



LED lighting systems for furniture and furnishings

# Light for every mood and function





# Contents



# Lighting systems for furniture and furnishings

Pa	age
The lighting system for furnishings	-7
_ighting effects	· 11
12 V system	. 12
24 V system	.36
350 mA system	.46
Battery-operated lights	.56
nstallation instructions	.57
Häfele around the globe	.58
nformation and technical terms	.60
Symbol definitions	.61
Häfele addresses	.62
mprint	.63

### **Engineered by Häfele**

Loox is the Häfele brand for LED lighting systems. Thanks to its innovative driver and the functional Plug & Play technology, it is mainly suitable for use in mass-produced furniture. The modular Loox system has many international certificates, and can therefore be used worldwide.

### Feature no. 1: A driver that is international

The Loox driver is adaptable to power systems anywhere in the world, meaning that you can wait until the last minute before deciding to use Loox in a particular country. The type of light can be chosen right at the start – without compromises.

### Benefits in mass production:

The furniture can be manufactured complete with Loox lights without knowing its final destination. The corresponding mains lead just needs to be plugged in on site, and the furniture is "ready to go".











 $(\bullet \bullet)$ EU (250 V)

> $\bigcirc$ KR (250 V)



The definition of the symbols can be found on page 61.

del: 833.74.900

100

240VAC

CEOT

2V Max.1



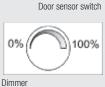
### Feature no. 2: Integrated controller

External control units are a thing of the past. The controller is integrated in the driver and the switch. The switch that is required is connected directly to the driver without the need for additional components.

#### Benefits in furniture construction:

Compact – because no external control unit is required. Flexible – free choice of switch type.





**a**\_1)))



Push switch

Feature no. 3: Wide variety of lights

The LED is the future of lighting technology. Loox already contains a wide variety of LED lights - individual design variants are possible.

#### Benefits for furniture design:

Standardised furniture can differ in terms of the lights, meaning that the desire for individuality can be fulfilled without problems.



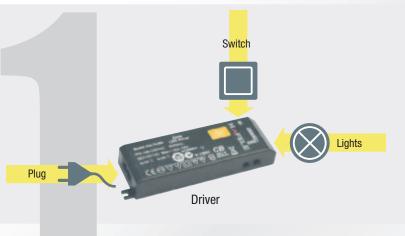
### Loox by Häfele

As a powerful partner to the furniture industry, Häfele is aware of the responsibility that constructive cooperation represents as far as lights are concerned. We prefer to accompany your project from start to finish - with care and reliability. We call this "Häfele Engineering".

#### Loox quality

"The whole is greater than the sum of its parts" – this quote from Aristotle describes the Loox system in a nutshell. A tremendous amount of development work has gone into Loox. Loox lights are high quality and can be efficiently integrated in the production of mass-produced furniture. The global deployment of Loox in mass-produced furniture is guaranteed by means of high testing standards and the necessary certification.





#### Loox modular system

Loox is structured in accordance with a clear modular principle. Regardless of whether your plans are drawn up from the starting point of the light or the driver, a driver and a wide range of lights, switches and mains leads are available for any Häfele LED technology.

### Loox lights

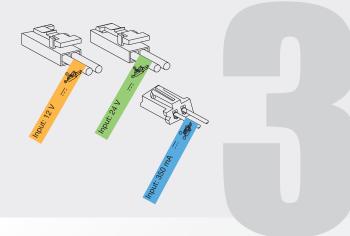
Lights are subject to the rules of fashion. Because of the standardised plug-in connection, Loox lights can be replaced without problems at any time. This makes it easier to adapt the lights to the lifecycle of the furniture series. The lights are selected in accordance with the latest trend – but the driver remains the same.





### Loox LED technology

In a rapidly growing market such as the LED technology market, you need partners who acknowledge your technology and provide well thought-out systems. Loox provides a unique, unmistakeable plugging system for lights, drivers and switches for any technology. Each driver and each light is also marked with the symbols for systems (colour and text). Mix-ups are therefore ruled out.





### Loox packaging and logistics

Häfele helps to provide smooth integration of the selected LED technology in mass production with individual packaging. All components that are required are packed in freely definable sets and also delivered to the required location "just in time" if necessary.

#### Loox planning service

Light in furniture provides new design possibilities. Depending on how the furniture is going to be used, the light takes over different functions. In order to ensure that the effect of the light in the furniture can be tried out in as realistic a way as possible, Häfele provides virtual room situations for individual lighting at http://www.hafele.com/loox



### The ABC

### of lighting technology

LED's (Light Emitting Diodes) can vary the properties of the light that is generated, and generate almost the entire colour spectrum. Unlike normal light bulbs and halogen lamps, LED's generate little heat. They use less energy and have a long service life.

#### Advantages of LED's

#### Longer lasting

LED lights have an extremely long service life of up to 25 years or more than 40,000 to 50,000 hours.

#### Insensitive

LED's have an extremely small and robust design. This makes handling easier during furniture construction and transport.

#### Low heat generation

Because of their extremely low power consumption, LED lights generate hardly any heat. This means that LED lighting systems are particularly suitable for displays.

#### Energy-saving

LED lights use an impressive 90 percent less power than conventional light bulbs! This means that they can be used to implement modern lighting scenarios in furniture, and still be in line with the energy saving trend.

#### Powerful

Modern LED lights are bright and have a saturated light colour. They achieve full brightness as soon as they are switched on. LED furniture lighting therefore has a lasting effect at the push of a button.

#### **Rich in variants**

LED lights are available in different colours, and can be designed as colour changing lights. This allows the light colour to be coordinate with furniture contents such as exhibits in the best possible way.

#### Loox LED technology

The Loox LED technology incorporates different power systems. A system is decided on by choosing the driver or a particular light. The choice of system is an important decision, because the driver that is selected can only be combined with lights from the same system.



#### 12 V Spoiled for choice in the 12 V system

The LED lights are voltage-controlled and connected in parallel in the 12 V system. The plugs on the driver can be freely allocated.

12 V lights are the most widespread at present.



#### Powerful 24 V system

Technically speaking, the 24 V system is identical to the 12 V system, but has a considerably higher power level. 24 V lights can therefore be used when extremely bright lights are required.



#### Spotlights in the 350 mA system

The LED lights in the 350 mA system are current-controlled and connected in series. This means that each plug has to be either occupied or bypassed. 350 mA lights provide extremely high light power and are particularly suitable for spotlighting.

### More enjoyment



### from furniture with light

Light inside furniture sets a mood, it improves the atmosphere and quality of life and home and in the office. The innovative Loox lights are especially suitable to simplify and improve accent lighting, guidance, safety and comfort.

#### Light in drawers

to improve access

Adding comfort to every furniture piece means illuminated drawers; it's the perfect solution to supplementing ambient light.





### Better light in the workplace

leads to improved results

Particularly in areas that call for a higher degree of attention, additional light sources should be used for proper illumination.

### Background lighting

for an improved atmosphere

For special occasions such a relaxing or to have a party, indirect light sources set a special mood.



### Loox in the living room:



### As diverse as life itself.

Relaxing, playing, reading, watching TV with the family, alone or in a cosy gathering of guests: No other room is used in as many different ways as the living room. At the same time, the living room is an expression of your own personality and a reflective of your style. For the lighting design plan this means: Versatile and flexible light sources to perfectly enhance the varying activities.





Inconspicuous spot lights bring decoratively displayed items into focus for those present.



Indirect background lighting emphasizes furnishings and creates a pleasant atmosphere.

### Loox in the kitchen:



### A room to savour.

Today, the kitchen is a living area and favourite place to gather for family and friends. Good light to work and more pleasant light during meals therefore is a requirement of the lighting plan that also needs to take furniture materials into account. Precious wood fronts and other dark surfaces absorb light while light high gloss fronts reflect it.





More enjoyment during cooking thanks to bright and even illumination of work surface.



Interior lighting of cabinets provides a better overview while at the same time creating a pleasant atmosphere during dinner.

### Loox in the bedroom:



### Retreating and feeling well.

There isn't another living space in which we spend more time than our bedroom. It's a cosy retreat for reading, watching TV or romance. It's also the room to dress or change clothes and for the wardrobe, maybe even walk-in closets. Perfectly adapted light accents and provides functionality and cosiness.





A flexible bedside light provides directional light so that the partner's dreams are uninterrupted.



And discreet low level light helps navigation in the dark.

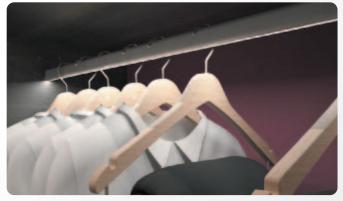
### Loox in the closet:



### A stylish welcome.

A walk-in closet has a greater responsibility than to just provide adequate clothes storage, it should also offer enough space to select the right outfits and to dress. Interesting lighting concepts have the task to create a balanced mix of task lighting as well as creating a cosy atmosphere.





Practical and attractive - an illuminated wardrobe rail.



Accessories are always accessible and presented stylishly on the illuminated shelf.

Overview 12 V System



LED 2018 Page 13
LED 2002 Page 15 LED 2009 Page 22
LED 2010 Page 23
LED 2004       Page 16         LED 2005       Page 17         LED 2003       Page 20         LED 2008       Page 21         LED 2017       Page 32
LED 2006 Page 18 LED 2007 Page 19
LED 2011 Page 24 LED 2012 Page 25 LED 2013 Page 26 LED 2014 Page 27 LED 2015 Page 28

Leads

### www.hafele.com

Page 35

### **LED 2018** 12 V System



### **Flexible light**

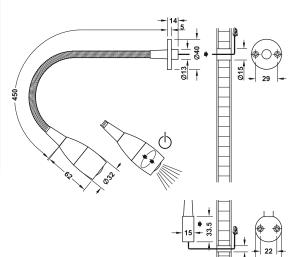


Reading light, flexible spotlight in the bookshelf or storage area - the application areas of the LED 2018 light could hardly be more diverse. It is easy to position, and the integrated glass lens provides a pleasant, uniform cone of light.



833.74.100

833.74.110

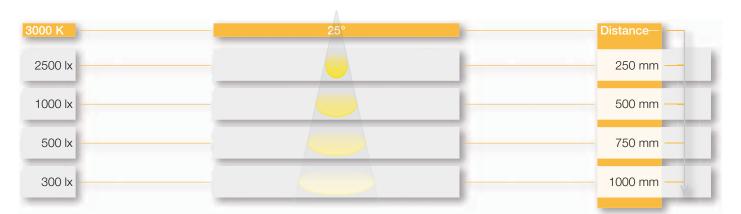


Cat. No.	833.74.***			
Cal. No.	100	110		
Light colour (K) ———		00 white)		
Length (mm) ———	45	50		
Diameter (mm) ———	3	2		
Wattage (W)		2		
Number of LED's ——	-	1		
Light output (Lumen) ——	7	0		
Lumen per Watt (Efficacy)	3	5		
Colour rendering index (CRI) ————————————————————————————————————	9	3		
Finish ———	Silver	r grey		
Packing	1 piece with mou	nting accessories		
Cable length	2.0	) m		

Cannot be dimmed.

Driver

page 33



 $(\bullet)$ 

### 12 V System LED 2001

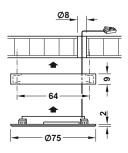


# **Down light**



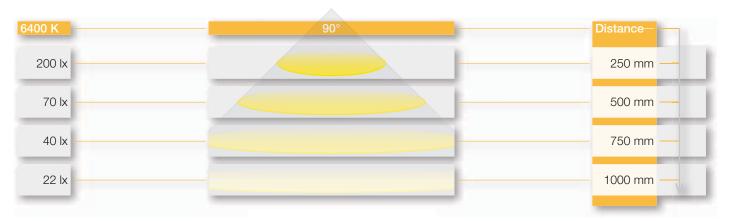
The extra-thin LED 2001 down light is particularly suitable for providing decorative lighting in furniture with shelves. A prismatic cover provides pleasant light. Two finishes are available for optimum integration in the furniture design.





Cat. No.	833.73.***				
	000	001			
Light colour (K) ———	6400 (as a Ludaita)				
	(cool white)				
Diameter (mm) ———	7	5			
Height (mm)	1	1			
Wattage (W)	1.	.7			
Number of LED's ——	2	1			
Light output (Lumen) —	- 126				
Lumen per Watt (Efficacy) ————————————————————————————————————	74				
Colour rendering index (CRI)	6	0			
Finish	Plastic silver coloured	Plastic white			
FILIST	With translucent, prismatic lamp				
	cover				
Packing ———	1 piece with mounting accessories				
Cable length	- 2.0 m				

Driver page 33





# Down light

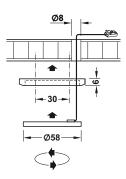
12 V System



The LED 2002 down light is characterised by its extremely flat shape, and is available in three light colours. In furniture and furnishings it is particularly suitable for providing decorative lighting in shelving and display cabinets.

Cat. No.	200	833.73.*** 210	220		
Light colour (K) ———	5000 (cool white)	3200 (warm white)	Blue		
Diameter (mm)		58			
Height (mm) ———	6				
Wattage (W)	1.5				
Number of LED's ——		19			
Light output (Lumen) —	62	16			
Lumen per Watt (Efficacy) ————————————————————————————————————	41	34	10		
Colour rendering index (CRI)	80	90	-		
Finish ———	Plastic housing with stainless steel ring				
Packing	1 piece				
Cable length	2.5 m				







page 33

400 lx 254 lx 230 lx 250 mm 140 lx 80 lx 90 lx 500 mm 40 lx 80 lx 46 lx 750 mm 40 lx 23 lx 20 lx 1000 mm



# Down light

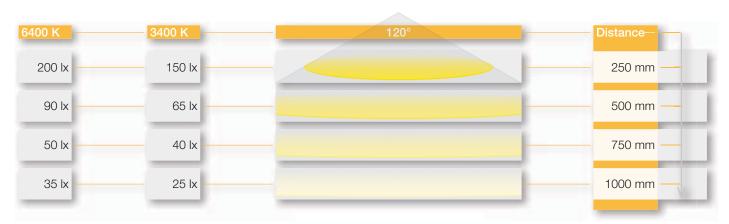


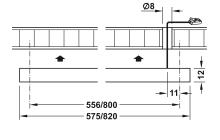
12 V System

If you are looking for an interesting design element in decorative furnishing areas, the LED 2004 light bar is just the ticket. It can be integrated into furniture almost invisibly because of its compact design.

Cat. No.	833.73.***				
Cal. NO.	040	041	050	051	
Light colour (K) ———	6400 (cool white)				
Length (mm) ———	575	820	575	820	
Width (mm) ———		1	3		
Height (mm)		1	2		
Wattage (W)	1.8	2.8	1.8	2.8	
Number of LED's	24	36	24	36	
Light output (Lumen) ——	90	135	90	135	
Lumen per Watt (Efficacy)	75				
Colour rendering index (CRI)	67				
Finish ———	Aluminium, silver coloured anodized				
Packing	1 piece with mounting accessories				
Cable length		2.0	) m		

Driver page 33

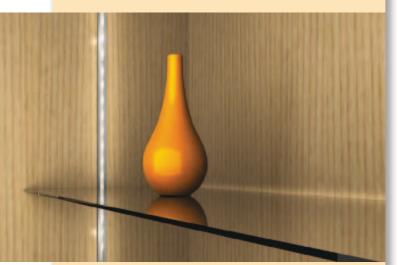




12 V System



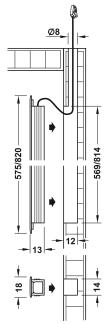
# **Recess mounted light**



The LED 2005 light bar can be integrated flush in furniture and therefore provides the possibility of installing lighting in display cabinets and representative furnishings. This light gives added value to any furniture because of its decorative effect, without influencing the design thereof. Additional variants are provided by two available lengths and light colours.

833.72.***				
000	001	010	011	
÷ .		64 (cool )		
575	820	575	820	
	1	2		
	1	4		
1.8	2.8	1.8	2.8	
24	36	24	36	
90	135	90	135	
75				
66	67	66	67	
Aluminium, silver coloured anodized				
1 piece				
	2.0	) m		
	34 (warm 575 1.8 24 90 66	000     001       34∪     (warm white)       575     820       575     820       1     1       1.8     2.8       24     36       90     135       66     67       Aluminium, silver of       1 pi	000         001         010           34∪0         64           (warm white)         (cool)           575         820         575           820         575         12           1.8         2.8         1.8           24         36         24           90         135         90           66         67         66           Aluminium, silver totured at the second at the se	







 3400 K
 6400 K
 120°
 Distance

 150 lx
 200 lx
 250 mm
 250 mm

 65 lx
 90 lx
 500 mm
 500 mm

 40 lx
 50 lx
 750 mm
 1000 mm

( E IP20

### 12 V System LED 2006



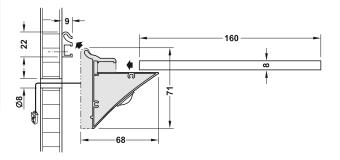
# Illuminated glass shelf

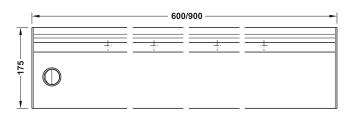


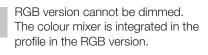
Functionality and design in one – combined perfectly in the LED 2006. Being a lighting element and a glass shelf at the same time, this innovative glass shelf generates uniform decorative light effects. Other types of emphasis can be set with the available light colours and satin-finish glass surfaces.

Cat. No.	833.74.***						
Gal. NO.	000	001	010	011	020	021	
Light colour (K)	RGB		Blue		6400 (cool white)		
Length (mm) —	600	900	600	900	600	900	
Height (mm) —			7	0			
Depth (mm) —			17	75			
Wattage (W) —	2.8	4.5	2.8	3.5	2.8	4.0	
Number of LED's	15	24	33	51	33	51	
Light output (Lumen) ———	20	31	20	31	198	306	
Lumen per Watt (Efficacy) –	7	6	7	6	66	61	
Colour render- ing index (CRI) -	-					70 – 80	
Finish ———	Aluminium, silver coloured anodized, with satin-frosted glass					ed,	
Packing ——	1	piece w	ith mou	nting ac	cessorie	S	
Cable length —			2.0	) m			









Driver

page 33

12 V System

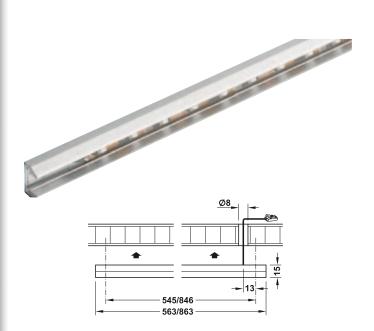


### **Glass edge light**



The LED 2007 clip-on profile is designed for installing behind glass shelving. It is ideal for 8 mm thick glass shelves and provides an effective, emotional enhancement to furniture and furnishings. The design only requires an extremely small amount of space behind the glass shelf. Two lengths and two light colours are available for individual design.

Cat. No.	833.74.***					
Cal. No.	050	051	060	061		
Light colour (K) ———	34 (warm		Bl	ue		
Length (mm)	563	863	563	863		
Width (mm)		1	2			
Height (mm)	- 15					
Wattage (W)	2.5	4.0	2.5	4.0		
Number of LED's	30	48	30	48		
Light output (Lumen) ——	180	288	18	29		
Lumen per Watt (Efficacy)	7	2	7	7		
Colour rendering index (CRI)	55 -	- 60	-	-		
Finish	Aluminium, silver coloured anodized					
Packing	1 piece	with mou	nting acce	essories		
Cable length		2.0	) m			



The glass edge light is pushed onto the glass shelf from the rear. Without load bearing function!

Driver

🕸 🐽 💎 **( (** IP20

page 33

### 12 V System LED 2003

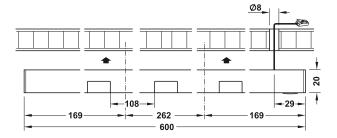


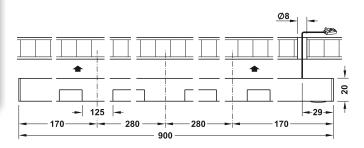
# Down light with sensor switch



Wide shelves, wall units and worktops – these are the classical areas of application for the LED 2003 light bar with its generous amount of light. Thanks to an integrated sensor, the classical on/off switch is not needed.

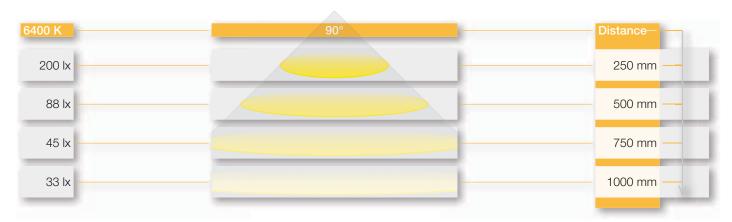






Cat. No.	833.73.***			
Gal. NO.	020	021		
Light colour (K) ———	64 (cool y			
Length (mm) ———	600	900		
Width (mm) ———	3	0		
Height (mm)	2	0		
Wattage (W)	3.0	3.6		
Number of LED's	9	12		
Number of light openings	3	4		
Light output (Lumen) —	140	210		
Lumen per Watt (Efficacy)	58	66		
Colour rendering index (CRI)	67	67		
Finish	Aluminium, silver o	coloured anodized		
Packing	1 piece with mounting accessories			
Cable length	2.0	) m		

Cannot be dimmed.



 $(\bullet)$ 

12 V System

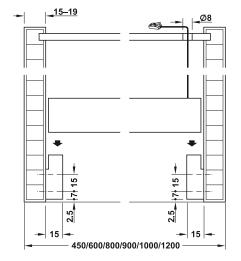


## **Drawer light**



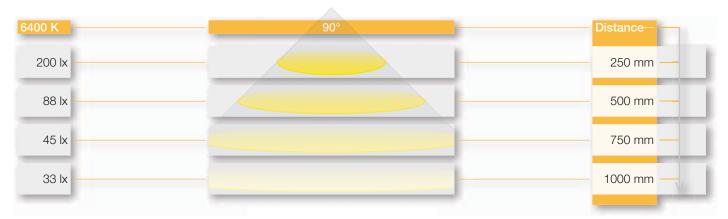
The 2008 light bar with integrated door sensor for switching on and off brings light into the dark in any storage space. Typical areas of application are the areas behind doors and drawers, whereby the light is uniformly distributed towards the front and downwards.

•	



Cat. No.	833.73.***					
Cal. NO.	060	061	062	065	063	064
Light colour (K) ———	6400					
g. (20000. ()	(cool white)					
Length (mm)	405	555	755	855	955	1155
Width (mm) ———			3	0		
Height (mm) ———			2	0		
Wattage (W)	1.5	2.0	2.5	2.5	3.0	3.5
Number of LED's ——	6	9	12	12	15	18
Number of light	2	3	4	4	5	6
openings	2	0	4	4	0	0
Light output (Lumen) —	70	105	140	140	175	210
Lumen per Watt			4	Л		
(Efficacy)			4	4		
Colour rendering index			6	7		
(CRI)	67					
Finish ———	Aluminium, silver coloured anodized				dized	
Packing	1 piece with mounting accessories				ories	
Cable length			2.0	) m		

Ę	Cannot be dimmed.	
	Driver	page 33



### 12 V System LED 2009



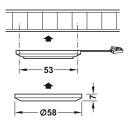
### **RGB** down light

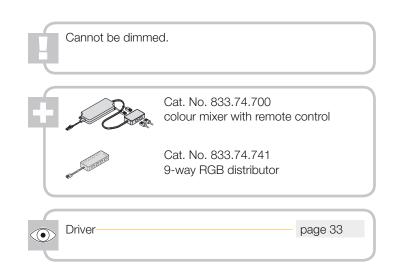


Do you want to enhance your furniture and furnishings with lighting using an individual colour shade or using automatic colour changes? If so, the space-saving LED 2009 colour changing light is the right choice. You will be surprised at its versatility!

Cat. No.	833.73.150
Light colour (K) ———	RGB
Diameter (mm) ———	58
Height (mm)	7
Wattage (W)	1.2
Number of LED's	8
Light output (Lumen) ——	10
Lumen per Watt (Efficacy)	8
Colour rendering index (CRI)	-
Finish	Stainless steel matt
Packing	1 piece with mounting accessories
Cable length	2.5 m







12 V System

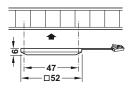


### **RGB down light**

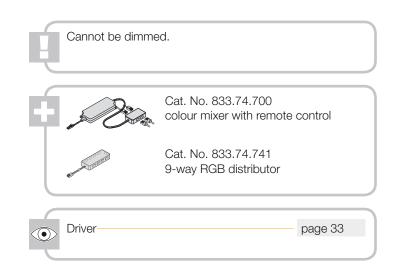


The LED 2010 is the right choice if you wish to create design emphasis in a small amount of space with a down light with changing colours. The colour thereof can be selected by the customer and requires very little room.





Cat. No.	833.73.100
Light colour (K) ———	RGB
Length (mm) ———	52
Width (mm)	52
Height (mm)	6
Wattage (W)	1.7
Number of LED's	9
Light output (Lumen) ——	15
Lumen per Watt (Efficacy)	9
Colour rendering index (CRI)	-
Finish	Stainless steel matt
Packing	1 piece with mounting accessories
Cable length	2.5 m



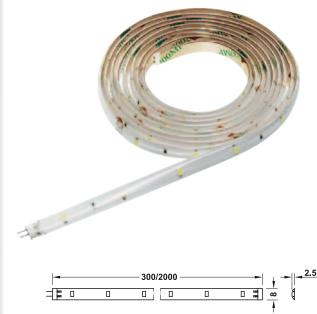
### 12 V System LED 2011



# LED flexible strip light

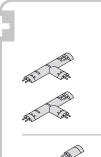


The LED 2011 strip light with its extremely small space requirement is easy to process and can be flexibly adapted to any furnishing. The strip light has a self adhesive backing and can be individually shortened. This means that this light is also ideal for retrofitting. Two lengths and two light colours are available for furniture design.



Can be shortened after every third LED, every 75 mm. Installation: Self-adhesive

Cat. No.	833.73.***			
Cal. NO.	250	252	260	262
Light colour (K)	50 (cool v		32 (warm	00 white)
Length (mm) ———	300	2000	300	2000
Width (mm) ———		8	3	
Height (mm)		2.	5	
Wattage (W)	0.8	5.0	0.8	5.0
Number of LED's	12	72	12	72
Light output (Lumen) ——	39	237	32	194
Lumen per Watt (Efficacy) ———	49	47	40	39
Colour rendering index (CRI)	8	0	9	0
Finish		Plastic	white	
Packing		1 pi	ece	



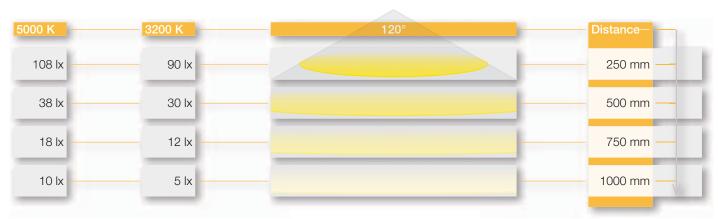
T-connector: Length: 75 mm; Wattage: 0.2 W; 3 LEDs; Cat. No. 833.73.300 T-connector, 5000 K (cool white) Cat. No. 833.73.310

T-connector, 3200 K (warm white)

Cat. No. 833.74.712 2.5 m interconnecting lead (connection between flexible strip lights and driver)

Cat. No. 833.74.713 50 mm interconnecting lead (e.g. for corner connection)







12 V System

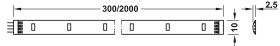


# LED flexible strip light, RGB



Furniture is put into the right light by means of individually selectable light colours using the LED 2012 colour changing strip light. Ideal for retrofitting: The strip light can be shortened in accordance with customer requirements and flexibly adapted to any furnishing.





Cat. No.			
Cat. No.	320	322	Can be shortene
Light colour (K) ———	R	GB	Installation: Self- Cannot be dimm
Length (mm)	300	2000	Carlinot be dimin
Width (mm)		8	
Height (mm)	2	2.5	
Wattage (W)	2.0	12.0	
Number of LED's ——	12	72	
Light output (Lumen)	22	129	
Lumen per Watt (Efficacy)	12	13	A A A A A A A A A A A A A A A A A A A
Colour rendering index (CRI)		_	
Finish ———	Plasti	c white	
Packing	1 p	piece	

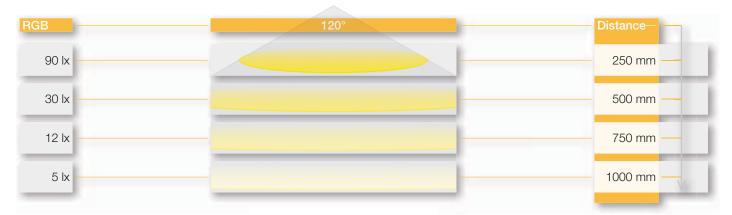
833.73.\*\*\*

Can be shortened after every sixth LED, every 150 mm. Installation: Self-adhesive Cannot be dimmed.



Driver

page 33



www.hafele.com

25

### 12 V System LED 2013

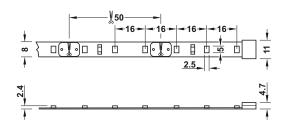


# 5 m LED strip light with 300 LED's



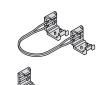
The LED 2013 strip light is ideal for background lighting for furniture and furnishings. The close LED grouping on the strip provides uniform lighting. The strip light can be shortened individually and is therefore extremely flexible from a processing point of view.





Cat. No.	833.73.***			
Gal. NO.	330	340	350	360
	3200	6500		
Light colour (K) ———	(warm	(cool	Blue	Red
	white)	white)		
Length (mm)		50	00	
Width (mm)		8	3	
Height (mm)		2.	.5	
Wattage (W)	24	(max. 5 r	n per driv	er)
Number of LED's ——	300 (60 per metre)			
Light output (Lumen) ——	1440	1800	408	516
Lumen per Watt (Efficacy)	60	75	17	22
Colour rendering index (CRI)	65	75	-	-
Finish		LED boa	ard white	
Packing —	5	m roll with	1 300 LED	's
Cable length		2.0	) m	

Every LED strip light is supplied with 2 m mains lead (833.74.718). 833.74.718: Mains lead 2 m with 12 V plug system and clip for LED strip light



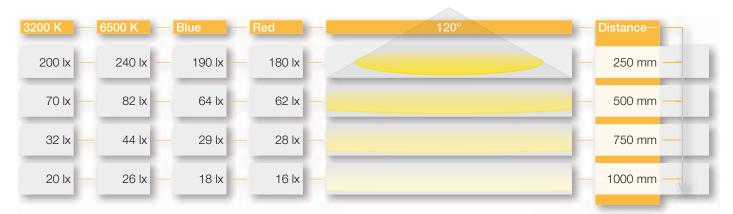
833.74.719: Interconnecting lead 500 mm with clip for LED strip light

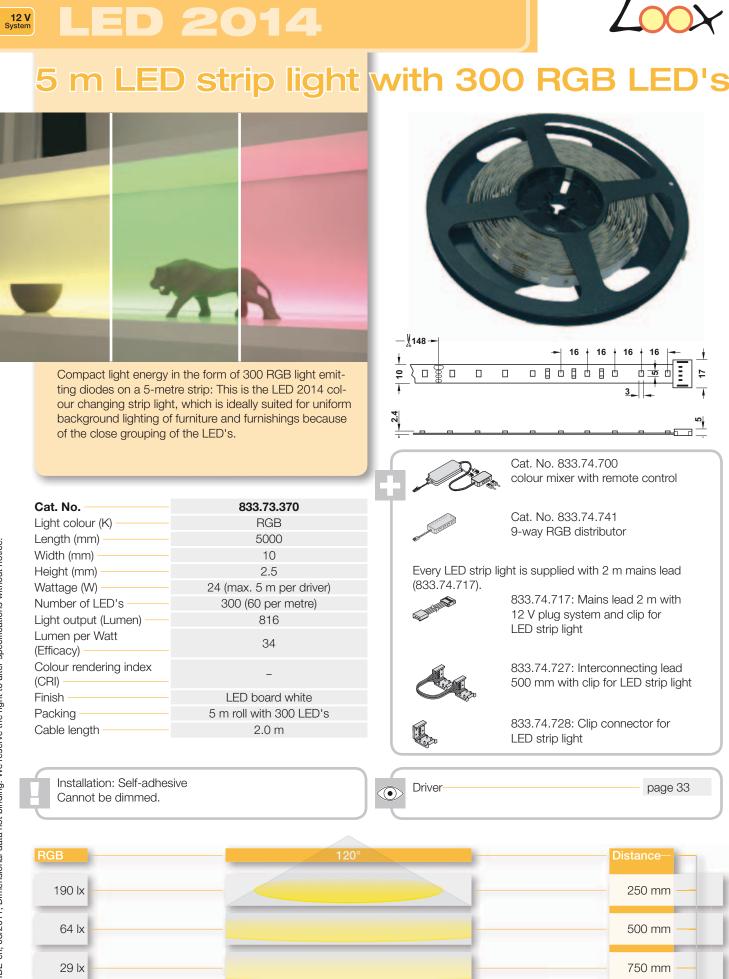
833.74.720: Clip connector for LED strip light

www.hafele.com

Installation: Self-adhesive

>	Driver	page 33
	Aluminium profile	page 30





18 lx

27

1000 mm

#### 12 V System LED 2015

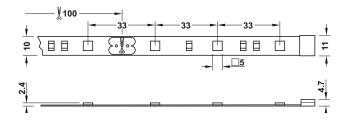


# 5 m LED strip light with 150 LED's



The 5 metre LED 2015 strip light is ideal for all applications involving direct lighting of furniture and furnishings. Flexible processing is guaranteed because individual shortening is possible.

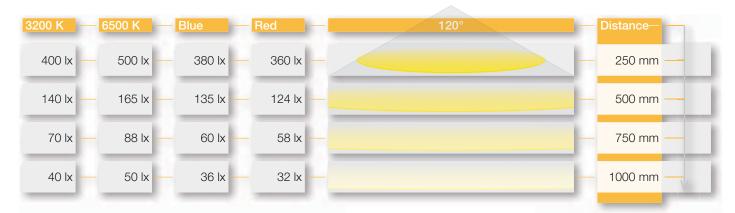




Cat. No.	833.73.***			
Cat. No.	400	410	420	430
Light colour (K) ———	3200 (warm	6500 (cool	Blue	Red
	white)	white)		
Length (mm)		50	00	
Width (mm)		1	0	
Height (mm)		2.	.5	
Wattage (W)	40	(max. 3.8	m per driv	ver)
Number of LED's		150 (30 p	er metre)	
Light output (Lumen) ——	2412	2808	504	612
Lumen per Watt (Efficacy)	67	78	14	17
Colour rendering index (CRI)	67	78	-	-
Finish		LED boa	ard white	
Packing	5	m roll with	150 LED	'S
Cable length		2.0	) m	

	Every LED strip lig (833.74.718).	ht is supplied with 2 m mains lead
	and the second s	833.74.718: Mains lead 2 m with 12 V plug system and clip for LED strip light
		833.74.719: Interconnecting lead 500 mm with clip for LED strip light
l		833.74.720: Clip connector for LED strip light
	Installation: Self-a	dhesive

>	Driver	page 33
	Aluminium profile	page 30



12 V System

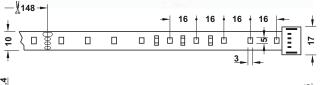


# 5 m LED strip light with 150 RGB LED's



Extremely bright light sources with changing colours are often in demand for lighting equipment items and furniture. The LED 2016 colour changing strip light meets these requirements easily.





LED strip light

Cat. No.	833.73.450
Light colour (K) ———	RGB
Length (mm)	5000
Width (mm) ———	12
Height (mm) ———	2.5
Wattage (W)	36 (max. 3.8 m per driver)
Number of LED's	150 (30 per metre)
Light output (Lumen) ——	1224
Lumen per Watt (Efficacy) ————	34
Colour rendering index (CRI)	-
Finish	LED board white
Packing	5 m roll with 150 LED's
Cable length	2.0 m



Every LED strip light is supplied with 2 m mains lead 833.74.717: Mains lead 2 m with 12 V plug system and clip for



Driver

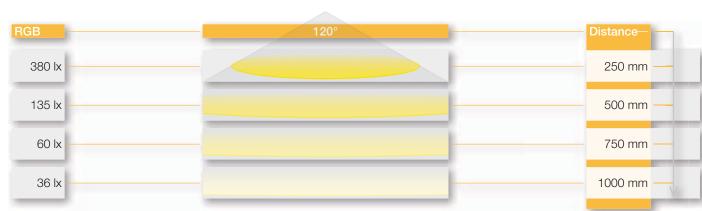
 $(\bullet)$ 

833.74.727: Interconnecting lead 500 mm with clip for LED strip light

833.74.728: Clip connector for LED strip light

page 33

Installation: Self-adhesive Cannot be dimmed.



#### 12 V System





# Aluminium profile for LED strip lights

Cat. No.	833.74.729
Length (mm) ———	2500
Width (mm) ———	17
Height (mm)	8
Application ———	For mounting as down light with frosted cover
Finish	Aluminium, silver coloured anodized
Packing	1 piece

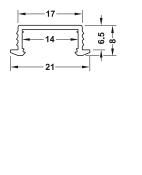






Cat. No. 833.74.730 end cap, plastic silver coloured anodized, 2 pieces

Cat. No.	833.72.705
Length (mm) ———	2500
Width (mm)	17
Height (mm)	8
Application	For recessed installation with frosted
	COVer
Finish	Aluminium, silver coloured anodized
Packing	1 piece

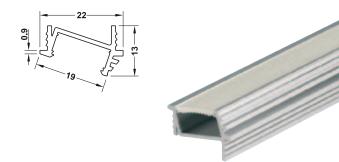






Cat. No. 833.72.709 end cap, plastic silver coloured anodized, 2 pieces

Cat. No.	833.72.715
Length (mm) ———	2500
Width (mm) ———	18
Height (mm) ———	13
Application	For angled installation with frosted
	cover
Finish ———	Aluminium, silver coloured anodized
Packing	1 piece





Cat. No. 833.72.719 end cap, plastic silver coloured anodized, 2 pieces

The cut to size aluminium profiles that are depicted are only suitable for the LED strip lights LED 2013 and LED 2015. Insulating strip is provided for all profiles.

### www.hafele.com

30

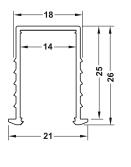
### 12 V System



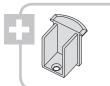


# Aluminium profile for LED strip lights

Cat. No.	833.72.725
Length (mm) ———	2500
Width (mm) ———	17
Height (mm) ———	26
Application ———	For recessed installation, 25 mm deep, with mik coloured cover
Finish	Aluminium, silver coloured anodized
Packing	1 piece

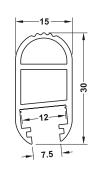






Cat. No. 833.72.729 end cap, plastic silver coloured anodized, 2 pieces

Cat. No.	833.72.735
Length (mm) ———	2500
Width (mm) ———	15
Height (mm) ———	30
Application ———	Rail end support with frosted cover
Finish ———	Aluminium, silver coloured anodized
Packing	1 piece







Cat. No. 803.33.758 oval rail end support (for screw fixing), plastic, silver coloured anodized, 2 pieces

Cat. No. 802.07.200 rail centre support

The cut to size aluminium profiles that are depicted are only suitable for the LED strip lights LED 2013 and LED 2015. Insulating strip is provided for all profiles.

32

# LED strip light, 3-piece set



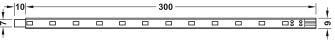
**LED 2017** 

12 V System

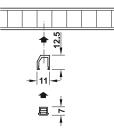
The LED 2017 strip light set provides a wide range of decorative usage options with its comprehensive range of provided accessories, e.g. shelf lighting, plinth lighting, background lighting etc.. The set is also perfectly suitable for retrofitting in existing furniture.

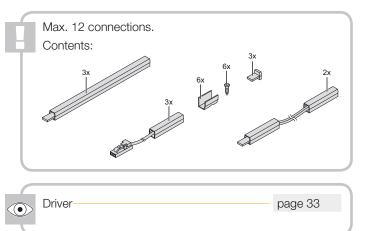
Cat. No.	833.73.***	
	080	070
Light colour (K)	6400 (cool white)	3000 (warm white)
Length (mm) ———	300 per	strip light
Width (mm) ———	Ę	3
Height (mm)	-	7
Wattage (W)	0.72 x 3	3 = 2.16
Number of LED's	12	х3
Light output (Lumen) ——	52 x 3	50 x 3
Lumen per Watt (Efficacy)	72	70
Colour rendering index (CRI)	60	65
Finish ———		: plastic with adhesive tape
Packing ————	6 double-sided 2 interconne	ights, 6 clips, adhesive strips, ecting leads, s and screws
Cable length ———	2.0	) m

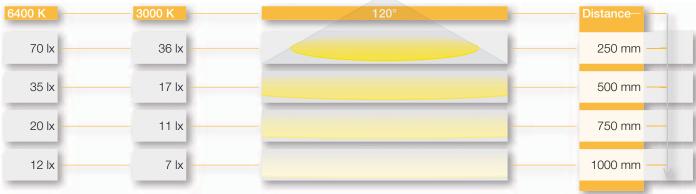












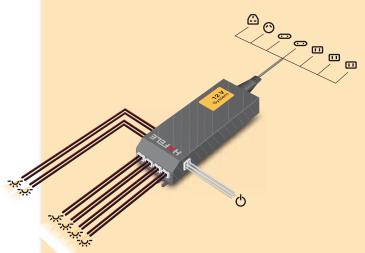
( E IP20



### **LED** driver



# Constant voltage 12 V

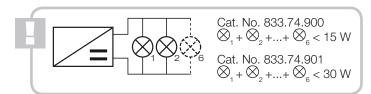


The driver is the heart of the Loox system, and is suitable for connecting to all of the world's power systems. It has an integrated switching function and connections for all of the most popular types of switch.



Cat. No.	833.74.***	
Cal. No.	900	901
Length (mm)	155	165
Width (mm)	45	50
Height (mm)	20	28
Wattage (W)	0.5 – 15	0.5 – 30
Input voltage	100 – 240 V	; 50 – 60 Hz
Output voltage	DC	12 V
Degree of protection —	IP	20
Number of slots ———	6 slots for 1 slot for 1 slot for country-s	r switch,
Packing	1 piece with mou	nting accessories

Coun	Country-specific mains lead (2 m) with small appliance plug:		
<b></b>	Cat. No. 833.89.000: British plug		
$\bigcirc$	Cat. No. 833.89.001: Australian plug		
	Cat. No. 833.89.002: European plug		
	Cat. No. 833.89.003: North American plug		
	Cat. No. 833.89.004: Japanese plug		
	Cat. No. 833.89.005: Chinese plug		
	Cat. No. 833.89.006: Korean plug		



Mains leads	page 35
Switches	page 34
Extension leads	page 35

12 V System

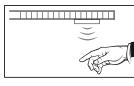
www.hafele.com

<

# Switches



### Sensor switch

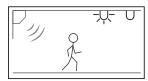




Touchless on/off switching

Cat. No.	833.89.040
Diameter (mm)	13
Length (mm) ———	60
Wattage (W)	0.3 – 30
Sensor range (mm)	0 - 80
Finish	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

### **Motion detector**

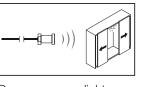




Automatic on/off switching

Cat. No.	833.89.042
Diameter (mm) ———	13
Length (mm) ———	60
Wattage (W)	0.3 - 30
Sensor range (mm)	0 – 3000
Finish	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

### **Door sensor switch**

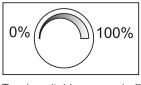




Door open = light on Door closed = light off

Cat. No.	833.89.041
Diameter (mm)	13
Length (mm) ———	60
Wattage (W)	0.3 – 30
Sensor range (mm)	0 - 80
Finish	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

### Dimmer





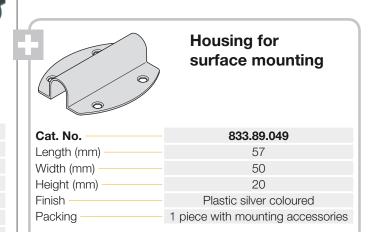
Touch switching on and off and adjusting the light output

Cat. No.	833.89.043
Diameter (mm) ———	13
Length (mm) ———	60
Wattage (W)	0.3 – 30
Finish ———	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

### **Push switch**



833.89.044
13
30
0.3 – 30
Plastic black
1 piece
2.0 m



## Leads

12 V System



## Mains leads

Cat. No. ——	833.89.***						
Cal. No. ——	000	001	002	003	004	005	006
Plug design —	<b>—</b>	$\bigcirc$					
Designation —	UK	AU	EU	US	JP	CN	KR
Voltage (V)	250	250	250	120	100	250	250
Length (mm) —	2000						
Finish ———	Plastic black						
Packing ——				1 piece			



833.89.000 UK





833.89.002 EU





833.89.001 AU



833.89.003 US

833.89.004 JP

833.89.005 CN



833.89.006 KR

# Extension leads, 12 V

Cat. No.	833.74.***			
	724	725	726	
Length (mm)	500	1000	2000	
Application ———	E	Extension lead 12 V system	,	
Packing		1 piece		

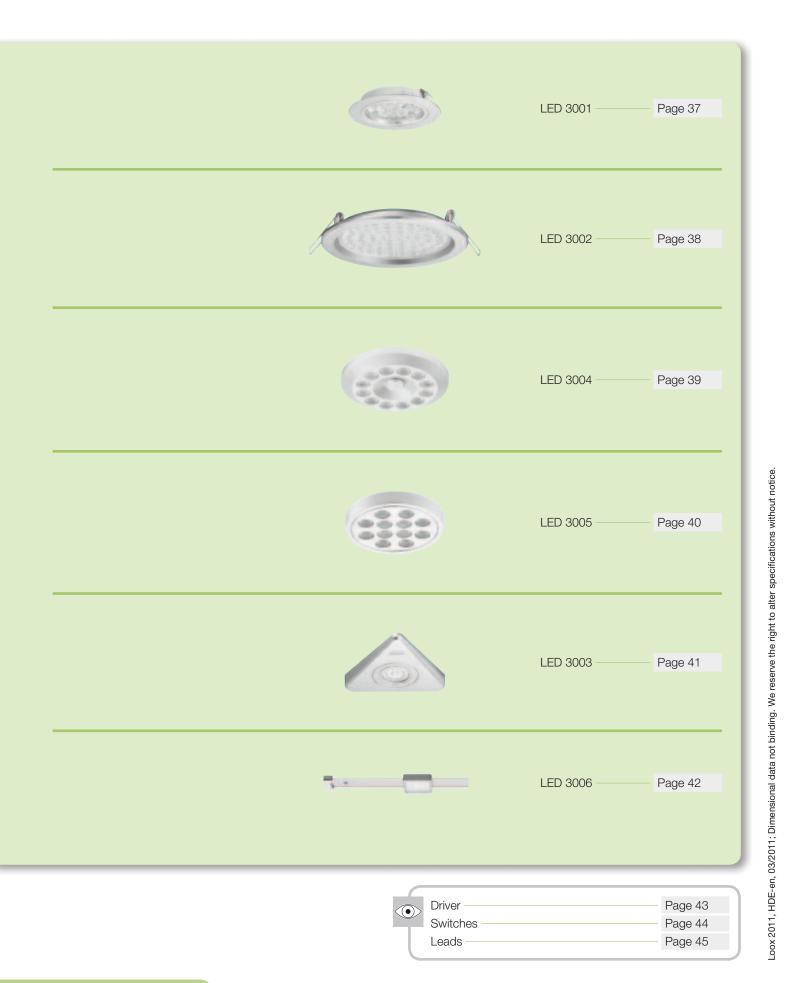


# Cable channels

Cat. No	833.89.***			
Gal. NO.	013	023	033	
Length (mm) ———		2500		
Width (mm)		12		
Height (mm)		7.3		
Application ———	For concealing visible cables in furniture and cabinets			
Finish	White, RAL 9010	Brown, RAL 8007	Black, RAL 9005	
Packing ———	1 piece with self adhesive tape			







### www.hafele.com

36

## 24 V System LED 3001



# **Recess mounted light**

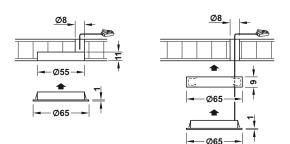


Display cabinets and shelves reveal their full aesthetics if they are put in the right light.

The LED 3001 can be surface or recessed mounted. Two light colours can be used for design purposes.





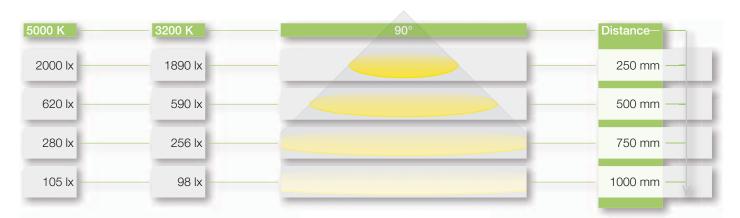




Driver

833.77.710: Surface mounted ring silver coloured

page 43



 $\overline{ullet}$ 

# 24 V System LED 3002



# **Recess mounted light**

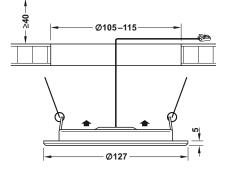


The LED 3002 recess mounted light is especially for suspended panels and is appealing because of its extremely high light intensity. Other ideal areas of application are the illumination of wall units, display cabinets and shelving.

000 75 +++

P	
	V

### 



Cat. No.	833.75.***			
Cal. NO.	020	030		
Light colour (K) ———	5000 (cool white)	3200 (warm white)		
Diameter (mm)	12	27		
Height (mm)	1	8		
Wattage (W)	4.	.4		
Number of LED's	6	0		
Light output (Lumen) ——	168	142		
Lumen per Watt (Efficacy) ————————————————————————————————————	38	32		
Colour rendering index (CRI)	80 -	- 90		
Finish ———	Aluminium, silver c with cle	,		
Packing	1 pi	ece		
Cable length	2.0	) m		

É	Cannot be dimmed.	
	Driver	page 43

 5000 K
 3200 K
 90°
 Distance

 1800 lx
 1546 lx
 250 mm
 250 mm

 850 lx
 554 lx
 500 mm
 500 mm

 450 lx
 310 lx
 750 mm
 1000 mm

 260 lx
 190 lx
 1000 mm
 1000 mm

## **LED 3004**



# Down light

24 V System

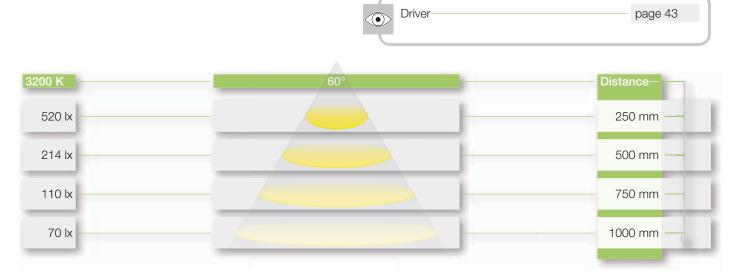




	ļ			
•	+			
6	 Ø7	) —		

Visually appealing and with a unique design: The LED 3004 down light is the highlight for decorative lighting in living area furniture. 12 LED's provide pleasant and accurately-directed lighting.

833.76.021
3200
(warm white)
70
9
0.8
12
30
38
56
80 - 90
00 00
Plastic, nickel plated matt
1 piece with mounting accessories
2.0 m







## **Down light**

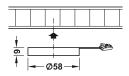


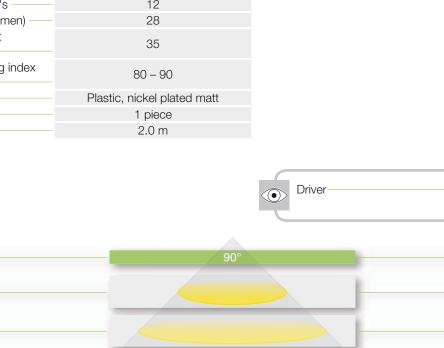
The LED 3005 is the proof that down lights can be decorative, space-saving and perfect.

The striking appearance stylishly emphasizes the most important aspects of furniture items and furnishings in the living area.

Cat. No.	833.76.020
Light colour (K)	3200 (warm white)
Diameter (mm)	58
Height (mm)	9
Wattage (W)	0.8
Number of LED's	12
Light output (Lumen) ——	28
Lumen per Watt (Efficacy) ———	35
Colour rendering index (CRI) ————————————————————————————————————	80 – 90
Finish	Plastic, nickel plated matt
Packing	1 piece
Cable length	2.0 m







3200 K

377 lx

190 lx

102 lx

66 lx

750 mm

1000 mm

# LED 3003

24 V System



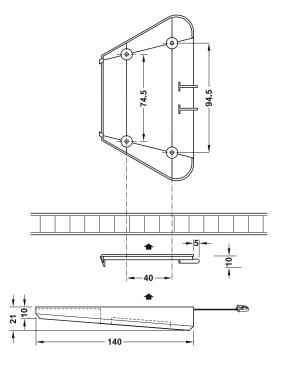
# Down light, 3-piece set



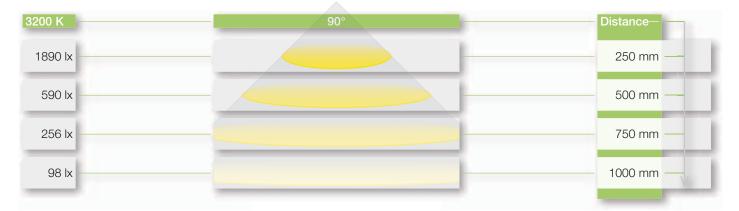
The LED 3003 down light set with its trio of lights in a triangular design introduces new perspectives into furnishings. All of the lights in the set can be conveniently operated without contact using an integrated sensor switch.

Cat. No.	833.76.000
Light colour (K) ———	3200
	(warm white)
Length (mm)	145
Width (mm)	147
Height (mm)	21
Wattage (W)	5.5
Number of LED's	24 x 3
Light output (Lumen)	57 x 3
Lumen per Watt	34.5
(Efficacy)	34.5
Colour rendering index	80 – 90
(CRI)	80 - 90
Finish	Plastic, silver coloured anodized
	3-piece set consisting of:
Packing	1 Master light with sensor switch and
T acking	2 subsequent lights
	with mounting accessories
Cable length	2.0 m





É	Cannot be dimmed.	
	Driver	page 43



### D 3006 24 V System

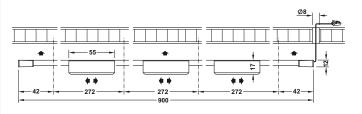


## **Down light**



Working areas and representative areas must both be illuminated in the best possible way. The LED 3006 conductor rail light is the solution that makes it possible to react to spatial changes - the lights are easy to move without the need for tools.





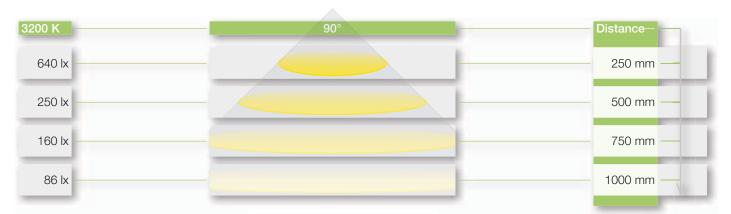
Cat. No.	833.76.040
Light colour (K)	3200 (warm white)
Length (mm) ———	900
Width (mm) ———	59
Height (mm)	15
Wattage (W)	$1.8 \times 3 = 5.4$
Number of LED's	25 x 3
Light output (Lumen) ——	280
Lumen per Watt (Efficacy) ————	42
Colour rendering index (CRI)	80 - 90
Finish ———	Aluminium, silver coloured anodized
Packing	1 piece with mounting accessories
Cable length	2.0 m



Driver

833.76.060: Single light, dimensions:  $55 \times 55 \times 15$  mm (L x W x H), wattage: 1.8 W

page 43

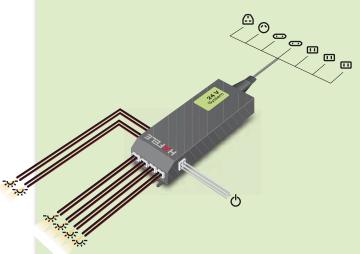


 $(\bullet)$ 

# **LED** driver



# Constant voltage 24 V

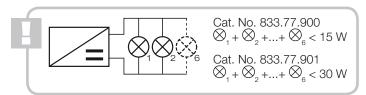


The heart of the 24 volt system in the Loox product range is the driver, which is suitable for all of the world's power systems. The integrated switching function and connections for all of the most popular types of switch make it possible to make future changes or additions in a flash.

Cat. No	833.7	7.***	
Cal. NO.	900	901	
Length (mm) ———	155	165	
Width (mm) ———	45	50	
Height (mm)	20	28	
Wattage (W)	0.5 – 15	0.5 – 30	
Input voltage	100 – 240 V; 50 – 60 Hz		
Output voltage	DC	24 V	
Degree of protection ——	- IP 20		
Number of slots ———	6 slots for 24 V lights, 1 slot for switch, 1 slot for country-specific mains lead		
Packing ———	1 piece with mounting accessories		

Martin Sautran Laborer Londer Longer CB III III

	Countr	ry-specific mains lead (2 m) with small appliance plug:
1	<b></b>	Cat. No. 833.89.000: British plug
	$\bigcirc$	Cat. No. 833.89.001: Australian plug
		Cat. No. 833.89.002: European plug
		Cat. No. 833.89.003: North American plug
		Cat. No. 833.89.004: Japanese plug
		Cat. No. 833.89.005: Chinese plug
		Cat. No. 833.89.006: Korean plug



Mains leads	page 45
Switches —	page 44
Extension leads	page 45



24 V System

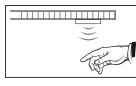
www.hafele.com

<

# Switches



## Sensor switch

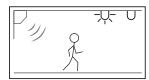




Touchless on/off switching

Cat. No.	833.89.040
Diameter (mm)	13
Length (mm)	60
Wattage (W)	0.3 – 30
Sensor range (mm)	0 - 80
Finish	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

## **Motion detector**

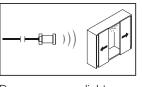




Automatic on/off switching

Cat. No.	833.89.042
Diameter (mm) ———	13
Length (mm)	60
Wattage (W)	0.3 - 30
Sensor range (mm)	0 – 3000
Finish ———	Plastic silver coloured
Packing —	1 piece
Cable length	2.0 m

## **Door sensor switch**

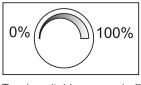




Door open = light on Door closed = light off

Cat. No.	833.89.041
Diameter (mm)	13
Length (mm) ———	60
Wattage (W)	0.3 - 30
Sensor range (mm)	0 - 80
Finish ———	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

## Dimmer

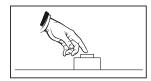




Touch switching on and off and adjusting the light output

Cat. No.	833.89.043
Diameter (mm) ———	13
Length (mm) ———	60
Wattage (W)	0.3 - 30
Finish ———	Plastic silver coloured
Packing ———	1 piece
Cable length	2.0 m

## **Push switch**



Cat. No.	833.89.044
Diameter (mm)	13
Length (mm)	30
Wattage (W)	0.3 – 30
Finish ———	Plastic black
Packing	1 piece
Cable length	2.0 m



# Leads

24 V System



## Mains leads

Cat. No.	833.89.***						
Cal. NO.	000	001	002	003	004	005	006
Plug design —	<b>—</b>	$\bigcirc$					
Designation —	UK	AU	EU	US	JP	CN	KR
Voltage (V)	250	250	250	120	100	250	250
Length (mm) —	2000						
Finish ———	Plastic black						
Packing ——	1 piece						







833.89.002 EU





833.89.001 AU



833.89.003 US

833.89.000 UK

833.89.004 JP

833.89.005 CN



833.89.006 KR

## Extension leads, 24 V

Cat. No	833.77.***				
Cal. No.	706	707	708		
Length (mm) ———	500	1000	2000		
Application ———	Extension lead, 24 V system				
Packing	1 piece				



# **Cable channels**

Cat. No	833.89.***			
Cal. NO.	013	023	033	
Length (mm) ———		2500		
Width (mm) ———		12		
Height (mm)		7.3		
Application —	For concealing visible cables in furniture and cabinets			
Finish ———	White, RAL 9010	Brown, RAL 8007	Black, RAL 9005	
Packing —	1 piece with self adhesive tape			



350 mA System Overview



	LED 4009 — Page 47	
	LED 4005 ——— Page 48	
6	LED 4004 — Page 49	
	LED 4003 — Page 50	
	LED 4007 ——— Page 51	
	LED 4006 — Page 52	
Driver     Switches     Leads	Page 53 Page 54 Page 55	

## **LED 4009**



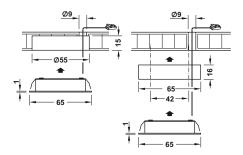
# **Recess mounted light with 3 LED's**



The LED 4009 recess mounted light has three extrapowerful LED's and therefore generates powerful, directed light. This light can therefore be deployed universally in any furnishings as a functional light. Three different attachment options are available for design purposes.

000 70 \*\*\*





Cat. No.	833.78.***	
Cal. NO.	140	150
Light colour (K) ———	3000 (warm white)	6000 (cool white)
Diameter (mm)	6	5
Height (mm)	1	5
Wattage (W)	3	3
Number of LED's	3	3
Light output (Lumen)	120	140
Lumen per Watt (Efficacy) ————————————————————————————————————	40	47
Colour rendering index (CRI)	85	75
Finish	Nickel matt	. aluminium
Packing	1 pi	ece
Cable length	2.0	) m



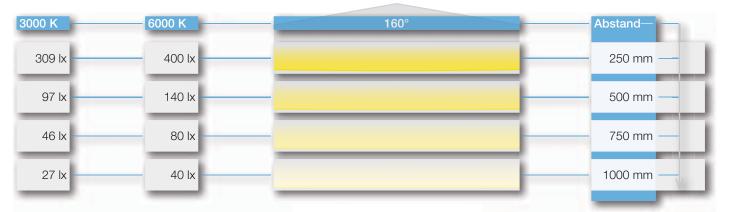
Driver

Cat. No. 833.80.710 surface mounted ring, 65 x 16 mm (Ø x H)

Cat. No. 833.80.711 triangular surface mounted housing, 135 x 118 x 40 mm (L x W x H)

\_\_\_\_\_

page 53



 $(\bullet)$ 

350 mA

## D 4005

350 mA System



# Recess mounted light, 1 W, round w. lens

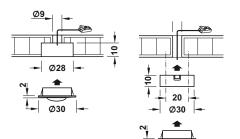


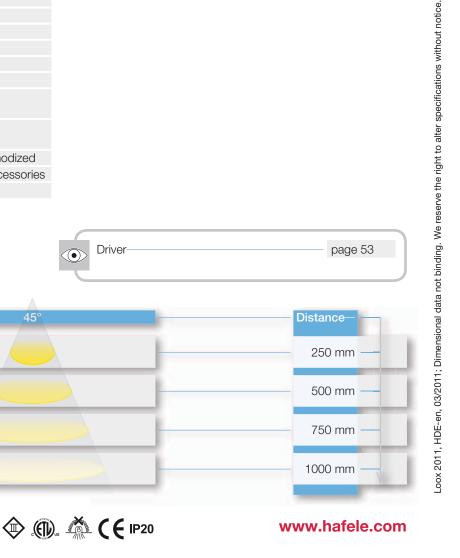
The LED 4005 can be used as a recess mounted or down light. The extremely small and flat design makes the light easy to integrate in the furniture design. The light spot is suitable for decoratively illuminating objects in furniture. The integrated lens also centres and intensifies the light spot.

Cat. No.	833.78.100
Light colour (K)	3000 (warm white)
Diameter (mm)	30
Height (mm)	12
Wattage (W)	1
Number of LED's	1
Light output (Lumen) ——	53
Lumen per Watt (Efficacy)	53
Colour rendering index (CRI)	87
Finish	Plastic, silver coloured anodized
Packing	3 pieces with mounting accessories
Cable length	2.0 m

45°







3000 K

650 lx

209 lx

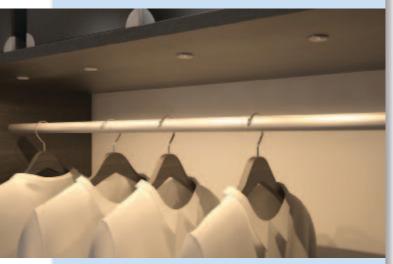
104 lx

60 lx

## 350 mA LED 4004

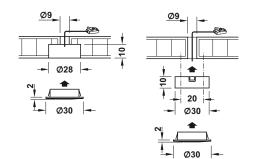


# Recess mounted light, 1 W, round



Extremely small and slimline design – and no lack of light intensity: The beam of the round version of the LED 4004 puts objects firmly in the spotlight in the recess mounted and down light area.





Cat. No.	833.78.080
Light colour (K)	3000 (warm white)
Diameter (mm)	30
Height (mm)	12
Wattage (W)	1
Number of LED's	1
Light output (Lumen) ——	65
Lumen per Watt (Efficacy) ————————————————————————————————————	65
Colour rendering index (CRI)	85
Finish	Plastic, silver coloured anodized
Packing —	3 pieces with mounting accessories
Cable length	2.0 m

 1 per vvatt
 65

 crendering index
 85

 Plastic, silver coloured anodized

 ig
 3 pieces with mounting accessories

 length
 2.0 m

90° Distance 250 mm 500 mm 750 mm 1000 mm

page 53

## LED 4003

350 mA



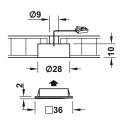
# Recess mounted light, 1 W, square



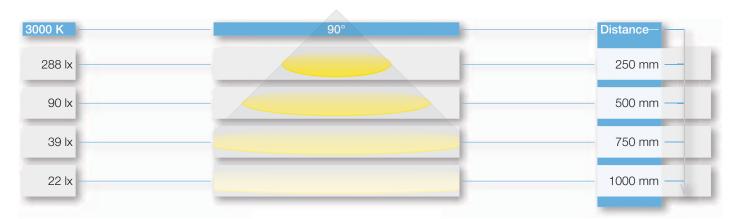
The extremely small and flat design of the LED 4003 makes it easy to integrate in the furniture design. The light spot can be pointed upwards or downwards, and is suitable for illuminating objects in furniture. Depending on the installation situation, this light can also put the emphasis on furniture as an effective sidelight.

Cat. No.	833.78.040
Light colour (K)	3000 (warm white)
Length (mm)	34
Width (mm)	34
Height (mm)	12
Wattage (W)	1
Number of LED's	1
Light output (Lumen) ——	65
Lumen per Watt (Efficacy) ————————————————————————————————————	65
Colour rendering index (CRI)	85
Finish	Plastic, silver coloured anodized
Packing	3 pieces with mounting accessories
Cable length	2.0 m









350 mA System

## LED 4007



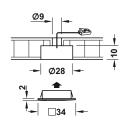
# Recess mounted light, 1 W, square

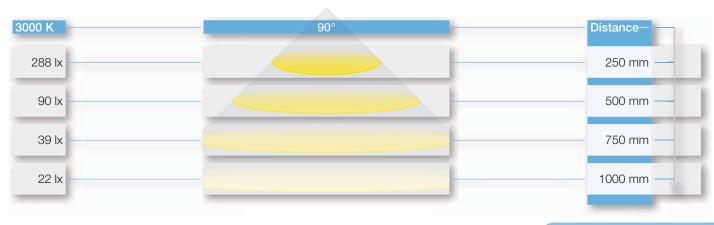


Small, versatile and with flexible alignment: The LED 4007 recess mounted light with its striking square styling is already a design element in itself. The light spot emphasizes the effect of objects in furniture in an extraordinary way.

Cat. No.	833.78.020
Light colour (K)	3000 (warm white)
Length (mm)	34
Width (mm)	34
Height (mm)	12
Wattage (W)	1
Number of LED's	1
Light output (Lumen) —	53
Lumen per Watt (Efficacy) ————————————————————————————————————	53
Colour rendering index (CRI)	85
Finish	Plastic, silver coloured anodized
Packing	3 pieces with mounting accessories
Cable length	2.0 m







 $(\bullet)$ 

Driver

page 53

## D 4006

350 mA



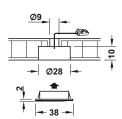
# Recess mounted light, 1 W, hexagonal



The hexagonal shape is the striking feature of the LED 4006. With its slimline, flat design the light spot can be pointed either up or down depending on the application. Exciting sidelight effects can also be created with this light.

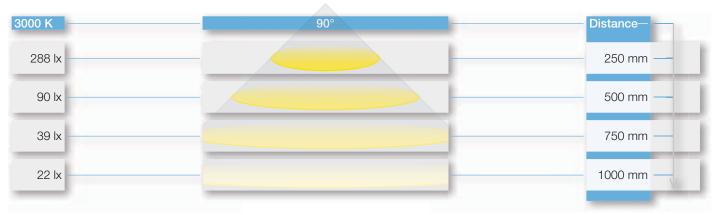
Cat. No.	833.78.000
Light colour (K)	3000
	(warm white)
Length (mm)	38
Width (mm)	33
Height (mm)	12
Wattage (W)	1
Number of LED's	1
Light output (Lumen)	65
Lumen per Watt	65
(Efficacy)	00
Colour rendering index	85
(CRI)	00
Finish	Plastic, silver coloured anodized
Packing	3 pieces with mounting accessories
Cable length	2.0 m







page 53



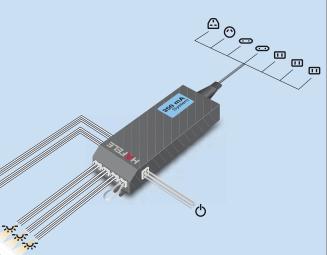
( E IP20

## LED driver 350 mA



## **Constant current 350 mA**

<

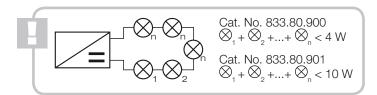


Compatibility and flexibility are the keywords as far as the 350 mA driver of the Loox lighting system is concerned. It operates with all of the world's power systems, has an integrated switching function and provides a connection for all of the most popular types of switch.



Cat. No.	833.80.***	
Cal. NO.	900	901
Length (mm)	155	165
Width (mm)	45	50
Height (mm)	20	28
Wattage (W)	1 – 4	5 – 10
Input voltage	100 – 240 V	; 50 – 60 Hz
Output current ———	350	mA
Degree of protection ——	IP	20
Number of slots ———	4 slots for 350 mA lights, 1 slot for 1 slot for a count	10 slots for 350 mA lights, a switch, ry-specific mains
Packing	lea 1 piece with mou	ad nting accessories

ľ	Country-specific mains lead (2 m) with small appliance plug:		
1	<u> </u>	Cat. No. 833.89.000: British plug	
	$\bigcirc$	Cat. No. 833.89.001: Australian plug	
		Cat. No. 833.89.002: European plug	
	Π	Cat. No. 833.89.003: North American plug	
		Cat. No. 833.89.004: Japanese plug	
		Cat. No. 833.89.005: Chinese plug	
		Cat. No. 833.89.006: Korean plug	



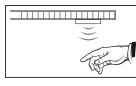
Mains leads	page 55
Switches	page 54
Extension leads	page 55
	1 0

CCC (PE) + US W M C F ( C C A113851 A112586EA SEL V IP20 www.hafele.com

## 350 mA System Switches



## Sensor switch

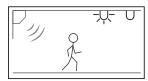




Touchless on/off switching

Cat. No.	833.89.040
Diameter (mm)	13
Length (mm)	60
Wattage (W)	0.3 – 30
Sensor range (mm)	0 - 80
Finish	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

## **Motion detector**

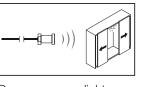




Automatic on/off switching

Cat. No.	833.89.042
Diameter (mm) ———	13
Length (mm)	60
Wattage (W)	0.3 - 30
Sensor range (mm)	0 – 3000
Finish ———	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

## **Door sensor switch**

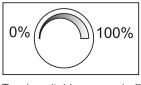




Door open = light on Door closed = light off

Cat. No.	833.89.041
Diameter (mm)	13
Length (mm) ———	60
Wattage (W)	0.3 - 30
Sensor range (mm)	0 - 80
Finish	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

## Dimmer





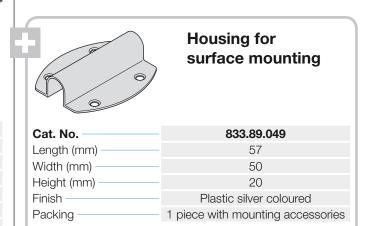
Touch switching on and off and adjusting the light output

Cat. No.	833.89.043
Diameter (mm) ———	13
Length (mm) ———	60
Wattage (W)	0.3 – 30
Finish	Plastic silver coloured
Packing	1 piece
Cable length	2.0 m

## **Push switch**



Cat. No.	833.89.044
Diameter (mm)	13
Length (mm) ———	30
Wattage (W)	0.3 – 30
Finish	Plastic black
Packing	1 piece
Cable length	2.0 m



# Leads

350 mA System



## Mains leads

Cat. No. ——	833.89.***						
Cal. No. ——	000	001	002	003	004	005	006
Plug design —	<b>—</b>	$\bigcirc$					
Designation —	UK	AU	EU	US	JP	CN	KR
Voltage (V)	250	250	250	120	100	250	250
Length (mm) —	2000						
Finish ———	Plastic black						
Packing ——	1 piece						







833.89.002 EU





833.89.001 AU



833.89.003 US

833.89.000 UK

833.89.004 JP

833.89.005 CN



833.89.006 KR

## Extension leads, 350 mA

Cat. No.	833.80.***			
Cal. NO.	704	705	706	
Length (mm)	500	1000	2000	
Application —	Extension lead, 350 mA system			
Packing	1 piece			



# Cable channels

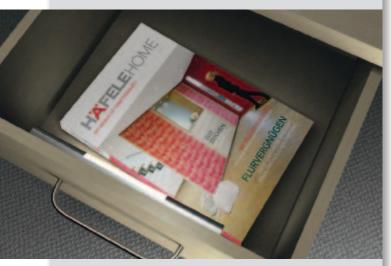
Cat. No.	833.89.***			
Gal. NO.	013	023	033	
Length (mm) ———		2500		
Width (mm)		12		
Height (mm)		7.3		
Application —	For concealing visible cables in furniture and cabinets			
Finish	White, RAL 9010	Brown, RAL 8007	Black, RAL 9005	
Packing —	1 piece with self adhesive tape			



# ED 9001



# **Battery-operated light** with sensor



The LED 9001 battery-operated light is perfect for illuminating drawers, storage spaces and behind front panels. The batteries make the light independent of the mains supply and freely positionable. The integrated sensor allows the light to be activated without contact in any application. The energy-saving mode gives the batteries a long service life.



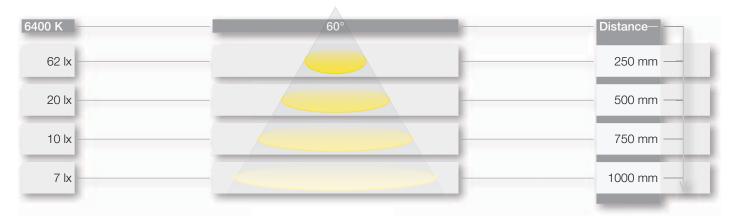


Cat. No.	833.87.000		
Light colour (K) ———	6400 (cool white)		
Length (mm)	303		
Diameter (mm) ———	17		
Wattage (W)	0.2		
Number of LED's	4		Cat. No. 910.54.986
Light output (Lumen) ——	15	FP 79	micro battery 1.5 V, type AAA
Lumen per Watt (Efficacy) ————	57		Cat. No. 910.54.976
Colour rendering index (CRI) ————————————————————————————————————	80		rechargeable micro battery 1.5 V, type AAA
Finish ———	Plastic silver coloured		
Packing ———	1 piece with mounting accessories	Selectable switc	h function:
		1. Door sensor s	

Active on/off switching

4 type AAA batteries are required. Service life: approx. 80 hours per set of batteries.

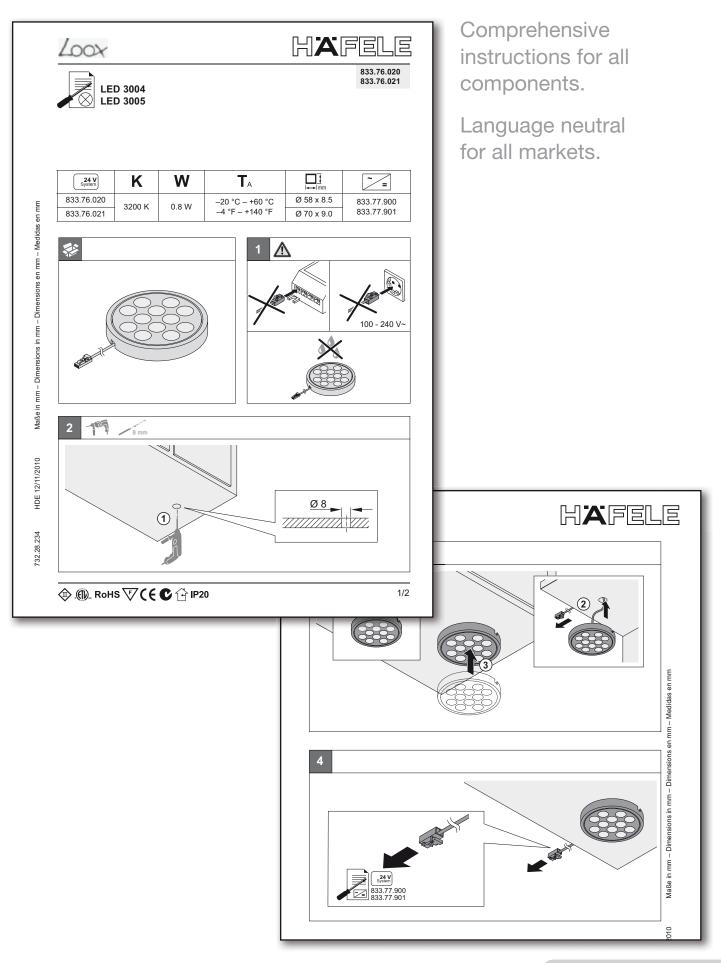
2. Sensor switch:



F (E IP20

## Installation instructions





# Häfele around the globe

## global availability

## - global service





Certificates and installation instructions download at: www.hafele.com



## Information and technical terms



### Cone of light

3000 K	45*	Abstand
650 k	-	250 mm —
	2	503
104 k		750 mm —
60 k	A	1000 mm

- 1
  - The light output is noted in the left-hand column. The correlated colour temperature of the light is noted in the header in Kelvin (K). The Lux (lx) values for the light appear in the lines below, depending on certain distances from the light (see column 3).
- The angle of radiation is marked in the centre column. The angle of radiation of the light is specified in degrees (°) in the header. The lines below show the illuminated area depending on certain distances from the light (see column 3).

The right-hand column contains the distances for which the illuminated area and the associated Lux value (Ix) were measured.

Example for a cone of light at point **A**. The lamp generates light similar to a spotlight with 60 lx at a distance of 1000 mm.

### Technical terms

### Light colour/colour temperature

The light colour is a specification of the colour appearance of a light source and is measured in Kelvin (K). The lower the Kelvin value, the warmer the light; the higher the value, the cooler the light. Sources below 3200 K are considered "warm", while those above 4000 K are considered "cool" sources.

### Luminous efficacy

The luminous efficacy is the indication of the illuminance in relation to a surface and its distance. It is indicated in Lux (lx).

### Light output

The light output determines the luminous intensity or quantity of light. It is indicated in Lumen (Im).

### **Colour rendering index**

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.

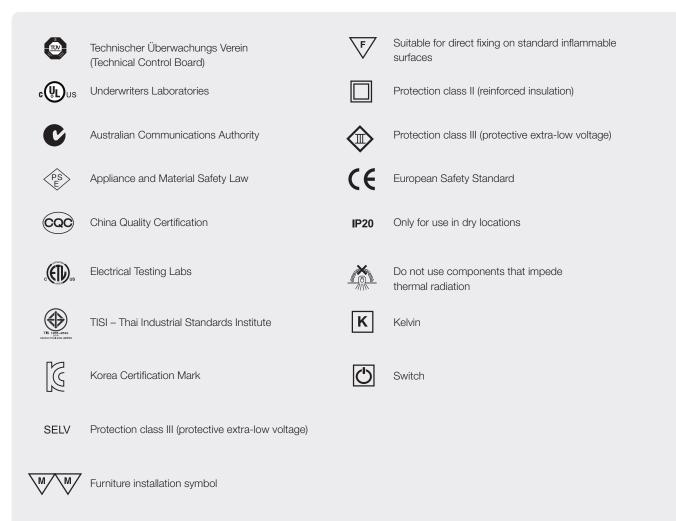
### Comparison of lighting systems

Light	<b>Wattage</b> in W	Light output in Im/W	Colour rendering index $R_a$
Halogen 12 V	10–20	27–28	60–95
Fluorescent lamp*	8–58	80–110	50–90
LED	0,8–4,8	30–90	70–95

\*with electric ballast

## **Symbol definitions**





## Häfele worldwide

### Europe

Headquarters Germany Häfele GmbH & Co KG

72202 Nagold Phone +49 (0)74 52 / 95-0 Fax +49 (0)74 52 / 95-2 00 info@haefele.de

### Austria

Häfele Austria GmbH 5322 Hof bei Salzburg Phone +43 (0)62 29 / 3 90 39-0 Fax +43 (0)62 29 / 3 90 39-30 info@haefele.at

#### Belgium

Häfele Belgium N. V. 9240 Zele Phone +32 (0)52 / 45 01 14 Fax +32 (0)52 / 45 01 51 info@hafele.be

### Czech Republic & Slovakia

Häfele Czech & Slovakia s.r.o. 140 00 Praha 4 Phone +42 02 41 09 50 00 +42 02 41 09 50 01 Fax info.cz@haefele.de

#### Croatia

Häfele GmbH & Co KG Representative in Kroatien 10090 Zagreb Phone +38 51 / 3 43 57 40 Fax +38 51 / 3 43 57 41 info-croatia@hafele.com

Denmark Häfele Danmark A/S 7800 Skive Phone +45 97 / 51 15 22 Fax +45 97 / 51 12 13 info@haefele.dk

#### Finland

Häfele GmbH & Co KG Sivuliike Suomessa 15200 Lahti Phone +3 58 (0)3 / 8 77 77-0 Fax +3 58 (0)3 / 8 77 77-88 info@hafele.fi

#### France

Häfele France s.à.r.l. 95157 Taverny Cédex Phone +33 (0)1 / 30 40 54 50 +33 (0)1 / 30 40 54 61 Fax info@hafele.fr

#### Great Britain

Häfele U.K. I.td. Rugby, Warks. CV211RD Phone +44 (0)17 88 / 54 20 20 Fax +44 (0)17 88 / 54 44 40 info@hafele.co.uk

Greece Häfele GmbH & Co KG Information Office 15124 Maroussi Phone +30 2 10 / 6 17 95 44 Fax +30 2 10 / 6 17 95 45 info@hafele.gr

#### Hungary

Häfele GmbH & Co KG Representative in Hungary 1132 Budapest Phone +36 (0)1 / 2 25 34 14 Fax +36 (0)1 / 2 02 01 82 info-hungary@hafele.com

### Ireland

Häfele Ireland Ltd. 
 Kilcoole, Co. Wicklow

 Phone
 +3 53 (0)1 / 2 87 34 88

 Fax
 +3 53 (0)1 / 2 87 35 63
 info@hafele.ie

#### Italy

Häfele Italia s.r.l. 20823 Lentate s.S. (MB). Phone +39 03 62 / 57 74-1 Fax +39 03 62 / 57 74-4 77 info@hafele.it

#### Netherlands Häfele Nederland BV

7333 NZ Apeldoorn Phone +31 (0)55 / 5 38 46 00 Fax +31 (0)55 / 5 42 49 50 info@hafele.nl

#### Poland Häfele Polska Sp. z o.o.

55-090 Dlugoleka Phone +48 (0)71 / 3 15 32 42 Fax +48 (0)71 / 3 15 32 62 info@hafele.pl

### Portugal

Häfele GmbH & Co KG Escritorio de Vendas Portugal 4470-177 Maia Phone +3 51 (0)22 / 9 47 55 96 +3 51 (0)22 / 9 48 15 74 Fax info-portugal@hafele.com

#### Romania

Häfele Romania S.R.L. RO-300562 Timişoara Phone +40 (0)2 56 / 30 61 72 +40 (0)2 56 / 30 61 73 Fax info@hafele.ro

### Russia

Häfele Rus 000 MKAD 14. km, Building 10 109429 Moskow Phone +7 (495)7 87 / 07 85 Fax +7 (495)7 87 / 07 84 info@hafele.ru

#### Serbia Häfele Serbia d.o.o

22330 Nova Pazova Phone +3 81 22 / 32 55 55 +3 81 22 / 32 59 99 Fax info-serbia@hafele.com

### Spain

Häfele Herrajes España S.L. 28923 Alcorcón-Madrid Phone +34 91 / 6 44 80 21 +34 91 / 6 44 80 28 Fax info@hafele.es

Sweden Häfele GmbH & Co KG Tyskland Fillial Sverige 55303 Jönköping Phone +46 (0)46 36 / 18 00 88 +46 (0)46 36 / 18 00 99 info@haefele.se

### Switzerland

Häfele Schweiz AG 
 8280 Kreuzlingen

 Phone
 +41 (0)71 / 6 86 82 20

 Fax
 +41 (0)71 / 6 86 82 82
 info@haefele.ch

Turkey Häfele San. ve Tic. A.S. 34776, Ümraniye, Istanbul Phone +90 (0)2 16 / 5 28 59 00 +90 (0)2 16 / 5 28 59 30 Fax info@hafele.com.tr

### Ukraine

Häfele Ukraine LLC 80362 Kulykiv Zhovkva District, Lviv Region Phone +3 80 32 2 35 15 59 +3 80 32 2 35 15 60 Fax info@hafele.com.ua

### Africa

South Africa Häfele South Africa (Pty) Ltd Honeydew 2040 Phone +27 (0)11 / 7 96 81 00 Fax +27 (0)11 / 7 94 14 90 Fax info@hafele.co.za

### America

Argentina Häfele Argentina S.A. B1611GFG-Don Torcuato-Buenos Aires Phone +54 (0)11 / 63 47 26 00 Fax +54 (0)11 / 63 47 26 26 info@haefele.com.ar

#### Brazil

Häfele Brasil Ltda. Piraquara-Paraná, CEP: 83302-000 Phone +55 (0)41 / 30 34 - 81 50 Fax +55 (0)41 / 30 34 - 81 52 info@hafele.com.br

### Canada

Häfele Canada Inc. Burlington, ON L7L 6A8 Phone +1 9 05 / 3 36 66 08 Fax +1 9 05 / 3 19 44 46 info\_can@hafeleamericas.com

#### Mexico

Häfele de México S.A. de C.V. El Marqués, Querétaro, México. Phone +52 (0)4 42 / 2 96 86 00 +52 (0)4 42 / 2 96 86 20 hmxinfomexico@hafele.com.mx

### United States of America

Häfele America Co Archdale, N.C. 27263 Phone +1 3 36 / 4 34 23 22 +1 3 36 / 4 31 38 31 Fax info us@hafeleamericas.com

### Asia

Kazakhstan Häfele Kazakhstan TOO 050008 Almaty Phone +7 (727) 376 08 13 Fax +7 (727) 376 09 42 info@hafele.kz

#### Australia, New Zealand

Australia Häfele Australia Pty. Ltd. Dandenong, VIC 3175 Phone +61 (0)3 / 92 12 20 00 Fax +61 (0)3 / 92 12 20 01 info@hafele.com.au

### New Zealand

Häfele (N.Z.) Limited East Tamaki, Auckland Phone +64 (0)9 / 2 74 20 40 Fax +64 (0)9 / 2 74 20 41 info@hafele.co.nz

### Middle East

Dubai Häfele GmbH & Co KG Dubai Representative Office Dubai/U.A.E. Phone +9 71 (0)4 / 2 84 44 06 +9 71 (0)4 / 2 86 08 49 Fax info@hafele.ae

### Far East

China Häfele Hardware Technology (China) Co., Ltd. 101318 Beijing Phone +86 (0)10 / 80 48 26 86 Fax +86 (0)10 / 80 48 28 85 info bj@hafele.com.cn

Hong Kong Häfele GmbH & Co KG HK Representative Office Hong Kong Phone +8 52 / 23 68 64 33 Fax +8 52 / 23 68 99 72 info\_hk@hafele.com.cn

#### India

Häfele India Private Limited Mumbai 400 042 Phone +91 (0)22 / 66 95 09 20/21 Fax +91 (0)22 / 66 95 09 22 info@hafeleindia.com

### Indonesia

P.T. Häfele Indotama 
 Tangerang
 15314

 Phone
 +62 (0)21 / 75 87 88 88

 Fax
 +62 (0)21 / 75 87 77 77
 info@hafele.co.id

#### Japan

Häfele Japan K.K. Totsuka-ku, Yokohama 244-0806 Phone +81 (0)45 / 8 28 31 17 +81 (0)45 / 8 28 31 13 Fax info@hafele.co.jp

#### Korea

Häfele Korea Inc. 659 Jinu-ri, Dochuk-myon, Gwangju-si, Gyeonggi-do Phone +82 (0)31 / 7 60 76 00 +82 (0)31 / 7 60 76 09 Fax +82 (0)3 info@hafele.co.kr

## Malaysia Häfele (Malaysia) Sdn Bhd

40150 Shah Alam, Selangor Phone +60 (0)3 / 55 69 25 26 Fax +60 (0)3 / 55 69 35 26 info@hafele.com.my

### Philippines

Häfele Philippines Inc. Barangay Ususan Taguig City 1638 Metro Manila Phone +63 (0)2 / 5 71 36 78 +63 (0)2 / 5 71 36 99 Fax info@hafele.com.ph

#### Singapore

Häfele Singapore Pte Ltd Singapore 729504 Phone +65 / 64 94 74 00 Fax +65 / 64 94 74 01 info@hafele.com.sq

#### Taiwan

Häfele Taiwan Ltd. 
 Taipei County 248, Taiwan (R.O.C.)

 Phone
 +8 86 (0)2 / 22 98 00 30

 Fax
 +8 86 (0)2 / 22 98 00 31
 info@haefele.com.tw

#### Thailand

Häfele (Thailand) Limited 57 Soi Sukhumvit 64 Bangkok 10260 Phone +66 (0)2 / 7 41 71 71 Fax +66 (0)2 / 7 41 72 72 info@hafele.co.th

### Vietnam

Häfele Vina Co., Ltd. Ho Chi Minh City Phone +84 (0)8 / 39 57 31 66 +84 (0)8 / 39 57 31 67 Fax info@hafele.com.vn

## HAFELE

## Imprint



### Imprint

Reproduction of this catalogue in whole or in part, the copying or imitation of any illustrations and the imitation of the layout are strictly prohibited.

The technical descriptions and dimensions in this catalogue, also those with the photographs and drawings, are not binding. We reserve the right to alter specifications without notice. All dimensions in mm, unless stated otherwise.

We bear no liability for any misprints or other errors that might occur in the production of the catalogue.

All deliveries are subject to the Häfele conditions of sale.

Issued by: Häfele GmbH & Co KG Adolf-Häfele-Straße 1 D-72202 Nagold

Phone +49(0)74 52/95-0 Fax +49(0)74 52/95-2 00 Internet: www.hafele.com e-mail: info@haefele.de

March 2011 © by Häfele Nagold. All rights reserved. Printed in Germany. Imprimé en Allemagne. 732.02.811-03/11-15-BE