733 RoHS IP20 IP44

# Häfele Loox LED 2022

## Downlight housing, round

| Colour | Cat. No. |
|---|---|
| Silver coloured anodized | 833.72.831 |

## Downlight housing, wedge-shaped

| Colour | Cat. No. |
|---|---|
| Silver coloured anodized | 833.72.832 |
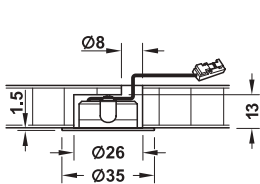
Ø8
1.5
Ø26
Ø35
13

Recess mounting

Ø8
1.5
14.5
Ø35

Mounting as downlight

Ø8
20°
11.3
23
Ø35

Illuminating – Point light / 63

ILLUMINATING
EXTENDING
SWITCHING
NETWORKING
DISTRIBUTING
SUPPLYING
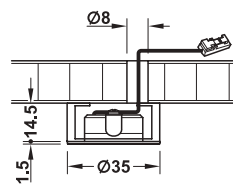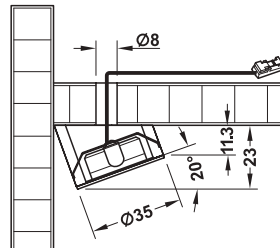
# Recess mounted downlights

Monochrome, drill hole Ø: 58 mm

**Häfele Loox LED 2039**



**12 V SYSTEM**
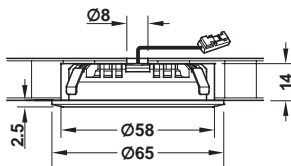
> Dimmable: Yes
> Material: Zinc alloy
> Finish: Matt nickel plated
> Energy efficiency class: A
> Degree of protection: IP65 after installation
> Number of LEDs: 18
> Mounting: For mounting in drilled hole, for clamp fixing
> Drill hole Ø: 58 mm
> Supplied with: 1 light with 4 m lead

**12 V** Loox 12 V driver see page 92
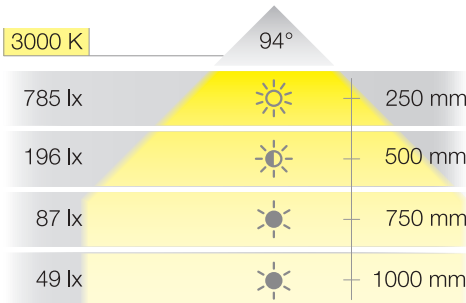
| 3000 K | 94° | |
|---|---|---|
| 785 lx | | 250 mm |
| 196 lx | | 500 mm |
| 87 lx | | 750 mm |
| 49 lx | | 1000 mm |

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Cat. No. |
|---|---|---|---|---|---|---|---|
| V | K | W | lm | lm/W | $R_a$ | kWh/1000 h | |
| 12 V | 3000 | 2.5 | 125 | 50 | 85 | 2.75 | **833.72.091** |

5 YEARS GUARANTEE* · c UL us R36733 · RoHS · III · IP20 IP44

# Recess mounted downlights

Monochrome, sensor-controlled, drill hole Ø: 40 mm

HÄFELE

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

**Häfele Loox LED 2028 with motion detector**

12 V
SYSTEM
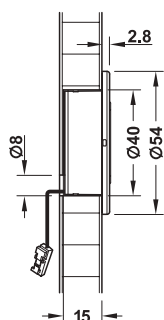
| | |
|---|---|
| > Dimmable | No |
| > Material: | Stainless steel, plastic |
| > Finish: | Black |
| > Version: | With motion detector active from a decreasing ambient light of 15 lx |
| > Energy efficiency class: | A+ |
| > Degree of protection: | IP44 |
| > Delay time: | approx. 2 min. |
| > Sensor range: | 0–3000 mm |
| > Number of LEDs: | 3 |
| > Mounting: | For mounting in drilled hole |
| > Drill hole Ø: | 40 mm |
| > Supplied with: | 1 light with 2 m lead including fixing materials |

**12 V** Loox 12 V driver see page 92

| 2700 K | 69° |
|---|---|
| 26 lx | 250 mm |
| 7 lx | 500 mm |
| 3 lx | 750 mm |
| 1.6 lx | 1000 mm |

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Cat. No. |
|---|---|---|---|---|---|---|---|
| V | K | W | lm | lm/W | $R_a$ | kWh/1000 h | |
| 12 V | 2700 | 0.3 | 4 | 13 | 90 | 0.37 | **833.73.111** |

**5 YEARS GUARANTEE*** ᶜ(UL)ᵁˢ R36733 RoHS III IP20 / IP44

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# Glass edge light

Monochrome

**12 V SYSTEM**

**Effect of the glass edge on the light**
> **Glass edge with satin finish = even light line**
> **Clear glass edge = point light**

| | |
|---|---|
| > Dimmable: | Yes |
| > Material: | Stainless steel |
| > Length x width: | 40 x 25.5 mm |
| > Height: | 12 mm |
| > Degree of protection: | IP20 |
| > Number of LEDs: | 3 |
| > Mounting: | Is pushed onto the glass shelf from the rear |
| > Glass thickness: | 6–12 mm |
| > Supplied with: | 1 light with 2 m lead |

**!**    Without load bearing function

**12 V**    Loox 12 V driver see page 92

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Finish/colour | Cat. No. |
|---|---|---|---|---|---|---|---|---|
| | K | W | lm | lm/W | $R_a$ | kWh/1000 h | | |
| 12 V | 4000 | 0.2 | 15 | 75 | 88 | 0.22 | Bright | **833.74.130** |
| | 6000 | 0.2 | 19 | 95 | 84 | 0.22 | Bright | **833.74.120** |

5 YEARS GUARANTEE*   c UL us   R36733   RoHS   IP20

# Surface mounted downlights

Monochrome, Ø 65 mm

**Häfele Loox LED 2027**



**12 V SYSTEM**
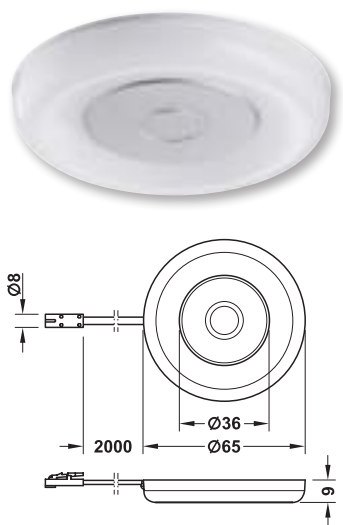
> Dimmable: Yes
> Material: Aluminium, plastic
> Finish: Silver coloured
> Diameter: 65 mm
> Height: 9 mm
> Energy efficiency class: A+
> Degree of protection: IP20
> Number of LEDs: 27
> Mounting: For screw fixing
> Supplied with: 1 light with 2 m lead, including fixing materials

**12 V** Loox 12 V driver see page 92

| 3000 K | 4000 K | 5000 K | | 117° |
|---|---|---|---|---|
| 867 lx | 884 lx | 918 lx | | 250 mm |
| 216 lx | 221 lx | 229 lx | | 500 mm |
| 96 lx | 98 lx | 102 lx | | 750 mm |
| 54 lx | 55 lx | 57 lx | | 1000 mm |

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Cat. No. |
|---|---|---|---|---|---|---|---|
| V | K | W | lm | lm/W | R_a | kWh/1000 h | |
| 12 V | 3000 | 2.6 | 190 | 73 | 85 | 2.86 | **833.72.050** |
| | 4000 | 2.6 | 208 | 80 | 85 | 2.86 | **833.72.051** |
| | 5000 | 2.6 | 218 | 84 | 85 | 2.86 | **833.72.052** |

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ILLUMINATING · EXTENDING · SWITCHING · NETWORKING · DISTRIBUTING · SUPPLYING

LOOX5

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# Flexible surface mounted lights

Monochrome with USB

**Häfele Loox LED 2034**



12 V SYSTEM

WITH USB CHARGING STATION

450
Ø36
15
Ø50
Ø8
Ø50
Ø50
15.5

> Dimmable: Yes
> Version: Integrated twin USB charging station 5 V / 2 A, integrated push switch for 2 brightness levels
> Material: Aluminium
> Length x width: 450 x 50 mm
> Height: 15.5 mm
> Energy efficiency class: A+
> Degree of protection: IP20
> Number of LEDs: 3
> Mounting: For screw fixing beneath magnetic cover
> Supplied with: 1 light with 2 m lead including fixing materials

12 V   Loox 12 V driver see page 92

Min. 20 W driver per light for optimum operation of the USB charging station.
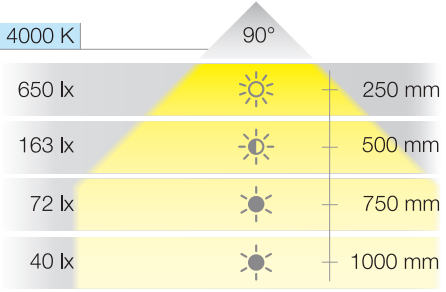
| 4000 K | 90° | |
|---|---|---|
| 650 lx | ☀ | 250 mm |
| 163 lx | ☀ | 500 mm |
| 72 lx | ☀ | 750 mm |
| 40 lx | ☀ | 1000 mm |

| Voltage | Colour temperature K | Wattage W | Luminous flux lm | Luminous efficacy lm/W | Colour render-ing index CRI $R_a$ | Weighted en-ergy consump-tion kWh/1000 h | Finish/ colour | Cat. No. |
|---|---|---|---|---|---|---|---|---|
| 12 V | 4000 | 17 (light: 1.5) | 105 | 70 | 82 | 1.65 | Black | **833.74.097** |

5 YEARS GUARANTEE*   UL us R36733   RoHS   IP20

# Flexible surface mounted lights

Monochrome

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

**HÄFELE**

## Häfele Loox LED 2035

**12 V SYSTEM**

> Dimmable:                    Yes
> Version:                     Integrated push switch for 2 brightness
>                              levels
> Material:                    Aluminium
> Length x width:              450 x 50 mm
> Height:                      15.5 mm
> Energy efficiency class:     A+
> Degree of protection:        IP20
> Number of LEDs:              3
> Mounting:                    For screw fixing beneath magnetic cover
> Supplied with:               1 light with 2 m lead,
>                              including fixing materials

**12 V** Loox 12 V driver see page 92

450
Ø36
15
Ø50
Ø8
Ø50
Ø50
15.5

| 4000 K | | 90° |
|---|---|---|
| 650 lx | | 250 mm |
| 163 lx | | 500 mm |
| 72 lx | | 750 mm |
| 40 lx | | 1000 mm |

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Finish/colour | Cat. No. |
| | K | W | lm | lm/W | $R_a$ | kWh/1000 h | | |
|---|---|---|---|---|---|---|---|---|
| 12 V | 4000 | 1.5 | 105 | 70 | 82 | 1.65 | Black | **833.74.153** |

**5 YEARS GUARANTEE** · **UL** us R36733 · **RoHS** · IP20

LOOX5

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# Recess mounted lights

Monochrome

**Häfele Loox LED 2036**



**12 V SYSTEM**

The LED 2036 impresses with its extremely homogeneous, extensive light, which is also reinforced by the illuminated edge. The acrylic glass gives this light a high-quality appearance.

> Dimmable:                   Yes
> Material:                   Aluminium, acrylic glass
> Length:                     250 mm
> Width:                      50 mm
> Height:                     18.5 mm
> Energy efficiency class:    A+
> Number of LEDs:             36
> Supplied with:             1 light with 2 m lead,
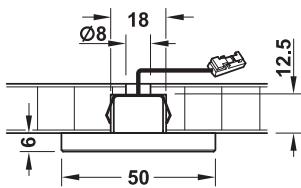
**12 V** Loox 12 V driver see page 92

| 3000 K | 4000 K | 5000 K | 100° |
|--------|--------|--------|------|
| 984 lx | 1015 lx | 1033 lx | 250 mm |
| 246 lx | 250 lx | 255 lx | 500 mm |
| 109 lx | 110 lx | 114 lx | 750 mm |
| 62 lx | 65 lx | 66 lx | 1000 mm |

| Voltage | Colour temperature | Wattage | Luminous flux | Luminous efficacy | Colour rendering index CRI | Weighted energy consumption | Finish/colour | Cat. No. |
| | K | W | lm | lm/W | R$_a$ | kWh/1000 h | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 12 V | 3000 | 3.6 | 182 | 51 | 82 | 3.96 | White | **833.72.080** |
| | 4000 | 3.6 | 190 | 53 | 82 | 3.96 | White | **833.72.081** |
| | 5000 | 3.6 | 210 | 58 | 82 | 3.96 | White | **833.72.082** |

**5 YEARS GUARANTEE\*** · UL us R36733 · RoHS · IP20

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# HÄFELE

—
# Recess/surface mounted downlights

Monochrome

## Häfele Loox LED 4004

350 mA
SYSTEM

The small and slimline LED 4004 puts objects firmly in the spotlight in the recess mounted and down lit area.

| > Dimmable: | Yes |
| > Material: | Plastic |
| > Height: | 12 mm |
| > Ø: | 30 mm |
| > Drill hole Ø: | 28 mm |
| > Number of LEDs: | 1 |
| > Energy efficiency class: | A+ |
| > Supplied with: | 3 lights with 2 m lead and housing each, and fixing material |

350 mA  Loox 350 mA driver see page 94

Ø9
2
10
Ø28
Ø30

Ø9
2
10
20
Ø30

3000 K                    130°

| 244 lx | 250 mm |
| 61 lx | 500 mm |
| 27 lx | 750 mm |
| 15 lx | 1000 mm |

| Voltage | Colour temperature<br><br>K | Wattage<br><br>W | Luminous flux<br><br>lm | Luminous efficacy<br><br>lm/W | Colour rendering index CRI<br><br>$R_a$ | Weighted energy consumption<br>kWh/1000 h | Finish/colour | Cat. No. |
|---|---|---|---|---|---|---|---|---|
| 350 mA | 3000 | 1 | 80 | 80 | 80 | 1.10 | Silver coloured | **833.78.080** |

5 YEARS GUARANTEE*  UL US  RoHS  IP20  R36733

# Recess/surface mounted downlights

Monochrome, round with lens

**Häfele Loox LED 4005**



**350 mA SYSTEM**

The LED 4005 can be used as a recess mounted or surface mounted downlight. The extremely small and flat design makes the light easy to integrate in the furniture design. The integrated lens also centres and intensifies the light spot.

> Dimmable: Yes
> Material: Plastic
> Height: 12 mm
> Ø: 30 mm
> Drill hole Ø: 28 mm
> Number of LEDs: 1
> Energy efficiency class: A+
> Supplied with: 3 lights with 2 m lead and housing each, and fixing material

350 mA Loox 350 mA driver see page 94

| 3000 K | 45° |
|---|---|
| 444 lx | 250 mm |
| 111 lx | 500 mm |
| 49 lx | 750 mm |
| 28 lx | 1000 mm |

| Voltage | Colour temperature K | Wattage W | Luminous flux lm | Luminous efficacy lm/W | Colour rendering index CRI $R_a$ | Weighted energy consumption kWh/1000 h | Finish/colour | Cat. No. |
|---|---|---|---|---|---|---|---|---|
| 350 mA | 3000 | 1 | 63 | 63 | 80 | 1.10 | Silver coloured | **833.78.100** |

**5 YEARS GUARANTEE\*** · RoHS · IP20

# Deco shelf light

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

## LED Decorative Box Shelf Light



INBUILT DRIVER

Deco LED Box Shelf Lights seamlessly blend into the environment giving a floating effect to your precious artefacts. The design accentuates your wall spaces, adding more light and airy feel in your room.

| | |
|---|---|
| > Material: | Aluminium with Glass Shelf |
| > Switching: | On /Off Switch Inbuilt |
| > Input Voltage: | 230V |
| > Supplied with: | Allen Key & Mounting Screws |
| > Driver: | Built-In Driver |
| > Life | 50,000 hours (LED) |
| > Warranty: | 2 year |

| Colour temperature K | Luminous Intensity lm | L X W X H mm | Output W | Load Bearing Capacity Kg | Cat. No. |
|---|---|---|---|---|---|
| 4000 | 350 | 600 X 200 X 40 | 10 | 1 | **833.14.670** |
| 4000 | 550 | 900 X 200 X 40 | 13 | 2 | **833.14.671** |
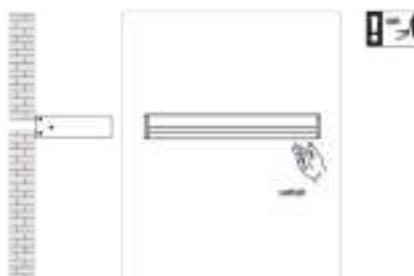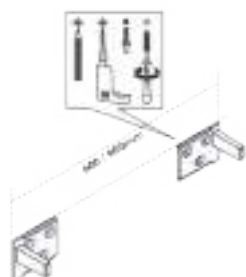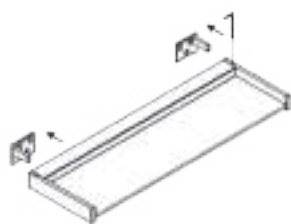




2 YEARS WARRANTY* R36733   RoHS   IP20

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# Deco shelf light

**LED Corner Shelf Light**



12 V
SYSTEM

Deco LED Corner Shelf Light reinforces the brightness in crisp white spaces and keep dark rooms from being too heavy. The design accentuates the corners of your wall spaces, adding more light and airy feel in your room.

> Material:          Aluminium with acrylic shelf
> Switching:         External switch
> Supplied with:     1.5m cable with MOLEX
                     connector and 2 side bracket
> Warranty:          2 years



| Volt-age | Colour temper-ature | Luminous Intensity | L X W X H | Output | Load Bearing Capacity | Cat. No. |
|---|---|---|---|---|---|---|
| | K | lm | mm | W | Kg | |
| 12 V | 4000 | 300 | 202 X 202 X 15 | 4.5W | 0.7 | **833.14.672** |

| | 12 V | Loox 12 V driver see page 92 |
|---|---|---|

2 YEARS WARRANTY* R36733    RoHS    IP20
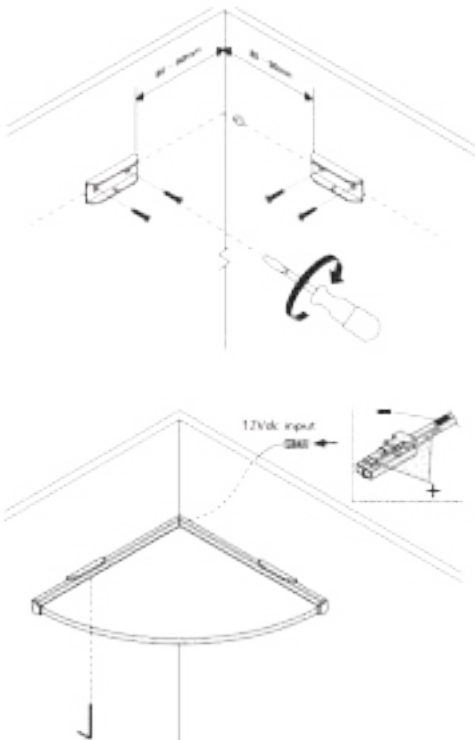
# Box shelf light

## LED Lit Glass Shelf Box



**INBUILT DRIVER**

Decorative lights add the much needed zing and drama to enhance your furniture and design objects. They add a dimension of style and aesthetics to match the individualist grace of your homes.
The effortless yet uniquely crafted designs speak utmost of the change it can bring to the entire ambience.

> Works directly on 220 VAL mains
> Switching: Built-in on/off switch
> Life: 50,000 hours (LED)
> Load bearing capacity: 10 kgs
> Driver: Built-in LED driver



50

200

L

Switch underneath

Glass shelf

View from above
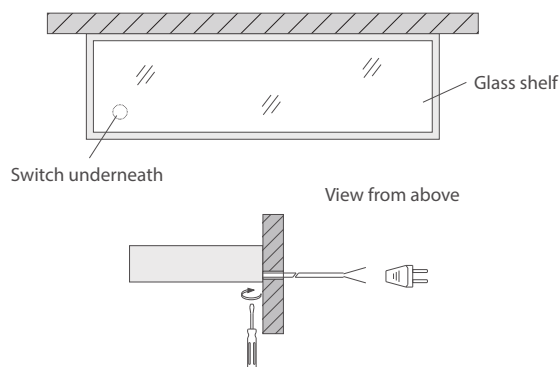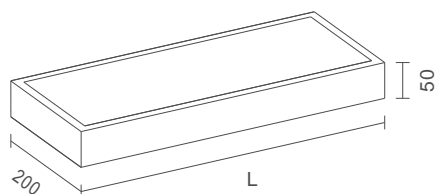
| Output | Colour temperature | L X W X H | Finish | Cat. No. |
| W | K | mm | | |
|---|---|---|---|---|
| 6 | 6400 | 600 X 200 X 50 | Silver Anodized Aluminium Profile | **833.14.271** |
| 9 | 6400 | 900 X 200 X 50 | Silver Anodized Aluminium Profile | **833.14.272** |

**2 YEARS WARRANTY\*** R36733 RoHS IP20

ILLUMINATING

EXTENDING

SWITCHING

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DISTRIBUTING

SUPPLYING

# LED drawer light & Two way profile light

**LED Drawer Light with Built-in Infra Red Sensor**

**12 V SYSTEM**

LED Drawer Light helps you locate and search through the drawer and cabinet contents. The inbuilt sensor gets activated by the movement of door, automatically switching on and off as you open and close the drawer / shutter.

> LED Drawer Light with Built-in Infra Red Sensor
> Silver Anodized Aluminium Profile
> Life: 50,000 hours

**LED drawer lights**

| Output W | Colour temperature K | L X W X H mm | Cat. No. |
|---|---|---|---|
| 2.4 | 6400 | 563 X 18 X 14 | **833.01.003** |
| 5.2 | 6400 | 863 X 18 X 14 | **833.01.006** |
| 6 | 5000 | 563 X 18 X 13 | **833.71.889** |
| 6 | 5000 | 863 X 18 X 13 | **833.71.836** |

The Two Way Profile Light helps illuminate the under-cabinet area as well as the area inside of the cabinet. It also simultaneously functions as a handle for your wall cabinet.

> Two Way Profile Light with Built-in Infra Red Sensor
> Silver Anodized Aluminium Profile
> Life: 50,000 hours

**Two way profile lights**

| Output W | Colour temperature K | L X W X H mm | Cat. No. |
|---|---|---|---|
| 11 | 3000 | 563 X 50 X 19 | **833.70.178** |
| 17 | 3000 | 863 X 50 X 19 | **833.70.179** |

**2 YEARS WARRANTY\*** R36733 RoHS IP20

# Extending

## Charging Stations

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

**Häfele Loox ESC 2002 inductive charging station** – for 12 V system
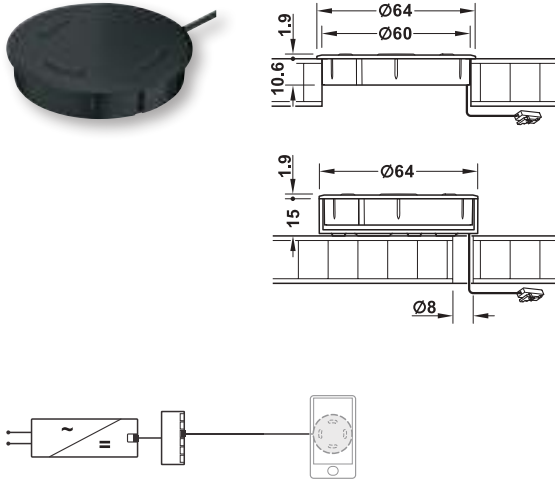
> Material/colour:        Plastic, matt black
> Diameter:               64
> Charging current:       1 A
> Output voltage:         5 V
> Standby power
  consumption:            0.3 W
> Power consumption:      Max. 10 W
> Standard:               WPC compatible
> Supplied with:          1 inductive charging station with
                          mounting ring and 2 m lead

| Voltage | | Cat. No. |
|---|---|---|
| 12 V | ESC 2002 inductive charging station | **833.73.776** |

⚠ Drill hole Ø for plug: 8 mm

🔌  12 V  Loox 12 V driver see page 92

---

**Häfele Loox ESC 2001 USB charging station, modular** – for 12 V system

> Material:               Plastic, matt
> Output voltage:         5 V
> Output current:         2 A
> Power consumption:      Max. 15 W
> Drill hole Ø:           35 mm
> Mounting:               For mounting in drilled hole,
                          for clamp fixing
> Supplied with:          1 USB charging station

| Colour | Round |
|---|---|
| Black | **833.73.751** |

**➕ Lead with snap-in connector**

| mm | Cat.No |
|---|---|
| 500 | **833.72.880** |
| 1000 | **833.72.881** |
| 2000 | **833.72.882** |

➡ Please order lead separately.

🔌  12 V  Loox 12 V driver see page 92

5 YEARS GUARANTEE*

# Sound systems

## 420 E sound system, exciter speakers



**12 V SYSTEM**

> Material/finish:        Plastic, black
> Dimensions.           140 x 45 x 15 mm (L x W x H)
> Power consumption:    Operation with 2 exciter speakers: Max. 19 W,
                        operation with 4 exciter speakers: Max. 32 W,
                        standby: <0.3 W
> Music wattage:        Operation with 2 or 4 exciter speakers:
                        2 x 10 W (RMS)
> Reception range:      Max. 10 m
> Mounting:             For screw fixing
> Supplied with:        1 Bluetooth® receiver with 2 m lead and
                        4 connections for exciter speakers,
                        incl. 2 exciter speakers

| Voltage | | Cat. No. |
|---|---|---|
| 12 V | 420 E sound system (stereo and 2 exciter speakers) | 822.65.034 |

**!** Please observe the installation regulations for bathrooms!
Can be installed on glass and mirror glass (3–6 mm each), acrylic
glass (3 mm), chipboard (10–20 mm) and mineral composite boards.

**12 V** Loox 12 V driver see page 92

**+ Exciter speaker**
> Dimensions:          Ø 65 x 22 mm
> Wattage:             Rated/music load capacity 4/15 W
> Mounting:            For screw fixing or for glue fixing
> Supplied with:       1 exciter speaker with 1 m speaker lead

| | Cat. No. |
|---|---|
| Exciter speaker (wattage with 12 V plug system) | 822.65.039 |
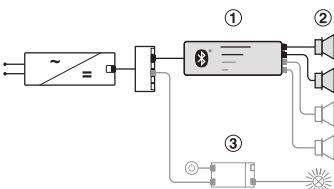
① Sound system
② Exciter speaker
③ 3-way distributor with switching function

5 YEARS WARRANTY*  FC  RoHS

HÄFELE

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# Pop-Up-Sockets

## Pop-up Socket



Less is indeed more! Functionality at a pull. Häfele integrates concepts of space efficiency, functionality, ease, entertainment and advanced technology seamlessly into its New Pop-up Socket Systems.

> Effective utilisation of space
> Reduces dependency on the traditional wall socket systems:
> Packs-in a unique dose of entertainment through the integrated Bluetooth audio system.
> Is splash-proof (IP54 in a close position) which means that it is resistant to water splashing from all directions

| Type | Dimensions (mm) | No. of Sockets | Input | Cat. No. |
|---|---|---|---|---|
| Pop-up Socket with Bluetooth Speaker | 430 x Ø100 | 10A universal socket x 2<br>USB socket (Max.2100mA) x 2<br>Bluetooth audio system x 1<br>On/Off neon switch x 1<br>2 meter cable with SA plug | 220 – 240 V ~ 50 Hz | **822.80.900** |
| Pop-up Socket without Bluetooth Speaker | 430 x Ø100 | 10A universal socket x 2<br>USB socket (Max.2100mA) x 2<br>On/Off neon switch x 1<br>2 meter cable with SA plug | 220 – 240 V ~ 50 Hz | **822.80.901** |

**2 YEARS WARRANTY\***

# Switching

## Symbol overview

**Sensor switch**
Touchless, soft on/off switching

**Door sensor switch**
Soft on/off switching

**Motion detector**
Automatic on/off switching

**Dimmer**
Soft on/off switching and dimming
10%    100%
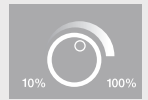
**Captive switch/dimmer**
Touchless on/off switching and dimming

**Universal door contact switch**
On/off switching

**Door contact switch**
On/off switching,
door close = light off,
door open = light on

**Rocker switch**
On/off switching

**ILLUMINATING**

**EXTENDING**

**SWITCHING**

**NETWORKING**

**DISTRIBUTING**

**SUPPLYING**

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# HÄFELE

# Sensor switches

## Häfele Loox sensor switch, modular – touchless, soft on/off switching

TOUCHLESS
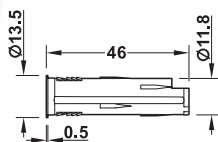
> Material/colour:       Plastic, silver coloured
> Degree of protection:  IP20
> Sensor range:          0–80 mm
> Power consumption:     ≤0.3 W
> Drill hole Ø:          12 mm
> Supplied with:         1 switch

Ø13.5   46   Ø11.8   0.5

|                         | Cat. No.    |
|-------------------------|-------------|
| Sensor switch, modular  | 833.89.127  |

➕ Please order lead with snap-in connector for modular switches driver separately. Length 2 m: Cat. No. 833.89.142. See page 84

❗ On/off state is stored without the need for power supply (memory function).

## Häfele Loox door sensor switch, modular – soft on/off switching
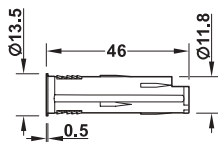
> Material/colour:       Plastic, silver coloured
> Degree of protection:  IP20
> Sensor range:          0–100 mm
> Power consumption:     ≤0.3 W
> Drill hole Ø:          12 mm
> Supplied with:         1 switch

Ø13.5   46   Ø11.8   0.5

|                            | Cat. No.    |
|----------------------------|-------------|
| Door sensor switch, modular| 833.89.128  |

➕ Please order lead with snap-in connector for modular switches driver separately. Length 2 m: Cat. No. 833.89.142. See page 84

## Häfele Loox motion detector, modular – automatic on/off switching
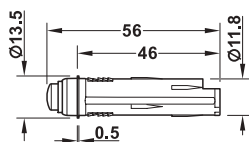
> Material/colour:       Plastic, silver coloured
> Degree of protection:  IP20
> Sensor range:          0–3000 mm
> Sensor angle:          120 °
> Power consumption:     ≤0.1 W
> Delay time:            30 sec.
> Drill hole Ø:          12 mm
> Supplied with:         1 motion detector

Ø13.5   56   46   Ø11.8   0.5

|                          | Cat. No.    |
|--------------------------|-------------|
| Motion detector, modular | 833.89.129  |

➕ Please order lead with snap-in connector for modular switches driver separately. Length 2 m: Cat. No. 833.89.142. See page 84

5 YEARS GUARANTEE*

# Sensor switches

## Häfele Loox dimmer, modular – automatic on/off switching

**WITH TOUCH/
TOUCHLESS**
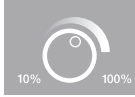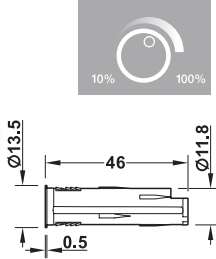
10%  100%

Ø13.5  46  Ø11.8  0.5

> Material/colour:        Plastic, silver coloured
> Degree of protection:   IP20
> Power consumption:      ≤0.3 W
> Drill hole Ø:           12 mm
> Supplied with:          1 dimmer

| Type | Sensor range | Cat. No. |
|------|-------------|----------|
| With touch | – | **833.89.058** |
| Touchless | 0–60 mm | **833.89.126** |

➕ Please order lead with snap-in connector for modular switches driver separately. Length 2 m: Cat. No. 833.89.142. See page 84

❗ Dimming value is stored without the need for voltage supply (memory function)

## Häfele Loox capacitive switch/dimmer, modular – touchless on/off switching and dimming

Ø12  ≤30  Ø35

9  ≤30
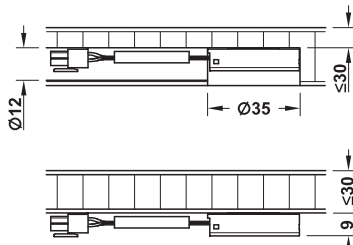
> Manual operation (proximity sensor), memory function
> Concealed installation in wood, glass or stone (not in metalliferous materials) at a maximum depth of 30 mm
> For screw fixing or recess mounting (drill hole Ø 35 mm)
> A distance of min. 500 mm to electromagnetic fields (power lines, microwave) must be adhered to.

> Material/colour:        Plastic, silver coloured
> Diameter:               35 mm
> Height:                 10 mm
> Degree of protection:   IP20
> Power consumption:      ≤1 W
> Supplied with:          1 switch

| | Cat. No. |
|---|----------|
| Capacitive switch/dimmer, modular | **833.89.133** |

This completely invisible operating solution opens up completely new possibilities in continuously adjustable light control.

➕ Please order lead with snap-in connector for modular switches driver separately. Length 2 m: Cat. No. 833.89.142. See page 84

# Sensor switches

## Häfele Loox dimmer, surface mounted modular – soft on/off switching and dimming

WITH TOUCH

With touch function
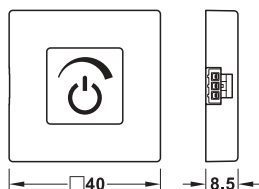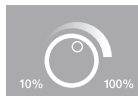
> Material/colour:        Plastic, silver coloured
> Dimesion:               40 x 40 x 8.5 mm (L x W x H)
> Degree of protection:   IP20
> Sensor range:           0–100 mm
> Power consumption:      ≤0.3 W
> Supplied with:          1 switch with fixing material

|  | Cat. No. |
|---|---|
| Modular dimmer (with touch) | 833.89.134 |

➕ Please order lead with snap-in connector for modular switches driver separately. Length 2 m: Cat. No. 833.89.142.
See page 84

❗ Dimming value is stored without the need for voltage supply (memory function)

## Häfele Loox door sensor for drawer profile

| Door sensor | |
|---|---|
|  | Cat. No. |
| Door sensor for Loox drawer profile for 833.74.835 | 833.89.110 |

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# Mechanical switches

## Häfele Loox universal door contact switch, modular – on/off switching
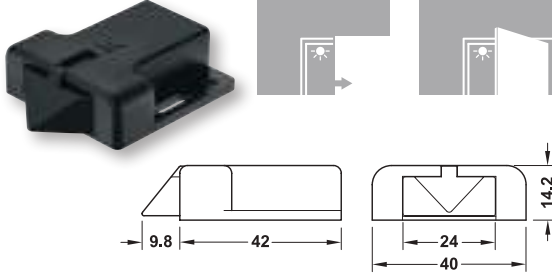
> Material/colour:     Plastic, black
> Dimension:           51.8 x 40 x 14.2 mm (L x W x H)
> Degree of protection: IP20
> Supplied with:       1 switch with fixing material

| | Cat. No. |
|---|---|
| Universal door contact switch, modular | 833.89.143 |

➕ Please order lead with snap-in connector for modular switches driver separately. Length 2 m: Cat. No. 833.89.142. See page 84

❗ The universal door contact switch is suitable for hinged doors or single-leaf sliding doors.

## Häfele Loox lead with snap-in connector for modular switches

> Degree of protection: IP20
> Supplied with:        1 lead

| | Length mm | Cat. No. |
|---|---|---|
| Lead with snap-in connector for modular switches | 1000 mm | 833.89.141 |
| | 2000 mm | 833.89.142 |

➕ Required for modular switches

❗ Drill hole Ø for plug: 12 mm

## Häfele Loox door contact switch – on/off switching
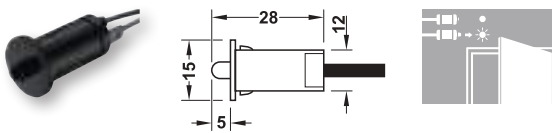
> Material/colour:     Plastic, Black
> Degree of protection: IP20
> Drill hole Ø:        12 mm
> Length               28 mm
> Supplied with:       1 switch with 2 m lead

| | Cat. No. |
|---|---|
| Door contact switch | 833.89.059 |

❗ Drill hole Ø for plug: 12 mm

# Mechanical switches

ILLUMINATING
EXTENDING
SWITCHING
NETWORKING
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SUPPLYING

## Häfele Loox rocker switch – on/off switching

| | Cat. No. |
|---|---|
| | |
| Rocker switch | 833.89.106 |
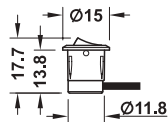
> Material/colour:      Plastic, black
> Diameter:      15 mm
> Height:      17.7 mm
> Drill hole Ø:      12 mm
> Supplied with:      1 switch with 2 m lead

! Drill hole Ø for plug: 12 mm

## Housing for switch, surface mounted
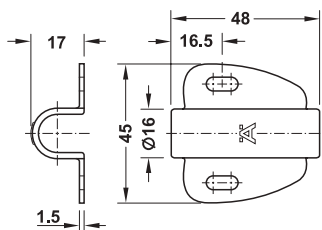
> Dimension:      48 x 45 x 17 mm (L x W x H)
> Diameter:      16 mm
> Material/colour:      Plastic, silver coloured
> Supplied with:      1 housing
> Application:      For switch Ø 12 mm

| | Cat. No. |
|---|---|
| | |
| Housing for switch | 833.89.090 |

! Suitable for 32 mm series drilled holes

5 YEARS GUARANTEE*

# Multi switch box

## Häfele Loox multi switch box

> Function: 2 operating modes can be selected using an integrated toggle switch.
> **Cross circuit:** On/off switching at different switches
> **Deactivated cross circuit:** Switching on with switch 1, 2 or 3. For switching off, all switches that were switched on have to be activated again
> Material/colour:          Plastic, black
> Length x width:           55 x 45 mm
> Height:                   16 mm
> Standby power consumption: ≤0.3 W
> Degree of protection:     IP20
> Supplied with:            1 multi switch box with 1 m lead for switch

Ⓐ Switch
Ⓑ Multi switch box
Ⓒ Driver

Ⓒ 12 V
24 V
350 mA

|  | Cat. No. |
|---|---|
| Multi-switch box | **833.89.066** |

**Lead from multi boxes to switching input**

| Length mm | Supplied with | Cat. No. |
|---|---|---|
| 500 | 1 lead | **833.89.068** |
| 2000 | 1 lead | **833.89.069** |

Cannot be used in combination with dimmer 833.89.043
Drill hole Ø for plug: 12 mm
Alternative to the supplied 1 m lead
For multi switch box.
The drill hole Ø for the male plug and the female socket of the switch leads is 12 mm.

1 LED driver operated by up to 3 switches.
Allows the LED driver or distributor with switching function to be switched on and off from different positions.

## Häfele Loox extension lead for switches

> Length:                   2000 mm
> Supplied with:            1 lead

|  | Cat. No. |
|---|---|
| Extension lead for switches | **833.89.067** |

Drill hole Ø for plug: 12 mm
Can also be used for the multi switch box and the multi driver box.
The maximum lead length of a switch is 6 m.
The drill hole Ø for the male plug and the female socket of the switch leads is 12 mm.

5 YEARS GUARANTEE*

# Multi driver box

## Häfele Loox multi driver box
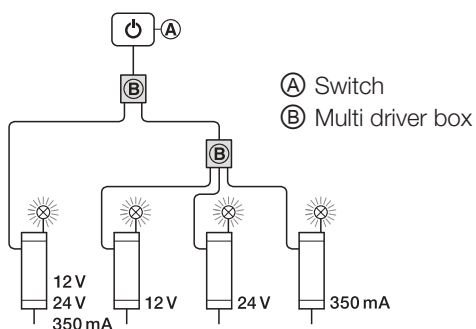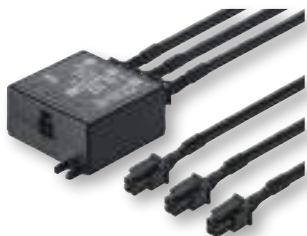
| > Material/colour: | Plastic, black |
| --- | --- |
| > Length x width: | 50 x 40 mm |
| > Height: | 19 mm |
| > Standby power consumption: | 1.5 W |
| > Supplied with: | 1 multi driver box with 3 x 1 m lead for switch |

| | Cat. No. |
| --- | --- |
| Multi-driver box | 833.89.061 |

❗ Max. 3 x 75 W per multi driver box.

➕ **Lead for multi boxes to switching input**

| Length mm | Supplied with | Cat. No. |
| --- | --- | --- |
| 500 | 1 lead | 833.89.068 |
| 2000 | 1 lead | 833.89.069 |

❗ Drill hole Ø for plug: 12 mm

Alternative to the supplied three 1 m leads for multi driver box.

The drill hole Ø for the male plug and the female socket of the switch leads is 12 mm.

Up to 3 LED drivers with different voltages or distributors with a switching function can be controlled with 1 switch.
Several lights in the room can be switched on and off with one switch. These can also be 3 of the same driver if you require additional power in a 12 V system, for example.

Ⓐ Switch
Ⓑ Multi driver box

12 V
24 V
350 mA
12 V
24 V
350 mA

## Häfele Loox extension lead for switches

➕
| > Length: | 2000 mm |
| --- | --- |
| > Supplied with: | 1 lead |

| | Cat. No. |
| --- | --- |
| Extension lead for switches | 833.89.067 |

❗ Drill hole Ø for plug: 12 mm

Can also be used for the multi switch box and the multi driver box.
The maximum lead length of a switch is 6 m.
The drill hole Ø for the male plug and the female socket of the switch leads is 12 mm.

5 YEARS GUARANTEE*

# Networking

## Häfele Connect BLE Box



> The Häfele Connect BLE box (Bluetooth low energy technology – ideal protocol for wireless light control) makes it possible to intuitively control furniture lighting and electrically operated fittings using a convenient app.
> A 12 V or 24 V driver supplies the BLE box via two leads. A single BLE Box or an entire network of BLE boxes is intuitively controlled via a Smartphone or tablet.
> The Häfele Connect App makes it possible to control individual lights and electrically operated fittings.

> The app controls the switching status (on/off), the brightness (0–100%) and also the colour temperature (with multi white lights) and the light colour (with RGB lights).
> All parameters can be saved as scenarios and retrieved at any time. Even time-controlled alteration of the brightness, the colour temperature, the light colour and the position of fittings is possible.
> Real-life images of the actual room and the actual lights provide an intuitive operating experience. The Häfele Connect App is free for Apple IOS® and Android™.
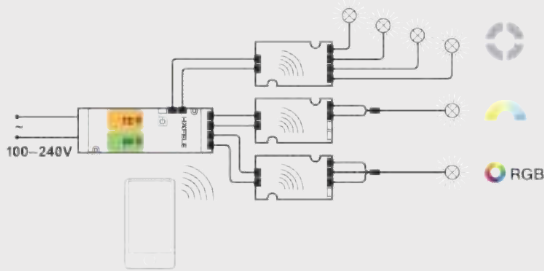


| Voltage V | Version | Number of connections | L X W X H mm | Output current | Standby power consumption W | Supplied with | Cat. No. |
|---|---|---|---|---|---|---|---|
| 12 V | For on/off switching and dimming of lights (0–100%). Please order the BLE adapter separately for operating RGB lights or multi white lights. | 4 | 100 x 57 x 17 | Single unit output: max. 30 W; Total output for all units: max. 60 W | <0.5 W | 1 BLE box, lead 300 mm | **BLE box 850.00.005** |
| 24 V | | 4 | 100 x 57 x 17 | Single unit output: max. 60 W; Total output for all units: max. 90 W | <0.6 W | 1 BLE box, lead 300 mm | **BLE box 850.00.006** |

5 YEARS GUARANTEE*

## Häfele Connect BLE Box

### Multi-white lights adaptor for BLE box

| Voltage | Output Slots | Cat. No. |
|---------|--------------|----------|
| 12 V | 8 | 850.00.011 |
| 24 V | 8 | 850.00.012 |

### RGB lights adaptor for BLE box

| Voltage | Output Slots | Cat. No. |
|---------|--------------|----------|
| 12 V | 4 | 850.00.013 |

> The distance between the Smartphone or tablet to the nearest BLE box is approx.10 m.
> Multiple BLE boxes create a network, and can also be placed approx.10 m apart.
> One BLE box occupies 2 outputs of the driver.

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

# Distributing

## Main leads

### Country-specific main leads, socket at cable: C7

833.89.002 EU          833.89.009 EU

> Voltage:          250 V
> Length:          2000 mm
> Supplied with:          1 piece

| Plug design | Cat. No. |
| --- | --- |
| ⬤⬤ | 833.89.002 |
| ⤚ | 833.89.009 |

## Switch leads

### Häfele Loox extension lead for switches

> Area of application:          Switches and modular switches
> Length:          2000 mm
> Drill hole Ø:          Plug 12 mm
> Supplied with:          1 extension lead plug/socket

| Length mm | Cat. No. |
| --- | --- |
| 2000 | 833.89.067 |

⚠  The maximum lead length of a switch is 6 m.

### Häfele Loox lead for modular switches

> Area of application:          Modular switches
> Version:          With snap-in connector
> Drill hole Ø:          Plug 12 mm
> Supplied with:          1 lead plug/plug

| Length mm | Cat. No. |
| --- | --- |
| 1000 | 833.89.141 |
| 2000 | 833.89.142 |

## Cable routing

### Häfele Loox cable channel

12
7.5
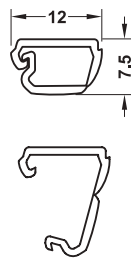
> Dimension:          2500 x 12 x 7.5 mm (L x W x H)
> Application:          Concealing visible cables in furniture and cabinets
> Supplied with:          1 cable channel with adhesive tape

| Finish | Cat. No. |
| --- | --- |
| Brown, RAL 8007 | 833.89.023 |
| White, RAL 9010 | 833.89.013 |

# Supplying

Driver, Constant voltage 12 V

ILLUMINATING

EXTENDING

SWITCHING

NETWORKING

DISTRIBUTING

SUPPLYING

## Häfele Loox wall plug driver 12 V

> Colour:                          Black
> Degree of protection:            IP20
> Input voltage:                   100–240 V~; 50–60 Hz
> Output voltage:                  DC 12 V
> Standby power consumption:       0.1 W
> Supplied with:                   1 wall plug driver

| Plug design/ designation | Output power W | Dim. (L x W x H) mm | Cat. No. |
|---|---|---|---|
| EU | 6 | 61 x 37 x 57 | **833.74.933** |
| | 15 | 78 x 46 x 68 | **833.74.935** |
| | 27 | 84 x 50 x 72 | **833.74.937** |
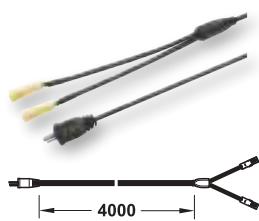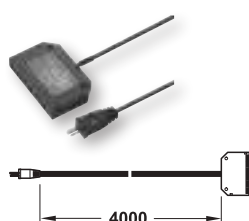
### Leads 12 V

| | Plug design/ designation | Cat. No. |
|---|---|---|
| **12 V** | 4 m lead 2.5 A/22 AWG with 2 slots | **833.74.749** |
| | 4 m lead 2.5 A/22 AWG with 6-way distributor | **833.74.748** |

4000

833.74.749

4000

833.74.748

**12 V**  All sockets for 12 V Loox.

# Loox LED Driver

Constant voltage 12 V

## Häfele Loox driver constant voltage 12 V



**EXTRA FLAT**

> Version:      With overload protection
> Colour:      Black
> Degree of protection:      IP20
> Input voltage:      100–240 V~; 50–60 Hz
> Output voltage:      DC 12 V
> Number of connections:      6 x consumer, 1 x switch
> Supplied with:      1 driver with mounting accessories

| 12 V | Output power W | Output current A | Standby power consumption W | Dim. (L x W x H) mm | Cat. No. |
|---|---|---|---|---|---|
| 1 | 0-20 | 1.67 | ≤0.1 | 140 x 50 x 16 | **833.74.960** |
| 2 | 0-40 | 3.33 | ≤0.1 | 190 x 60 x 16 | **833.74.962** |
| 3 | 0-60 | 3.5 | ≤0.2 | 230 x 70 x 16 | **833.74.913** |

The driver is the heart of the Loox system, and is suitable for connecting to all of the worlds most frequently used mains voltages and frequencies. All of the switches in the Loox product range can be connected to the drivers with a universal switch input. All drivers are energy efficient and equipped with overload protection.

> Lead length from driver to switch max. 6 m..
> Provide for sufficient air supply and circulation at the mounting location of the driver.



Parallel connection

**1**    Article No.: 833.74.960
$\otimes_1 + \otimes_2 \quad +...+ \otimes_6 < 20$ W

**2**    Article No.: 833.74.962
$\otimes_1 + \otimes_2 \quad +...+ \otimes_6 < 40$ W

**3**    Article No.: 833.74.964
$\otimes_1 + \otimes_2 \quad +...+ \otimes_6 < 60$ W
**max. 42 W per light output**

### Country-specific mains leads

> Description:      EU
> Supplied with:      1 piece

| Plug design | Cat. No. |
|---|---|
| ⬤⬤ | **833.89.002** |
| ⤛ | **833.89.009** |

**5 YEARS GUARANTEE\***   VI   TÜV   UL us   PSE   CCC   R36733   **RoHS**   SELV IP20

# Loox LED Driver

Constant voltage 24 V

**Häfele Loox driver constant voltage 24 V**
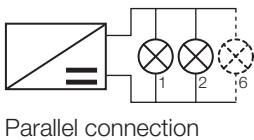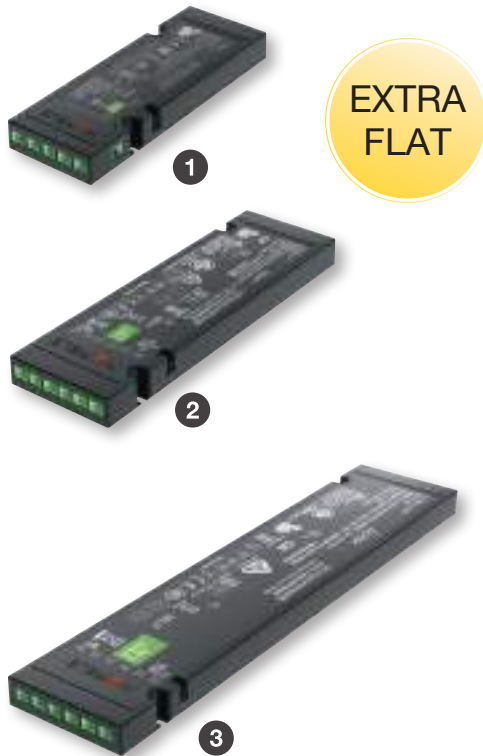


EXTRA FLAT

> Version: With overload protection
> Colour: Black
> Degree of protection: IP20
> Input voltage: 100–240 V~; 50–60 Hz
> Output voltage: DC 24 V
> Number of connections: 6 x consumer, 1 x switch
> Supplied with: 1 driver with mounting accessories

| 24 V | Output power | Output current | Standby power consumption | Dim. (L x W x H) | Cat. No. |
|---|---|---|---|---|---|
| | W | A | W | mm | |
| 1 | 0-20 | 0.83 | ≤0.1 | 140 x 50 x 16 | **833.77.945** |
| 2 | 0-40 | 1.67 | ≤0.1 | 190 x 60 x 16 | **833.77.947** |
| 3 | 0-90 | 3.5 | ≤0.2 | 316 x 70 x 16 | **833.77.949** |

The driver is the heart of the Loox system, and is suitable for connecting to all of the world's most frequently used mains voltages and frequencies. All of the switches in the Loox product range can be connected to the drivers with a universal switch input. All drivers are energy efficient and equipped with overload protection.

> Lead length from driver to switch max. 6 m.
> Provide for sufficient air supply and circulation at the mounting location of the driver.

Parallel connection

**1** Article No.: 833.77.945
$\otimes_1 + \otimes_2 \quad + ... + \otimes_6 < 20\ W$

**2** Article No.: 833.77.947
$\otimes_1 + \otimes_2 \quad + ... + \otimes_6 < 40\ W$

**3** Article No.: 833.77.949
$\otimes_1 + \otimes_2 \quad + ... + \otimes_6 < 90\ W$
**max. 84 W per light output**

**Country-specific mains leads**

> Description: EU
> Supplied with: 1 piece

| Plug design | Cat. No. |
|---|---|
| ⊙─● | 833.89.002 |
| ⟜ | 833.89.009 |

**5 YEARS GUARANTEE** RoHS SELV IP20

# Loox LED Driver

Constant current 350 mA

## Häfele Loox driver 350 mA

> Colour: Black
> Degree of protection: IP20
> Input voltage: 100–240 V~; 50–60 Hz
> Constant current: DC 350 mA
> Standby power consumption: <0.5 W
> Supplied with: 1 driver with mounting accessories

| Number of connections | Output power W | Dim. (L x W x H) mm | Cat. No. |
|---|---|---|---|
| 4 x devices, 1 x switch | >1.5–4 | 140 x 43 x 20 | **833.80.900** |
| 10 x devices, 1 x switch | >5–10 | 195 x 43 x 28 | **833.80.901** |
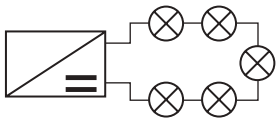
Series connection

**!** Article No.: 833.80.900
$\otimes_1 + \otimes_2 + ... + \otimes_n$ 1 W up to max. 4 W

Article No.: 833.80.901
$\otimes_1 + \otimes_2 + ... + \otimes_n$ 5 W up to max. 10 W

**! Note**
Connect consumer power of at least 2 W when operating with a Loox switch.
Lead length from driver to switch max. 6 m.
All lights and switches must be connected to the driver first, before connecting the driver to the mains. Any unused slot must have a cable bridge. Bridge connectors are supplied.
Ensure that there is a sufficient air supply and circulation at the mounting location.
Ambient temperature –10 °C to +40 °C

**+ Country-specific mains leads**
> Description: EU
> Supplied with: 1 piece

| Plug design | Cat. No. |
|---|---|
| ● ● | **833.89.002** |
| ⊃— | **833.89.009** |

# Leads and Distributors

## Extension leads 12 V / 24 V / 350 mA

12 V system,
3.5 A/20 AWG

24 V system,
3.5 A/20 AWG

350 mA system

> Supplied with:     1 lead

| Length (mm) | Cat. No. (1000) | Cat. No. (2000) |
|---|---|---|
| 12 V system, 3.5 A/20 AWG | **833.73.765** | **833.73.766** |
| 24 V system, 3.5 A/20 AWG | **833.77.713** | **833.77.714** |
| 350 mA system | **833.80.705** | **833.80.706** |

! For extending the connection leads of the LED lights.
> Lead length from driver to light max. 6 m

## 4-way extension lead – convenient extension for additional lights

12 V system, 3.5 A/20 AWG     24 V system, 3.5 A/20 AWG
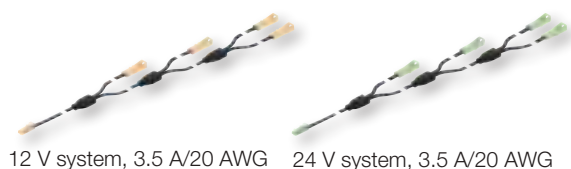
> Length:     6,500 mm
> Supplied with:     1 lead

| Application | Cat. No. |
|---|---|
| 12 V system, 3.5 A/20 AWG | **833.74.773** |
| 24 V system, 3.5 A/20 AWG | **833.77.813** |

100–240V   2000   1500   1500   1500   500

! Makes it easier to power several lights positioned one after the other.
> max. 4 lights per extension can be connected,
max. 2 extensions can be coupled
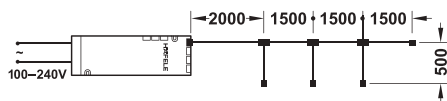
## 6-way distributor – for connecting additional lights to one driver

12 V system, 3.5 A/20 AWG     24 V system, 3.5 A/20 AWG
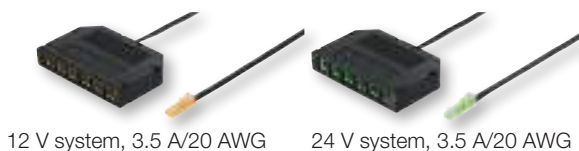
> Length x width:     58.5 x 34 mm
> Height:     18 mm
> Supplied with:     1 distributor with 2 m lead

| Application | Cat. No. |
|---|---|
| 12 V system, 3.5 A/20 AWG | **833.74.798** |
| 24 V system, 3.5 A/20 AWG | **833.77.724** |

100–240V

! With the 6-way distributor, up to 6 additional lights can be operated from one driver slot.
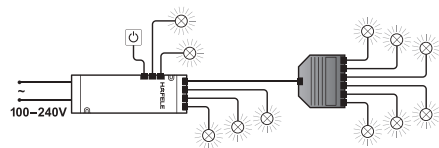
## 3-way distributor with switching function 12 V / 24 V

12 V system, 3.5 A/20 AWG     24 V system, 3.5 A/20 AWG
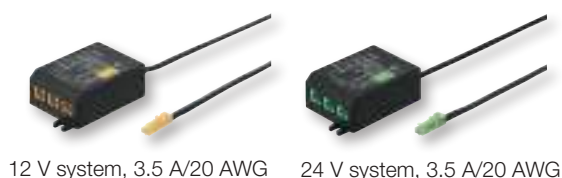
> Length x width:     57 x 34 mm
> Height:     18 mm
> Power consumption:     0.1 W
> Supplied with:     1 distributor with 200 m lead

| Application | Wattage | Cat. No. |
|---|---|---|
| 12 V system, 3.5 A/20 AWG | max. 42 W | **833.74.751** |
| 24 V system, 3.5 A/20 AWG | max. 84 W | **833.77.723** |

100–240V

! Up to 3 lights can be operated independently of the driver using the 3-way distributor with switching function connected to the output of the light.

5 YEARS GUARANTEE*
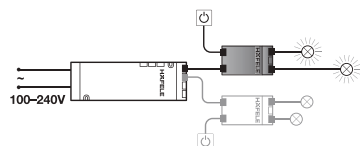
# Converters

## Häfele Loox converter 24 V to 12 V – for connecting 24 V lights to the 12 V system

| | 24 V |
|---|---|
| 12 V | 12 V | 5W | ≤10W |
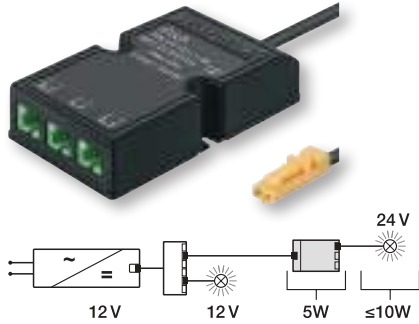
> Application: Connecting 24 V lights to the 12 V system
> Dimensions: 61 x 34 x 15 mm (L X W X H)
> Wattage: Input 15 W, output 10 W
> Standby power consumption: 0.3 W
> Primary side: DC 12 V
> Secondary side: DC 24 V
> Number of output ports: 3 connections for 24 V lights
> Supplied with: 1 converter with 200 mm lead

| | Cat. No. |
|---|---|
| Converter 24 V to 12 V | 833.77.934 |

! Maximum possible connected rating of 10 W per converter.

**12 V** Loox 12 V driver see page 92

## Häfele Loox converter 350 mA to 12 V – for connecting 350 mA lights to the 12 V system
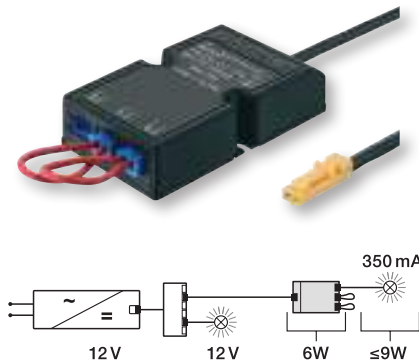
350 mA
12 V | 12 V | 6W | ≤9W

> Application: Connecting 350 mA lights to the 12 V system
> Dimensions: 61 x 34 x 15 mm (L X W X H)
> Wattage: Input 15 W, output 9 W
> Standby power consumption: 0.2 W
> Primary side: DC 12 V
> Secondary side: DC 350 mA (min. 1 W, max. 9 W)
> Number of output ports: 3 connections for 350 mA lights
> Supplied with: 1 converter with 200 mm lead

| | Cat. No. |
|---|---|
| Converter 350 mA to 12 V | 833.80.912 |

! Maximum possible connected rating of 9 W per converter.

**12 V** Loox 12 V driver see page 92

## Häfele Loox converter 12 V to 24 V – for connecting 12 V lights to the 24 V system

12 V
24 V | 24 V | 5W | ≤10W
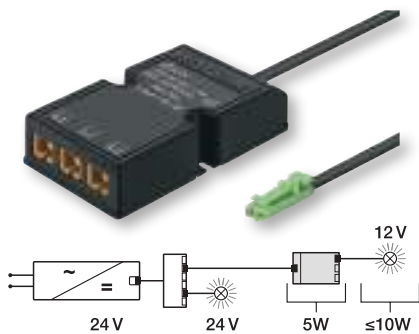
> Application: Connecting 12 V lights to the 24 V system
> Dimensions: 61 x 34 x 15 mm (L X W X H)
> Wattage: Input 15 W, output 10 W
> Standby power consumption: 0.3 W
> Primary side: DC 24 V
> Secondary side: DC 12 V
> Number of output ports: 3 connections for 12 V lights
> Supplied with: 1 converter with 200 mm lead

| | Cat. No. |
|---|---|
| Converter 12 V to 24 V | 833.74.947 |

! Maximum possible connected rating of 10 W per converter.

**24 V** Loox 24 V driver see page 93
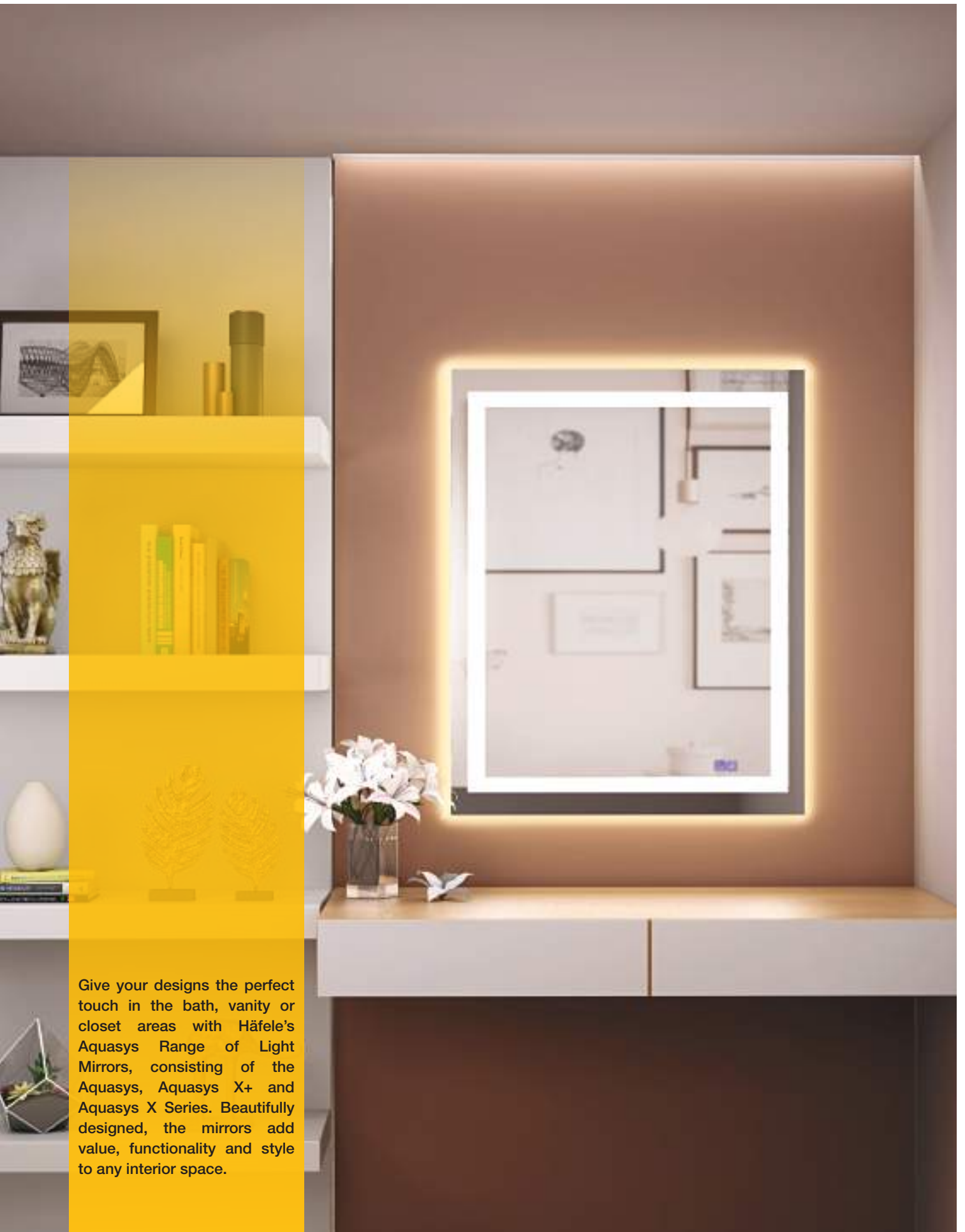
Give your designs the perfect touch in the bath, vanity or closet areas with Häfele's Aquasys Range of Light Mirrors, consisting of the Aquasys, Aquasys X+ and Aquasys X Series. Beautifully designed, the mirrors add value, functionality and style to any interior space.

# Aquasys Light Mirror

Multi-Functional Convenience



12 V SYSTEM

### Bluetooth Capable Transducer System

> Plays music from your mobile on the sound system integrated into the mirror

### Demister (Mirror Heater)

> Prevents the mirror from fogging up

### Background Lighting

> Functions as a source of mood and ambient lighting

### Front Lighting

> Offers adjustable lighting option from warm white to natural white

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## AQUASYS
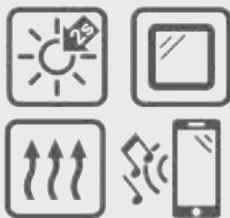
The mirrors from the Aquasys Series are top-of-the-range models and come feature packed with the following:

> Front Lighting
> Background Lighting
> Demister (Mirror heater)
> Bluetooth Capable Transducer System
  Application: Bathrooms
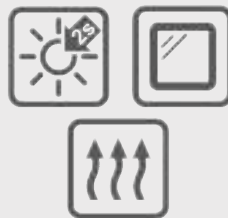
## AQUASYS X+

The mirrors from the Aquasys X+ Series include mid-range models which have the following features:

> Front Lighting
> Background Lighting
> Demister (Mirror heater)
  Application: Bathrooms

## AQUASYS X

The mirrors from the Aquasys X Series provide economical options for those looking for mirrors with:

> Front Lighting
> Background Lighting
  Application: Dressing Rooms, Living Rooms & Bathrooms

LOOX5

## Aquasys Light Mirror

### SIZE VARIANTS & PRODUCT SPECIFICATIONS

① 900(W) X 600 (H) X 54 (D) mm

② 900(W) X 900 (H) X 54 (D) mm

③ 1200(W) X 900 (H) X 54 (D) mm

600(W) X 900 (H) X 54 (D) mm

**Please Note**: The size variant can also be installed vertically

900(W) X 1200 (H) X 54 (D) mm
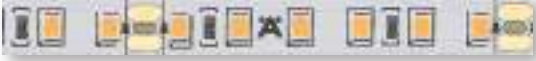
| Article No.: | 983.19.010 (Aquasys)<br>983.19.110 (Aquasys X+)<br>983.19.210 (Aquasys X) | 983.19.020 (Aquasys)<br>983.19.120 (Aquasys X+)<br>983.19.220 (Aquasys X) | 983.19.030 (Aquasys)<br>983.19.130 (Aquasys X+)<br>983.19.230 (Aquasys X) |
|---|---|---|---|
| Dimensions (W x H x D): | 900 x 600 x 54 mm | 900 x 900 x 54 mm | 1200 x 900 x 54 mm |
| Colour Temperature:<br>> Front Lighting: | Warm White (2700K) & Natural White (4000K) | | |
| > Back Lighting: | Warm White (2700K) | | |
| Front Lighting Lumen Output:<br>> Warm White: | 1080 Lm | 1080 Lm | 1560 Lm |
| > Cool White: | 1230 Lm | 1470 Lm | 1764 Lm |
| Colour Rendering Index: | > 90 | > 90 | > 90 |
| Wattage: | 95 W | 102 W | 111 W |
| Lux @ 70 cm (luminous Flux / Area): | 500 | | |
| Nominal Voltage: | DC 12 V | | |
| Input Voltage: | 100-240 V; 50-60 Hz | | |
| Material: | LED Profile – Aluminium; Rear Back Plate – Wood | | |
| Switch Type: | Touch LED Illuminated (Operation – Warm White, Stand-by – Blue) | | |
| Demister (Mirror Heater): | Standby after 45 minutes (only applicable for Aquasys and Aquasys X+ Mirrors) | | |
| Sound System: | Bluetooth Transducer System; Password – 0000 (only applicable for Aquasys Mirrors) | | |
| Bluetooth Frequency: | 2.4 GHz (only applicable for Aquasys Mirrors) | | |
| Degree of Protection: | IP 44 (Splash-proof for use in wet rooms) | | |
| Warranty: | 2 Years | | |
| Energy Efficiency Class: | A | | |
| Certification | BIS/ UL / CUL / SAA / CE / TÜV certified as per EN 1036-1:2007 against corrosion resistance | | |

| Series Name | Article No | Dimensions (W×H×D) mm | Net Weight Kg. | Front Lighting | Background Lighting | Demister Mirror Heater | Bluetooth Capable Transducer System |
|---|---|---|---|---|---|---|---|
| Aquasys | 983.19.010 | 900 × 600 × 54 | 10.82 | • | • | • | • |
| Aquasys | 983.19.020 | 900 × 900 × 54 | 14.88 | • | • | • | • |
| Aquasys | 983.19.030 | 1200 × 900× 54 | 19.38 | • | • | • | • |
| Aquasys X+ | 983.19.110 | 900 × 600 × 54 | 9.70 | • | • | • | |
| Aquasys X+ | 983.19.120 | 900 × 900 × 54 | 13.30 | • | • | • | |
| Aquasys X+ | 983.19.130 | 1200 × 900 × 54 | 18.00 | • | • | • | |
| Aquasys X | 983.19.210 | 900 × 600 × 54 | 9.40 | • | • | | |
| Aquasys X | 983.19.220 | 900 × 900 × 54 | 13.00 | • | • | | |
| Aquasys X | 983.19.230 | 1200 × 900 × 54 | 17.50 | • | • | | |

# LED strip lights

## Technical data, monochrome 5 mm / 8 mm

### LED strip lights monochrome, 5 mm

| Voltage V | Model Häfele Loox5 | Quantity LEDs/m | Colour temperature K | Illuminance lx Distance 250 mm | 500 mm | 750 mm | 1000 mm | Wattage W/m |
|---|---|---|---|---|---|---|---|---|
| 5 12 V | LED 2061 | 120 | 2700 | 1860 | 790 | 440 | 270 | 9.6 |
| | | | 3000 | 1960 | 850 | 470 | 290 | 9.6 |
| | | | 4000 | 2000 | 860 | 480 | 290 | 9.6 |
| | | | 5000 | 2060 | 860 | 480 | 290 | 9.6 |

### LED strip lights monochrome, 8 mm

| Voltage V | Model Häfele Loox5 | Quantity LEDs/m | Colour temperature K | Illuminance lx Distance 250 mm | 500 mm | 750 mm | 1000 mm | Wattage W/m |
|---|---|---|---|---|---|---|---|---|
| 5 12 V | LED 2062 | 60 | 2700 | 1050 | 435 | 240 | 145 | 4.8 |
| | | | 3000 | 1090 | 455 | 245 | 150 | 4.8 |
| | | | 4000 | 1120 | 460 | 260 | 155 | 4.8 |
| | | | 5000 | 1130 | 470 | 260 | 160 | 4.8 |
| | LED 2068 | 120 | 2700 | 2145 | 900 | 480 | 300 | 9.6 |
| | | | 3000 | 2250 | 940 | 505 | 310 | 9.6 |
| | | | 4000 | 2300 | 950 | 510 | 320 | 9.6 |
| | | | 5000 | 2300 | 955 | 515 | 320 | 9.6 |
| 5 24 V | LED 3048 | 120 | 2700 | 2870 | 1210 | 665 | 415 | 14.4 |
| | | | 3000 | 3000 | 1270 | 695 | 430 | 14.4 |
| | | | 4000 | 3100 | 1310 | 715 | 445 | 14.4 |
| | | | 5000 | 3100 | 1320 | 715 | 450 | 14.4 |

LED 2062

LED 2068

LED 3048

## Technical data, monochrome constant current 8 mm

### LED strip light, monochrome 8 mm

| Voltage V | Model Häfele Loox5 | Quantity LEDs/m | Colour temperature K | Illuminance lx Distance 250 mm | 500 mm | 750 mm | 1000 mm | Wattage W/m |
|---|---|---|---|---|---|---|---|---|
| 5 24 V | LED 3052 | 140 | 2700 | 4070 | 1750 | 970 | 600 | 19.2 |
| | | | 3000 | 4160 | 1780 | 990 | 620 | 19.2 |
| | | | 4000 | 4220 | 1800 | 1000 | 625 | 19.2 |
| | | | 5000 | 4260 | 1840 | 1020 | 630 | 19.2 |

LED 3052

### LED strip lights monochrome, 8 mm

| Voltage V | Model Häfele Loox5 | Quantity LEDs/m | Colour temperature K | Illuminance lx Distance 250 mm | 500 mm | 750 mm | 1000 mm | Wattage W/m |
|---|---|---|---|---|---|---|---|---|
| 5 12 V | LED 2071 | 60 | 2700 | 1050 | 435 | 240 | 145 | 4.8 |
| | | | 3000 | 1090 | 455 | 245 | 150 | 4.8 |
| | | | 4000 | 1120 | 460 | 260 | 155 | 4.8 |
| | | | 5000 | 1130 | 470 | 260 | 160 | 4.8 |
| 5 12 V | LED 2074 | 120 | 2700 | 2145 | 900 | 480 | 300 | 9.6 |
| | | | 3000 | 2250 | 940 | 505 | 310 | 9.6 |
| | | | 4000 | 2300 | 950 | 510 | 320 | 9.6 |
| | | | 5000 | 2300 | 955 | 515 | 320 | 9.6 |

LED 2071

LED 2074

| Luminous flux | Luminous efficacy | Section length | Colour rendering index CRI | | Available length | Max. strip length (visual) | Max. strip length wattage-dependent m on the Loox driver | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| lm/m | lm/W | mm | $R_a$ | $R_9$ | 5 m | m | 20 W | 40 W | 60 W | 90W |
| 870 | 91 | 25 | >90 | >50 | **833.74.328** | 3.0 | | | | |
| 830 | 97 | 25 | >90 | >50 | **833.74.329** | 3.0 | 2.00 | 4.10 | 6.20 | – |
| 955 | 99 | 25 | >90 | >50 | **833.74.330** | 3.0 | | | | |
| 990 | 103 | 25 | >90 | >50 | **833.74.331** | 3.0 | | | | |
| 440 | 92 | 50 | >90 | >50 | **833.74.336** | 6.0 | | | | |
| 465 | 97 | 50 | >90 | >50 | **833.74.337** | 6.0 | 4.10 | 8.30 | 12.50 | – |
| 490 | 102 | 50 | >90 | >50 | **833.74.338** | 6.0 | | | | |
| 495 | 103 | 50 | >90 | >50 | **833.74.339** | 6.0 | | | | |
| 920 | 96 | 25 | >90 | >50 | **833.74.362** | 4.0 | | | | |
| 970 | 101 | 25 | >90 | >50 | **833.74.363** | 4.0 | 2.00 | 4.10 | 6.20 | – |
| 1000 | 104 | 25 | >90 | >50 | **833.74.364** | 4.0 | | | | |
| 1040 | 108 | 25 | >90 | >50 | **833.74.365** | 4.0 | | | | |
| 1270 | 88 | 50 | >90 | >50 | **833.76.352** | 6.2 | | | | |
| 1305 | 91 | 50 | >90 | >50 | **833.76.353** | 6.2 | 1.30 | 2.70 | – | 6.20 |
| 1340 | 93 | 50 | >90 | >50 | **833.76.354** | 6.2 | | | | |
| 1430 | 99 | 50 | >90 | >50 | **833.76.355** | 6.2 | | | | |

| Luminous flux | Luminous efficacy | Section length | Colour rendering index CRI | | Available length | Max. strip length (visual) | Max. strip length wattage-dependent m on the Loox driver | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| lm/m | lm/W | mm | $R_a$ | $R_9$ | 5 m | m | 20 W | 40 W | 60 W | 90W |
| 1850 | 96 | 50 | >90 | >50 | **833.76.378** | 4.6 | | | | |
| 2015 | 105 | 50 | >90 | >50 | **833.76.379** | 4.6 | 1.00 | 2.00 | – | 4.60 |
| 2050 | 107 | 50 | >90 | >50 | **833.76.380** | 4.6 | | | | |
| 2100 | 109 | 50 | >90 | >50 | **833.76.381** | 4.6 | | | | |
| 440 | 92 | 50 | 90 | >50 | **833.74.300** | 6.0 | | | | |
| 465 | 97 | 50 | 90 | >50 | **833.74.301** | 6.0 | 4.10 | 8.30 | 12.50 | - |
| 490 | 102 | 50 | 90 | >50 | **833.74.302** | 6.0 | | | | |
| 495 | 103 | 50 | 90 | >50 | **833.74.303** | 6.0 | | | | |
| 920 | 96 | 25 | 90 | >50 | **833.74.308** | 3.5 | | | | |
| 970 | 101 | 25 | 90 | >50 | **833.74.309** | 3.5 | 2.00 | 4.10 | 6.20 | - |
| 1000 | 104 | 25 | 90 | >50 | **833.74.310** | 3.5 | | | | |
| 1040 | 108 | 25 | 90 | >50 | **833.74.311** | 3.5 | | | | |

# LED strip lights

Technical data, multi-white 8 mm

| | Voltage | Model Häfele Loox5 | Quantity | Colour temperature | Illuminance lx Distance | | | | Wattage |
|---|---|---|---|---|---|---|---|---|---|
| | V | | LEDs/m | K | 250 mm | 500 mm | 750 mm | 1000 mm | W/m |

**◉ LED strip lights multi-white, 8 mm, 3- wire**

| | Voltage | Model | Quantity | Colour temp | 250 mm | 500 mm | 750 mm | 1000 mm | W/m |
|---|---|---|---|---|---|---|---|---|---|
| LED 2073 | 5 12V | LED 2073 | 2 x 60 | 2700 | 1025 | 425 | 230 | 145 | 4.8 |
| | | | | 5000 | 1075 | 445 | 245 | 150 | |
| LED 2076 | | LED 2076 | 2 x 120 | 2700 | 2040 | 850 | 460 | 280 | 9.6 |
| | | | | 5000 | 2110 | 875 | 470 | 290 | |

**◉ LED strip lights, RGB, 12 mm**

| | Voltage | Model | Quantity | Colour temp | 250 mm | 500 mm | 750 mm | 1000 mm | W/m |
|---|---|---|---|---|---|---|---|---|---|
| LED 2016 | 12V | LED 2016 | 30 | RGB | - | - | - | - | 7.1 |

| Luminous flux | Luminous efficacy | Section length | Colour rendering index CRI | | Weight energy consumption | Length of contact surface P | Available length | Max. strip length (visual) | Max. strip length wattage-dependent m on the Loox5 driver | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| lm/m | lm/W | mm | $R_a$ | $R_9$ | kwh/1000 h | mm | 5 m | m | 20 W | 40 W | 60 W | 90W |
| 425 | 88 | 50 | >90 | >50 | 5.28 | 4 | **833.74.352** | 4.5 | 4.10 | 8.30 | 12.50 | – |
| 465 | 96 | | | | | | | | | | | |
| 875 | 91 | 25 | >90 | >50 | 10.56 | 3.5 | **833.74.318** | 3 | 2.00 | 4.10 | 6.20 | – |
| 940 | 97 | | | | | | | | | | | |
| 1050 | 29 | 100 | - | - | - | - | **833.73.450** | 3.4 | 2.81 | 5.63 | 8.45 | – |

# Light shapes rooms.

Light in furniture is more than just accessories.

Light in furniture is no longer an accessory which can be retrofitted later. Today, light has essential and imperative comfort functions in furniture.
Contemporary furniture planning incorporates light as a focus right from the beginning in order to achieve the best possible result for customers.

# Light changes spaces.

The interplay of light in rooms and light in furniture promotes a feeling of well-being.
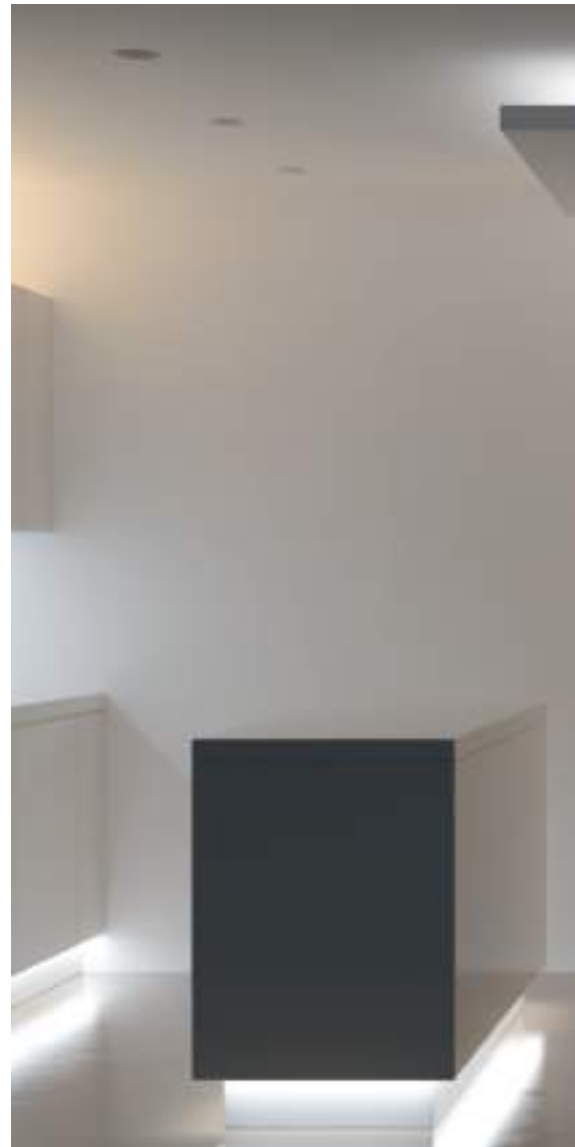
### Cooking.

Bright, neutral white light makes for a pleasant illumination of the important work spaces and ensures the proper reflection of the colour of food and products.

### Eating.

The combination of direct, flat light for a perfect illumination of the dining table, supplemented with indirect, warm effect lights on ceilings and walls creates an atmospheric ambience.

### Relaxation.

The interaction of areas of light and horizons created by light creates a comfortable and cozy atmosphere.

Bright cool light promotes concentration, warm and dimmed light promotes relaxation.

# Light and intensity.

When lighting a room, using a combination of several light sources is critical.

In the 1950s, Richard Kelly, a pioneer of lighting design, already differentiated between light to see – ambient luminescence, focal glow – the illumination of an object or area, and play of brilliants – in which the light itself is the object to observe.

Depending on the purpose for the lighting plan of a room and specific areas, task light is used. To create a specific ambiance ambient light is used.

## Task light.

For example, the lighting need in a home office can differ and depends on the location of the desk as well as the influx of daylight. When work is done on computer or tablet a glare-free light source is required. Since the screen is the work area, a backlight can be sufficient. However, drawing or writing require a well lit work surface.

## Ambient light.

To create an atmospheric ambience, the room light can also be used as indirect lighting in the furniture. Ambient light provides less illumination and serves to create an appealing environment. The light source is often hidden, for example it can be embedded in shelving or behind moldings. It is important that ambient light beams do not create brightly lit surfaces or produce sharp edges.

# Light evokes emotions.

Light situations trigger associations:
romantic, comfortable, relaxing and cold.



### Staging.

Spotlights make the illuminated objects on shelves and showcases the focus. And wall wash light makes wall structures visible.

### Highlighting.

Highlighting functional areas with even, bright light is a sensible addition to the general room light.

### Setting accents.

The Loox lighting system offers many possibilities to set accents in a room. With the appropriate light composition corners, edges and surfaces can be dramatized.

With a smart lighting plan specific moods can be created in the living environment. The Häfele Loox system can turn a purposefully designed bathroom into a spa. Edge lighting creates an artificial horizon, dimmable spotlights create a candlelight atmosphere. Warm light creates a mood simulating a sunset.

# Light and colour.



## Light makes colour visible.

Light is made up of electromagnetic waves which only become visible to the human eye through reflection on objects. A red object reflects only the red colour. The other colours are absorbed. All light sources are tested and measured based on the accuracy of their colour reproduction, the so-called colour rendering index (CRI). The higher the CRI, the higher the quality of colour reproduction.

## Warm light. Cool light.

The colour of the light, also referred to as colour temperature, controls our state of well-being. Light with a high blue component has an invigorating effect on the body. Just like the cool fresh light of an early morning. By comparison, strong red and yellow-coloured light has a relaxing effect and evokes a state of rest. Just like the warm glow in the late afternoon or a candle.

**Consistent colour quality and performance.**

An important factor for new technologies is the reliability in use.

Häfele has set high standards for the selection of materials, which are continually tested and certified internationally. Setting a narrow binning is one of them. All LEDs are tested and sorted to specified quality criteria after production. Häfele selects the highest quality class LEDs for maximum life time, energy efficiency and to ensure after market replacement quality.

# Light with effect.

Every room comes to life with light and shadows.





## Linear light.

Linear illumination is created with LED strip lights. Inside cabinets and shelves, on work surfaces or enclosures of furniture, LED strip lights provide uniform light with a broad area of illumination.



## Directional light.

Narrow beam Loox spotlights can create directional lighting effects to highlight specific objects. With surface mounted or built-in spotlights in a row it is possible to achieve flat surface illumination of specific areas. A special effect is created by overlapping cones of light.

Linear illumination can be used to create horizons. With direct light objects can be partially emphasized. Wall wash light can highlight and reinforce structures (stone structures, relief wallpapers).

# Light and surfaces.



Depending on the material and structure a surface reacts differently to light. Light is partially absorbed, a part is reflected and depending on the surface it is scattered. With translucent or transmissive materials, the light can also shine through the body.

Depending on the material and structure a surface reacts differently to light.

## Dark surfaces.

Dark materials absorb light, so it is necessary to use stronger light. However, too much light destroys the ambiance and comfort.

## Bright surfaces.

A bright floor or bright materials reflect the light much better than dark materials. A brightly designed space therefore requires less overall light. Extra effect lighting adds freshness and a feeling of spaciousness to the room.

# Light and control.

A Smart Home also includes the smart control of different lighting scenarios inside the building.

The Häfele Loox system offers several solutions for controlling lights; from the direct control via simple switching points to the remote control of more complex lighting scenarios.

In addition to the lighting, digital solutions can also be used to centrally operate and control the stereo, television, heating, alarm system and more.

## Remote control of light.

Especially important is the control of light scenarios in multi-functional rooms. Depending on the application remote controls can be used for easy control of several light sources, from multi-white lights to coloured RGB lights.

## Control light (and more) centrally.

An app connects and centrally controls all installed light components and allows the design of light effects individually with a smartphone or tablet. In this way multiple scenarios can be saved and programmed, or simply retrieved with just by finger tip.

# Light effects and lighting technology

## Cone of light

Refraction angle

Colour temperature — | 3000 K | 4000 K | | 117°

Illuminance value —

| | 3000 K | 4000 K | | Distance |
|---|---|---|---|---|
| | 867 lx | 884 lx | ☀ | 250 mm |
| | 216 lx | 221 lx | ☀ | 500 mm |
| | 96 lx | 98 lx | ☀ | 750 mm |
| | 54 lx | 55 lx | ☀ | 1000 mm |

Illuminance symbol
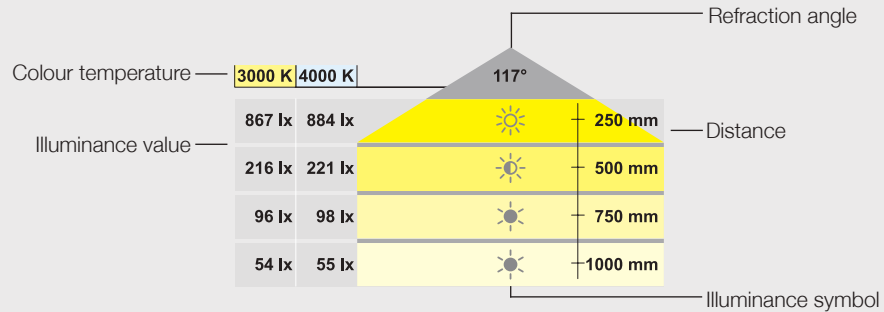
| ☀ | >500 lx |
|---|---|
| ☀ | 150–500 lx |
| ☀ | <150 lx |

**Note:**
The illuminance symbol always represents the best value of all colour temperatures and is meant to be for quick guidance only. Please note the specific values of the individual colour temperatures and the refraction angle before ordering!

## Recommendation for illumination of interior rooms

| Interior room type | Illuminance in Lux at 500 mm | Colour temperature |
|---|---|---|
| **Kitchen, dining area** | 300–500 | 2700–4000 K |
| **Store fixtures, galleries** | 300–500 | 4000–6500 K |
| **Bedroom, living room** | 200–300 | 2700–4000 K |
| **Bathroom** | 200–500 | 3500–4000 K |
| **Storage room** | 100 | 4000–5000 K |
| **Orientation light, hallway, wardrobe** | 10–50 | 4000–5000 K |

# Test symbols and symbols

## Product features

⬤ Dimmable

⬤ RGB light

⬤ Multi-white light

🅱 Bluetooth®: Industry standard for data transmission between electronic devices by radio over a short distance. The Bluetooth® word mark and logos are registered trademarks of Bluetooth SIG, Inc., and Häfele uses these marks under licence. Other trademarks and names are the propriety of their respective owners.

## Test symbol

TÜV seal of quality

Bureau of Indian Standards (BIS) Mandatory Certification of Quality Assurance

CE Confirmation from manufacturer that the product complies with the product-specific applicable European norms and standards.
Häfele will not use the certification in advertising.

RoHS Restriction of Hazardous Substances (EU directive 2011/65/EU).
Häfele will not use the certification in advertising.

Underwriters Laboratories, correspondence with the national standards in the USA and Canada

VI Energy efficiency standard VI of the United States Department of Energy

PSE Product Safety Electrical Appliance and Material Safety Law (for Japan)

Regulatory Compliance Mark (for Australia)

CCC China Compulsory Certification

EAC Eurasian Conformity, for CU countries (Russia, Kazakhstan, Belarus)

KC Korea Certification Mark

BSMI Bureau of Standards, Metrology & Inspection BSMI (for Taiwan)

Thai Industrial Standards Institute TISI

ENEC European Norms Electrical Certification, with indication of the testing laboratory (one of 18 European national institutes)

FC Declaration of Conformity for telecommunication and radio equipment (USA)

Telecommunication and Radio Equipment (Japan)

## Protection classes

☐ Protection class II

◇ Protection class III

## Degrees of protection

IP20 Only for use in dry locations

IP44 Penetration by solid foreign bodies $q \geq 1$ mm is prevented. Water spray protection (water from all directions)

IP65 Dustproof, protection from water spray (jet) from any angle.

IP20 / IP44 IP44 after installation
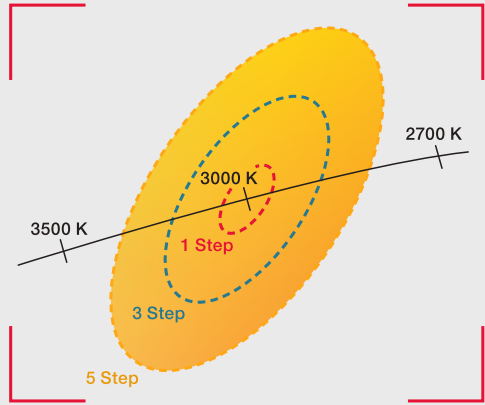
IP20 / IP65 IP65 after installation

## Safety symbols
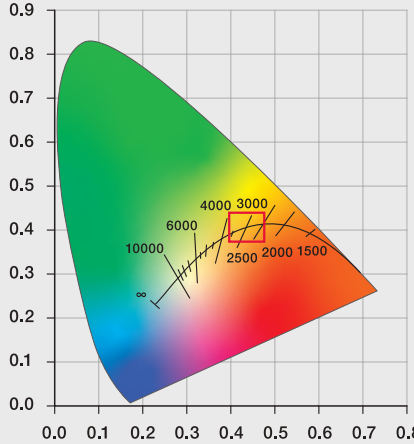
Installation permitted on or in furniture, whose ignition properties are unknown.

110 Max. surface temperature in case of fault

Lights to be used indoors only. Not to be used outdoors!

Do not use components that impede thermal radiation.

Waste of Electrical and Electronic Equipment. Do not dispose of in residential waste!

~ ⎓ Driver, converts alternating current to direct current

## Voltage supply

SELV Safety Extra Low Voltage

Independent operating unit for use outside of light without additional cover.

Short-circuit proof with safety isolation

# Technical terms

| Technical terms | |
|---|---|
| **Refraction angle** | The refraction angle (beam angle) describes the angle between two imagined straight lines in a plane through the visual beam axis, whereby these straight lines go through the centre of the front of the lamp and through the points at which the illuminance is 50% of the illuminance on the visual beam axis. |
| **Illuminance** | The illuminance is the **luminous flux** (lm) in relation to a surface (m²) and it is indicated in Lux (lx). It is used to measure the brightness with which a surface is illuminated. |
| **Binning** | During industrial manufacture, LEDs differ from each other with regard to colour, luminous flux (brightness) and forward voltage. In order to achieve consistent light quality with the same brightness level and a uniform light colour, they are therefore sorted according to colour, luminous flux and forward voltage and separated into bins ("containers") during manufacture. This sorting process is known as Binning. Häfele exclusively uses bins with a high degree of brightness in order to achieve high efficiency. |
| **Bluetooth® Mesh** | Network technology which was introduced in 2017, based on Bluetooth® Low Energy, in which all components (controls, devices) form a joint network, which is ideal for controlling lights. Häfele Connect Mesh uses this technology. |
| **Energy efficiency class** | The energy efficiency class provides information about the relevant energy consumption. Lamps and lights are categorised in classes E to A++. LED lights achieve the highest classes A to A++. |
| **Colour temperature and light colour** | The colour temperature is a specification of the colour appearance of a white light source and is measured in Kelvin (K). The lower the colour temperature, the warmer the light colour; the higher the colour temperature, the cooler the light colour. White light sources with a colour temperature below 3400 K are considered "warm white" by Häfele, white light sources with a colour temperature between 3400 K and 5700 K are considered "cool white". White light sources above 5700 K are referred to as "daylight white". |
| **Colour consistency/ colour differences** |  Colour differences are specified in stages, so called "MacAdams Ellipses" or "SDCM" (Standard Deviation of Colour Matching). Häfele uses 3 SDCM binnings for its LED products. This is a good value, because it is statistically unlikely that LEDs with a maximum colour difference will be next to each other on the strip light or in the light and that the colour difference is visible. In its ErP directive, the EU Commission stipulates that 6 SDCMs may not be exceeded for LED products. |

| SDCM | Visibility |
|---|---|
| 1 | Only people with extremely good vision can see the most minimal colour differences. |
| 2 | Most minimal colour differences are visible. |
| 3 | Very small colour differences are visible. |
| 4 | Colour differences are visible. |
| 5 | Significant colour differences are visible. |
| >5 | Very clear colour differences are visible. |

| | |
|---|---|
| **Colour rendering index CRI** | The colour rendering index is a parameter that can be used to compare the colour rendering quality of light sources at the same colour temperature. The higher the value, the better the colour rendering. A value of 100 corresponds to the colour rendering of daylight. |
| **Weighted energy consumption** | The weighted energy consumption is rounded to two decimal places in kilowatt hours in relation to 1,000 hours of use. It applies to operation of the LED with an external driver. The calculation and publication of this value is defined by EU ordnance No. 874/2012. |

## Technical terms

| | |
|---|---|
| **Constant current technology** | The same current flows through each LED. That means that the brightness of all LEDs is the same, and a **drop in luminous flux** is prevented. This increases the maximum visual length of the strip lights. |
| **Life time** | Specified in operating hours. The life time mainly depends on the warming of the products. The hotter the environment, the shorter the life time. The replacement rate in years is calculated from the total life time and the average operating time per annum. The following table can be used as a planning aid. The specified life time relates to L70/B50. |

| Indoor use | Annual operating time (EN 15193) hours | Replacement rate Years | Life time installation Hours |
|---|---|---|---|
| Office | 2,500 | 20 | 50,000 |
| Education | 2,000 | 25 | 50,000 |
| Hospital | 5,000 | 10 | 50,000 |
| Hotel | 5,000 | 10 | 50,000 |
| Restaurant | 2,500 | 10 | 25,000 |
| Shop | 5,000 | 10 | 50,000 |

| | |
|---|---|
| **Life time L80/B10** | L80 is the time after which the LED is still emitting 80 % of its original light. B10 means that 10 % of the LEDs may have less than 80 % of the original light output.<br>Häfele tests all LEDs it uses in accordance with the LM-80 standard. LM-80 is a standardised testing method, which allows products to bear the EPA's (Environmental Protection Agency) Energy Star. The test is a manufacturer-independent comparison of LEDs. During the test the luminous flux (Lumen maintenance) of an LED is tested at three different temperatures for a minimum of 6,000 hours. Then the life time L80 is calculated by means of extrapolation. The extrapolation procedure is described in regulation IES TM-21. |
| **LED** | A light-emitting diode (LED) is a semi-conductor element that emits light when electricity passes through it. This semi-conductor element consists of a crystal that is attached to a metal base, and both are encapsulated in protective plastic. LEDs are mostly based on inorganic, i.e. non-carbonic materials. |
| **Luminous efficacy** | The luminous efficacy is the ratio of the luminous flux and the wattage absorbed.<br>It is used to measure the operating efficiency of the light source.<br>It is indicated in Lumen per Watt (lm/W). |
| **Luminous flux** | It is indicated in Lumen (lm). The luminous flux indicates the light output, i.e. the quantity of light a source emits. The value may be subject to measurement and production-related fluctuations of ±10 %. |
| **Drop in luminous flux** | The brightness of the LEDs on LED strip lights decreases with the length of the strip light due to the increasing resistance of the copper line. A drop in luminous flux from the first to the last LED of up to 30% is imperceptible to the human eye. That's why Häfele specifies a **maximum strip light length** for this visual value. Generally, it is possible to operate strip lights with longer lengths, but a difference in brightness will be visible. Exception: The LEDs of the strip lights with constant current technology (LED 3052) always have the same brightness. |
| **Max. strip light length** | **Visual value**<br>Strip light length with an imperceptible **drop in luminous flux** of max. 30%.<br><br>**Wattage-dependent value**<br>Strip light length = output power of driver / wattage of the strip light per meter. If the wattage-dependent value is greater than the visual value, a difference in brightness will be perceivable. Exception: The LEDs of the strip lights with **constant current technology** (LED 3052) always have the same brightness. |
| **Multi-white** | The light colour of shades of white can be changed as required with Häfele Connect. BLE, e.g. from warm white to cool white. |
| **RGB** | RGB is the abbreviation for red, green and blue. In combination with Häfele Connect BLE, almost any colour combination can be created from the three primary colours. |
| **RoHS – Lead in Loox products** | Loox Products by Häfele are lead-free and adhere to the RoHS guidelines. RoHS is part of CE conformity. All Loox products are CE compliant. Häfele does not advertise the CE conformity in its catalogues, since only CE compliant products are allowed to be offered. The declaration of conformity is available online at www.hafele.com |
| **Transmittance** | Ratio of transmitted light to incidental light. An ideal transparent body would have a transmittance of 100 %. |

# Technical questions

| Technical questions | |
|---|---|
| **How do I clean an LED strip light?** | LED strip lights without a silicone sleeve do not require cleaning. Silicone strip lights can be wiped down with a damp antistatic cloth. Scouring agents and aggressive cleaners can destroy the surface and attack the LEDs. |
| **May I use drivers from other manufacturers?** | In order to ensure the safety and functionality of the installation, only Loox drivers or drivers that have been explicitly approved by Häfele may be used. If an electronics technician installs the system, Loox can also be connected and coupled with on-site electrical equipment. However, we explicitly point out that these tasks must be performed by a qualified electrician. |
| **What is the life time of the products in permanent operation?** | Loox5 drivers >50,000 hrs. with max. ambient temperature (40 °C/45 °C), wall plug drivers 30,000 hrs. at an ambient temperature of max. 40 °C. Provide for sufficient air supply and circulation at the mounting location of the driver. Loox5 LED strip lights >50,000 hrs. at an ambient temperature of max. 45 °C. Cooling with an aluminium profile is recommended from 9.6 W/m. |
| **Can the multi switch box, the multi driver box and the 3-way distributor with switching function be connected in series multiple times?** | No, because the signals can no longer be transmitted properly. |
| **Can 12 V and 350 mA lights or 12 V and 24 V lights be used together?** | Yes, please use our respective converter. (converters see chapter Supplying) |
| **How can sensor switch malfunctions be avoided (ꞯ 12 mm)?** | Check for correct switch installation. The TOP lettering on the switch must point upwards in the installation situation. |
| **How is consistent bulb light colour guaranteed?** | Häfele makes high demands on the selection of the materials. All Loox5 strip lights contain high-quality and long-lasting LEDs from Samsung and Lumileds. Setting very tight quality specifications ensures not only luminous flux and breakdown voltage, but also consistent light colour for follow-up purchases. |
| **What is the maximum wattage that I can connect to a device output of the driver?** | With 12 V systems it is 12 V x 5.0 A = 60 W with a 60 W driver<br>With 24 V systems it is 12 V x 3.75 A = 90 W with a 90 W driver |
| **How long may the lead between the driver and the device be?** | The maximum lead length from the Loox5 driver to the device is 10 m.<br>Long cable lengths in combination with large loads (strip light lengths) can result in voltage losses in the cable. These lead to visible loss of brightness in the lights. The illuminance listed with the lights has been determined with the rated output voltage of the driver. (12 V or 24 V). |
| **What is AWG?** | AWG stands for American Wire Gauge.<br>It is the coding for wire diameters in electrical leads that are mainly used in North America. This identifies the cross-section of wires in electrical leads that consist of strands and wire. |

**What is the current carrying capacity of my cable?**

Häfele allows the following current carrying capacity and wattage:

| Type of cable | 24 AWG | | 22 AWG | | 20 AWG | | 18 AWG | |
|---|---|---|---|---|---|---|---|---|
| Current carrying capacity | 1.5 A | | 2.5 A | | 3.5 A | | 5.0 A | |
| Voltage | 12 V | 24 V | 12 V | 24 V | 12 V | 24 V | 12 V | 24 V |
| Wattage | 18 W | 36 W | 30 W | 60 W | 42 W | 84 W | 60 W | 110 W |

The type of cable is imprinted on the coating of the cable.

| | |
|---|---|
| **Can an LED flexible strip light be used behind acrylic glass?** | Yes, however the acrylic glass increases the colour variations (binning) up to four times and minimal colour deviations are therefore more visible. |
| **Can Loox lights be operated using multiple switches?** | Yes, please use the multi switch box to do this. Up to three switches can be connected to the multi switch box (multi switch box see page 86). |
| **Why do the lights have to be plugged in first before connecting the high voltage mains plug?** | If the driver is connected to the mains first, electrical power is output at the secondary side, which leads to overvoltage and therefore damage to the lights if they are connected. |
| **Can Loox lights be used in RVs/boats/cars?** | Yes, for sure. We have special IC strip lights that compensate for voltage fluctuations of the vehicles without problems. Our regular LED strip lights can be used as well. It is important to note, however, that the voltage peaks may reduce the life time. |

## Technical questions

| Can I use Loox in a sauna/bathroom? | We offer special lights that offer IP44 protection when installed. This is sufficient for many applications. Our LED silicone strip lights are IP44 protected as well. However, it must be ensured that the driver and mains lead are dry. Furthermore, a maximum ambient temperature of 45 degrees must be ensured. |
|---|---|
| Why does my LED light flash? | Flashing is a sign of (under or) overloading. Use a driver with higher power or reduce the number of devices. |

# Documentation on the Internet

## Video guides
### Language neutral for all markets

Language-independent videos are available for the Loox radio remote controls and other selected products at **www.hafele.com** next to the item.

## Installation instructions
### Language neutral for all markets



Language neutral installation instructions are provided for all Häfele Loox lighting systems.

## Energy efficiency class
### Label in all EU languages



Labels are available for downloading in all EU languages for all Loox lighting systems at **www.hafele.com**.

**Mumbai Design Centre:**
Haji Moosa Patrawala Ind.(SOBO)
Estate, Near Famous Studio,
Mahalaxmi (West), Mumbai - 400 011.
Tel.: 022 6264 7100.

**Mumbai Design Centre:**
#2 Filix Building, Opp. Asian Paints,
L.B.S. Marg, Bhandup (West),
Mumbai - 400 078.
Tel.: 022 2596 9660/
2596 9787/2594 7305

**New Delhi Design Centre:**
D-89 , I$^{st}$ Floor, Okhla Phase-I,
New Delhi - 110 020.
Tel.: 011-66574999 .
Fax: 011-41605482.

**Bangalore Design Centre:**
Incubex Nestavera Spaces Pvt Ltd,
No:13, Langford Place, Langford Road,
Shanti Nagar, Bangalore - 560 025.
Tel.: 080 4132 6116.
Fax: 080 4132 6226.

**Hyderabad Design Centre:**
SJR Building - # 1-57/89/1 & 1-57/89/2
Opp Allahabad Bank, Gachibowli,
Hyderabad – 500032
Tel.: 040 29557578 / 040 29557588

**Kolkata Design Centre:**
PS PACE, Premises No. 1/1A,
Mahendra Roy Lane, Topsia,
Kolkata - 700 046.
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**Chennai Design Centre:**
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**Pune Design Centre:**
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