HÄFELE

Straight down the line.

New: Loox 5
Easy. Logical. Linear.
The LED lighting system for furniture and rooms.

LOOX 5

2021 V.1

Step 1: Select Lights

In the 1950s Richard Kelly, a pioneer of light design, differentiated between light to see - effect lighting - the illumination of an object or area - function lighting - and play of brilliance in which the light itself is the object to observe - design lighting.

EMPHASISING ROOM DIMENSIONS

The versatility of applications and combinations of lights within the LOOX LED System provide the opportunity to create these different types of lighting and combine them to emphasise the dimensions of room.

EFFECT LIGHTING

To balance room dimensions and facilitate special orientation, use ambient lighting for the desired effect. This will give a general light to illuminate the whole room.

FUNCTION LIGHTING

To illuminate a work surface in a kitchen or a bathroom counter top, task lighting is what is required here. Using the LOOX LED System to create this effect is easy to spec and install, adding the final touches of design to bring the room together.

DESIGN LIGHTING

You can add to ambient lighting in a room by including spot lighting a particular object or feature, like an alcove, or a piece of art.
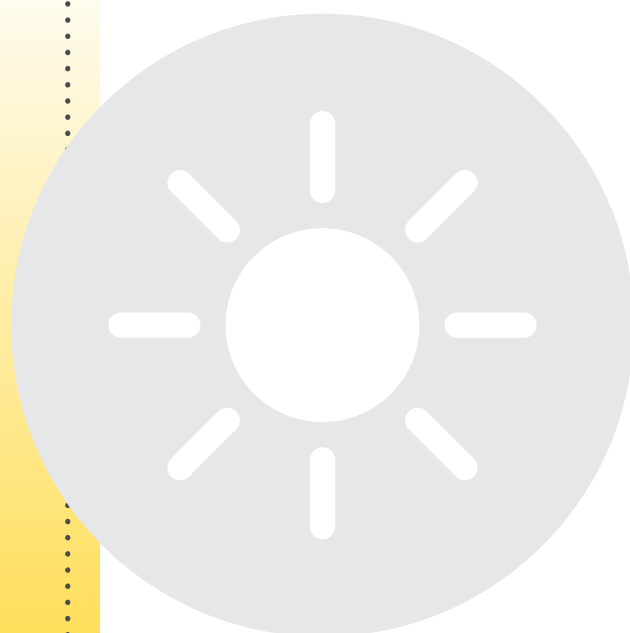
on.

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.

> Splash-proof silicone strip lights for bathroom applications
> Plastic profiles for vertical illumination in storage spaces
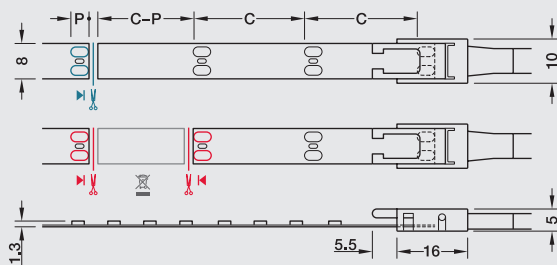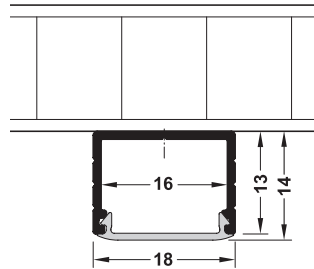> Aluminium profiles in trendy colours for top-of-the-line design demands

LED STRIP L1

L1 SURFACE PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

L1 SURFACE PROFILE WITH LED STRIP LIGHT

Equipped with high-quality Samsung LEDs

	120 LEDs		60 LEDs	
LIGHT COLOUR	3000K	4000K	3000K	4000K
WATTAGE (W)	24 (9.60 PER METRE)		12 (4.80 PER METRE)	
NUMBER OF LEDs	300 (120LEDs PER METRE)		150 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
   120 LEDs - Max. strip length 4000mm
   60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
   120 LEDs - Max. strip length 6000mm
   60 LEDs - Max. strip length 12000mm

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.

——— LED strip light cut
(one contact side remains with the offcut; can be re-used)

——— LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K		Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.175	833.88.182		231.00
	60 LEDs	4.8W	50	6	833.88.154	833.88.161		182.00

(!) Supplied with 1pc (2500 mm) LED strip and 1pc (2500 mm) surface mounting aluminium profile
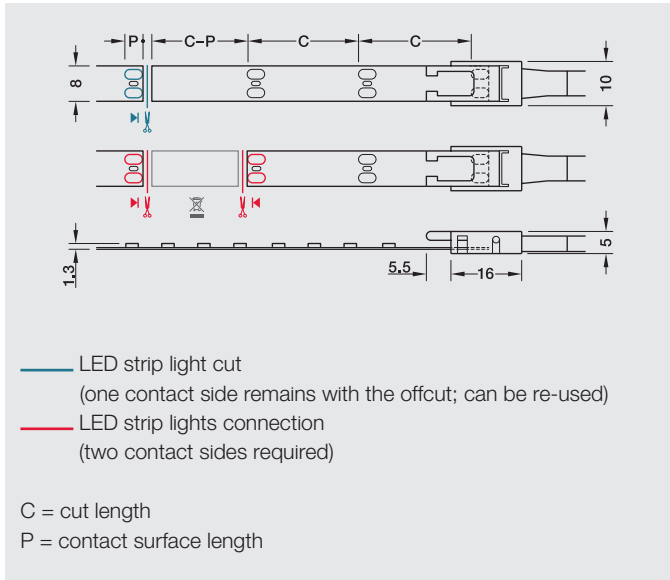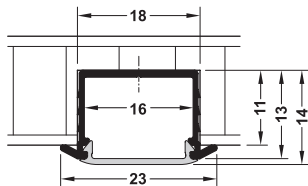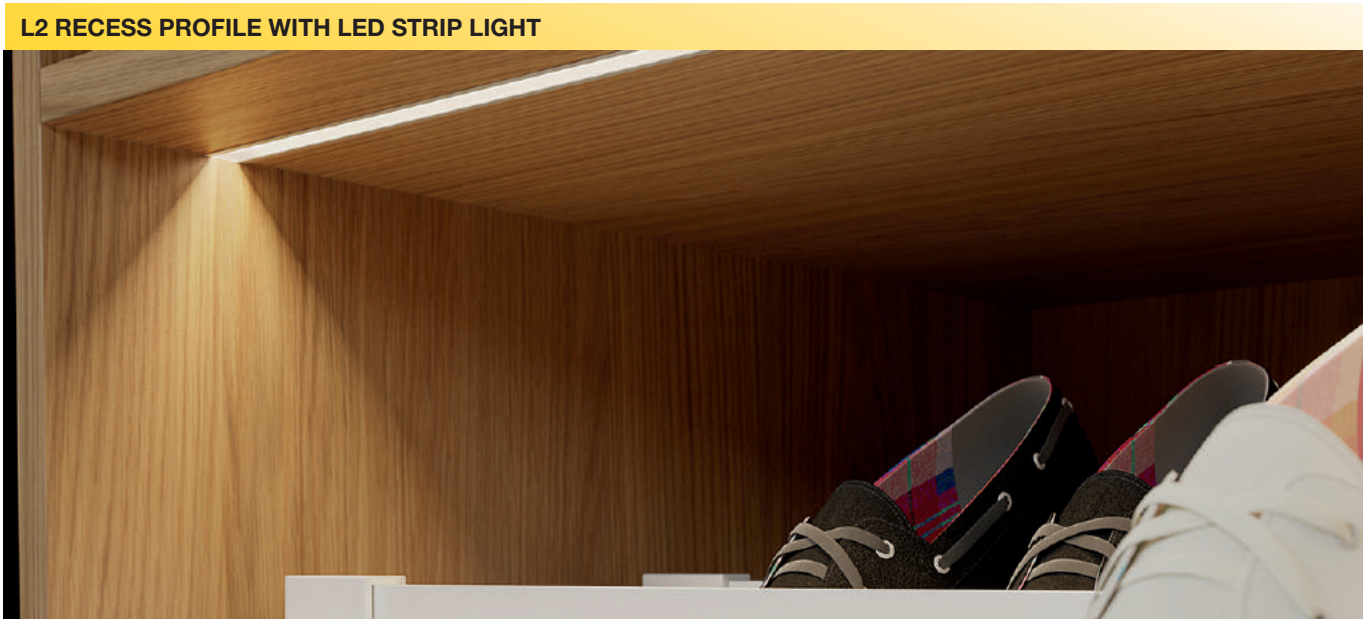
LED STRIP L1

L1 SURFACE PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

	Art. No.	Price*(MYR)
Option 1: Connecting lead 4M - L1,L2, L3, L4, L7, L8		
Supplied with 1 piece 2000mm connecting lead and 1 piece 2000mm extension lead	833.88.294 🏠	19.00
Option 2: Dimmer (with on/off) 4M - L1,L2 (Please skip step 3 if select this option)		
Supplied with 1 piece Aluminium profile dimmer switch with 2000mm lead and 1 piece 2000mm extension lead	833.71.649 🏠	47.00
Option 2: Motion lead 4M - L1,L2 (Please skip step 3 if select this option)		
Supplied with 1 piece Aluminium profile motion detector switch with 2000mm lead and 1 piece 2000mm extension lead	833.71.650 🏠	51.00

MOUNTING BRACKET	CABINET WIDTH	Art. No.	Price* (MYR)
	> 0 - 600MM	833.74.832 x 1 🏠	3.00
	> 700 - 1200MM	833.74.832 x 2 🏠	6.00
	> 1300 - 1800MM	833.74.832 x 3 🏠	9.00
	> 1900 - 2500MM	833.74.832 x 4 🏠	12.00

OPTIONAL CONNECTING ACCESSORIES		Art. No.	Price* (MYR)
	End cap	833.72.853 🏠	3.00
	Interconnecting Lead with Clip 50mm	833.89.191 🏠	16.00
	Clip Connector	833.89.206 🏠	5.00
	Corner connector	833.89.187 🏠	9.00

LED STRIP L2

L2 RECESS PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

L2 RECESS PROFILE WITH LED STRIP LIGHT

Equipped with high-quality Samsung LEDs

LIGHT COLOUR	120 LEDs		60 LEDs	
	3000K	4000K	3000K	4000K
WATTAGE (W)	24 (9.60 PER METRE)		12 (4.80 PER METRE)	
NUMBER OF LEDs	300 (120LEDs PER METRE)		150 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

LED strip light cut
(one contact side remains with the offcut; can be re-used)

LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
    120 LEDs - Max. strip length 4000mm
    60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
    120 LEDs - Max. strip length 6000mm
    60 LEDs - Max. strip length 12000mm

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.

LED STRIP L2

L2 RECESS PROFILE WITH LED STRIP LIGHT

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K	Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.176	833.88.183	234.00
	60 LEDs	4.8W	50	6	833.88.155	833.88.162	186.00

> **!** Supplied with 1pc (2500 mm) LED strip and 1pc (2500 mm) recess mounting profile

	Art. No.	Price*(MYR)
Option 1: Connecting lead 4M - L1,L2, L3, L4, L7, L8		
Supplied with 1 piece 2000mm connecting lead and 1 piece 2000mm extension lead	833.88.294	19.00
Option 2: Dimmer (with on/off) 4M - L1,L2 (Please skip step 3 if select this option)		
Supplied with 1 piece Aluminium profile dimmer switch with 2000mm lead and 1 piece 2000mm extension lead	833.71.649	47.00
Option 2: Motion lead 4M - L1,L2 (Please skip step 3 if select this option)		
Supplied with 1 piece Aluminium profile motion detector switch with 2000mm lead and 1 piece 2000mm extension lead	833.71.650	51.00

OPTIONAL CONNECTING ACCESSORIES		Art. No.	Price* (MYR)
	End cap	833.72.853	3.00
	Interconnecting Lead with Clip 50mm	833.89.191	16.00
	Clip Connector	833.89.206	5.00
	Corner connector	833.89.187	9.00

LED STRIP L3

L3 CORNER PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

L3 CORNER PROFILE WITH LED STRIP LIGHT

Equipped with high-quality Samsung LEDs

	120 LEDs		60 LEDs	
LIGHT COLOUR	**3000K**	**4000K**	**3000K**	**4000K**
WATTAGE (W)	24 (9.60 PER METRE)		12 (4.80 PER METRE)	
NUMBER OF LEDs	300 (120LEDs PER METRE)		150 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

20
14
28

P C–P C C

8
10

1.3
5.5 16
5

LED strip light cut
(one contact side remains with the offcut; can be re-used)
LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
    120 LEDs - Max. strip length 4000mm
    60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
    120 LEDs - Max. strip length 6000mm
    60 LEDs - Max. strip length 12000mm

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.

LED STRIP L3

L3 CORNER PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K	Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.177 🏛	833.88.184 🏛	242.00
	60 LEDs	4.8W	50	6	833.88.156 🏛	833.88.163 🏛	194.00

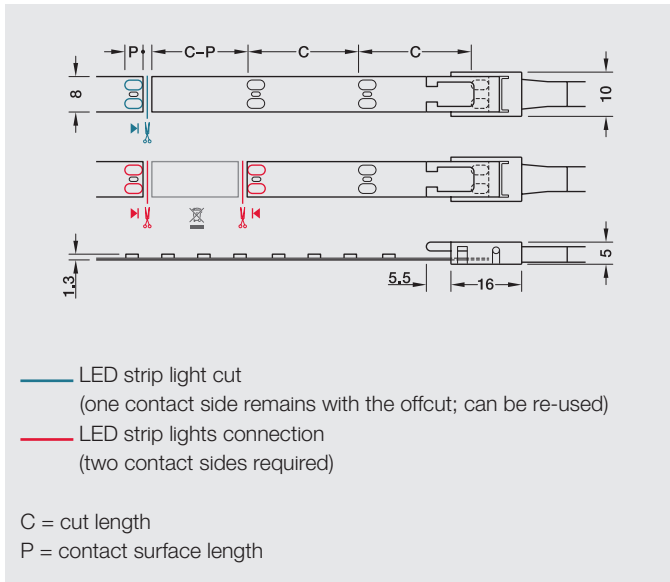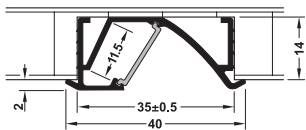! Supplied with 1pc (2500 mm) LED strip and 1pc (2500 mm) corner aluminium profile

		Art. No.	Price* (MYR)
Option 1: Connecting lead 4M - L1,L2, L3, L4, L7, L8		833.88.294 🏛	19.00

5.5   16   5

Supplied with 1 piece 2000mm connecting lead and 1 piece 2000mm extension lead

	End cap	833.72.853 🏛	3.00

MOUNTING BRACKET	CABINET WIDTH		
	0 - 600MM	833.74.826 x 1 🏛	3.00
	700 - 1200MM	833.74.826 x 2 🏛	6.00
	1300 - 1800MM	833.74.826 x 3 🏛	9.00
	1900 - 2500MM	833.74.826 x 4 🏛	12.00

OPTIONAL CONNECTING ACCESSORIES		Art. No.	Price* (MYR)
	Clip Connector	833.89.206 🏛	5.00

We reserve the right to alter specifications without notice.

LED STRIP L4

L4 ANGLE PROFILE WITH LED STRIP LIGHT

STEP 1 - SELECT LIGHTS

L4 ANGLE PROFILE WITH LED STRIP LIGHT

STEP 2 - SELECT DRIVER

11.5
14
2
35±0.5
40

P | C–P | C | C
8
10
5.5 | 16
1,3
5

LED strip light cut
(one contact side remains with the offcut; can be re-used)

LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

STEP 3: SELECT FUNCTION

Equipped with high-quality Samsung LEDs

LIGHT COLOUR	120 LEDs		60 LEDs	
	3000K	4000K	3000K	4000K
WATTAGE (W)	24 (9.60 PER METRE)		12 (4.80 PER METRE)	
NUMBER OF LEDs	300 (120LEDs PER METRE)		150 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

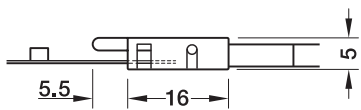Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
    120 LEDs - Max. strip length 4000mm
    60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
    120 LEDs - Max. strip length 6000mm
    60 LEDs - Max. strip length 12000mm

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.
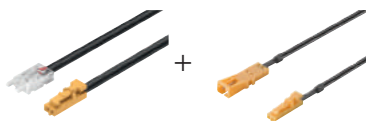
LED STRIP L4

L4 ANGLE PROFILE WITH LED STRIP LIGHT

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K	Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.178 🏠	833.88.185 🏠	277.00
	60 LEDs	4.8W	50	6	833.88.157 🏠	833.88.164 🏠	231.00

> ⚠ Supplied with 1pc (2500 mm) LED strip and 1pc (2500 mm) angle aluminium profile

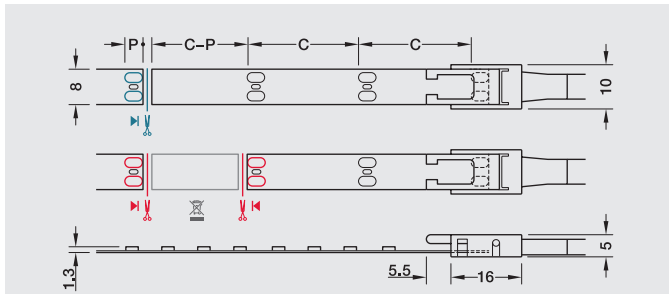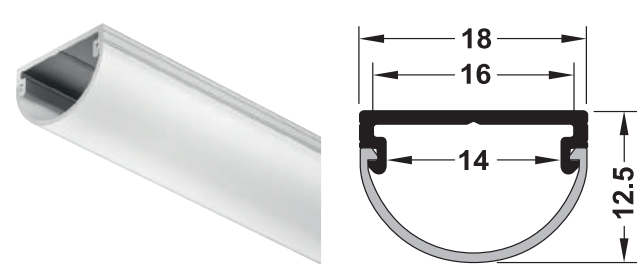|	Art. No.	Price* (MYR)
Option 1: Connecting lead 4M - L1,L2, L3, L4, L7, L8		
Supplied with 1 piece 2000mm connecting lead and 1 piece 2000mm extension lead	833.88.294 🏠	19.00

OPTIONAL CONNECTING ACCESSORIES		Art. No.	Price* (MYR)
	End cap	833.74.848 🏠	3.00
	Interconnecting Lead with Clip 50mm	833.89.191 🏠	16.00
	Clip Connector	833.89.206 🏠	5.00

LED STRIP L5
L5 DRAWER PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

L5 DRAWER PROFILE WITH LED STRIP LIGHT

18
16
14
12.5

8
P | C−P | C | C
10

1.3
5.5 | 16
5

──── LED strip light cut
(one contact side remains with the offcut; can be re-used)
──── LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

Equipped with high-quality Samsung LEDs

LIGHT COLOUR	120 LEDs		60 LEDs	
	3000K	4000K	3000K	4000K
WATTAGE (W)	24 (9.60 PER METRE)		12 (4.80 PER METRE)	
NUMBER OF LEDs	300 (120LEDs PER METRE)		150 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

➡ Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
   120 LEDs - Max. strip length 4000mm
   60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
   120 LEDs - Max. strip length 6000mm
   60 LEDs - Max. strip length 12000mm

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.

LED STRIP L5

L5 DRAWER PROFILE WITH LED STRIP LIGHT

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K	Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.179	833.88.186	253.00
	60 LEDs	4.8W	50	6	833.88.158	833.88.165	206.00

> ! Supplied with 1pc (2500 mm) LED strip and 1pc (2500 mm) drawer aluminium profile

	Art. No.	Price*(MYR)
Option 1: Drawer Door sensor lead 4M - L5 (Please skip step 3 if select this option)	833.71.651	77.00

Supplied with 1 piece door sensor 12V for drawer profile with 2000mm lead, 1 piece 2000mm extension lead and 1 pack of 5 sets of end caps with fixing screws

	Art. No.	Price*(MYR)
Option 2: Drawer. Motion lead 4M - L5 (Please skip step 3 if select this option)	833.71.652	79.00

Supplied with 1 piece motion detector 12V for drawer profile with 2000mm lead, 1 piece 2000mm extension lead and 1 pack of 5 sets of end caps with fixing screws

MOUNTING BRACKET	CABINET WIDTH	Art. No.	Price*(MYR)
	0 - 600MM	833.74.893 x 1	3.00
	601 - 1200MM	833.74.893 x 2	6.00
	1201 - 1800MM	833.74.893 x 3	9.00
	1801 - 2500MM	833.74.893 x 4	12.00

OPTIONAL CONNECTING ACCESSORIES		Art. No.	Price* (MYR)
	Clip Connector	833.89.206	5.00

LED STRIP L6

L6 WARDROBE RAIL PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

L6 WARDROBE RAIL PROFILE WITH LED STRIP LIGHT

34

18

Equipped with high-quality Samsung LEDs

	120 LEDs		60 LEDs	
LIGHT COLOUR	**3000K**	**4000K**	**3000K**	**4000K**
WATTAGE (W)	24 (9.60 PER METRE)		12 (4.80 PER METRE)	
NUMBER OF LEDs	300 (120LEDs PER METRE)		150 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

P   C–P   C   C

8

10

1.3

5.5   16   5

Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
   120 LEDs - Max. strip length 4000mm
   60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
   120 LEDs - Max. strip length 6000mm
   60 LEDs - Max. strip length 12000mm

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.

———— LED strip light cut
(one contact side remains with the offcut; can be re-used)

———— LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

We reserve the right to alter specifications without notice.

LED STRIP L6

L6 WARDROBE RAIL PROFILE WITH LED STRIP LIGHT

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K	Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.180 🏠	833.88.187 🏠	292.00
	60 LEDs	4.8W	50	6	833.88.159 🏠	833.88.166 🏠	260.00

⚠ Supplied with 1pc (2500 mm) LED strip and 1pc (2500 mm) wardrobe rail profile

		Art. No.	Price* (MYR)
Connecting lead 4M with end support			
	5.5 16 5 + +	833.88.295 🏠	41.00
Supplied with 1 piece 2000mm connecting lead, 1 piece 2000mm extension lead and 2 pieces end support			
OPTIONAL CONNECTING ACCESSORIES			
	Hook, straight edged	803.30.500 🏠	9.00
	Clip Connector	833.89.206 🏠	5.00

LED STRIP L7
L7 GLASS EDGE PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE
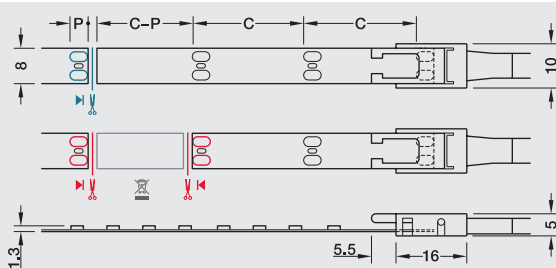
3 YEARS

L7 GLASS EDGE PROFILE WITH LED STRIP LIGHT
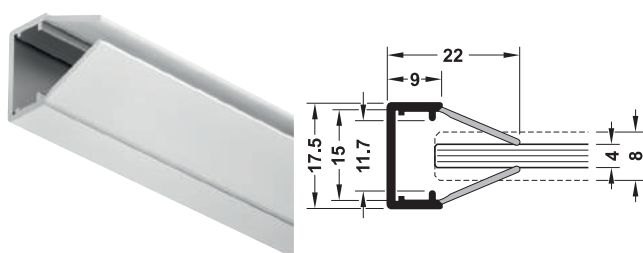
! > For manufacturing customized glass edge lighting for glass thickness of 4-8mm
> Without load bearing function
> Only for LED strip lights with max 7.5W/m

— LED strip light cut
(one contact side remains with the offcut; can be re-used)
— LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

Equipped with high-quality Samsung LEDs

LIGHT COLOUR	120 LEDs		60 LEDs	
	3000K	**4000K**	**3000K**	**4000K**
WATTAGE (W)	24 (9.60 PER METRE)		12 (4.80 PER METRE)	
NUMBER OF LEDs	240 (120LEDs PER METRE)		120 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

➡ Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
    120 LEDs - Max. strip length 4000mm
    60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
    120 LEDs - Max. strip length 6000mm
    60 LEDs - Max. strip length 12000mm

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.

STEP 1 - SELECT LIGHTS
STEP 2 - SELECT DRIVER
STEP 3: SELECT FUNCTION

LED STRIP L7

L7 GLASS EDGE PROFILE WITH LED STRIP LIGHT

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K	Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.181 🏠	833.88.188 🏠	223.00
	60 LEDs	4.8W	50	6	833.88.160 🏠	833.88.167 🏠	174.00

⚠ Supplied with 1pc (2000 mm) LED strip and 1pc (2000 mm) glass edge profile

	Art. No.	Price* (MYR)
Option 1: Connecting lead 4M - L1,L2, L3, L4, L7, L8		
5.5 16 5 +	833.88.294 🏠	19.00
Supplied with 1 piece 2000mm connecting lead and 1 piece 2000mm extension lead		

LED STRIP L8

L8 VERTICAL PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

L8 VERTICAL PROFILE WITH LED STRIP LIGHT

8.6

10.5 [11]

135°

10.2

11.5 [11]
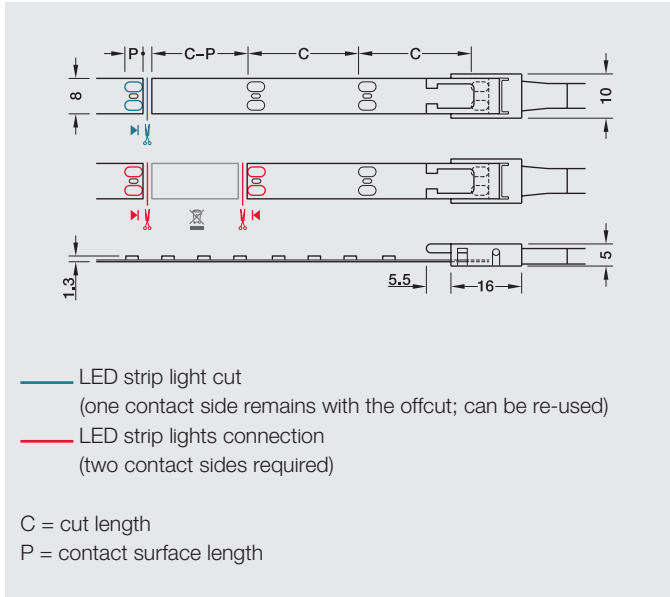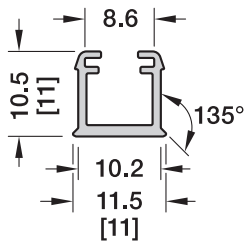
Equipped with high-quality Samsung LEDs

	120 LEDs		60 LEDs	
LIGHT COLOUR	3000K	4000K	3000K	4000K
WATTAGE (W)	28.8 (9.60 PER METRE)		14.4 (4.80 PER METRE)	
NUMBER OF LEDs	360 (120LEDs PER METRE)		180 (60LEDs PER METRE)	
LIGHT OUTPUT (Lm)	970	1000	465	490
EFFICACY (lm/W)	101	104	97	102
COLOUR RENDERING INDEX (CRI)	90	90	90	90
ENERGY EFFICIENCY CATEGORY	A+	A+	A+	A+
WEIGHTED ENERGY CONSUMPTION (kWh/1,000h)	10.56 PER METRE		5.28 PER METRE	

P | C–P | C | C

8

10

1.3

5.5 | 16

5

Tips: How to select the right driver (refer to STEP 2)
a. 40 WATT driver
   120 LEDs - Max. strip length 4000mm
   60 LEDs - Max. strip length 8000mm
b. 60 WATT driver
   120 LEDs - Max. strip length 6000mm
   60 LEDs - Max. strip length 12000mm

——— LED strip light cut
(one contact side remains with the offcut; can be re-used)
——— LED strip lights connection
(two contact sides required)

C = cut length
P = contact surface length

Note: Maximum strip light length (visual) describes a strip light section within which the luminous lux drop is not visually perceptible and does not exceed 30%. Please note: a directly following strip light section with a new infeed is noticeably brighter.

STEP 1 - SELECT LIGHTS

STEP 2 - SELECT DRIVER

STEP 3: SELECT FUNCTION

LED STRIP L8

L8 VERTICAL PROFILE WITH LED STRIP LIGHT

ENGINEERED BY HÄFELE

3 YEARS

	Number of LEDs/m	Wattage/m	Cut length C mm	Max. strip length (optical) m	3000K	4000K	Price* (MYR)
	120 LEDs	9.6W	25	3.5	833.88.263 🏛	833.88.265 🏛	223.00
	60 LEDs	4.8W	50	6	833.88.264 🏛	833.88.260 🏛	174.00

> ⚠ Supplied with 1pc (3000 mm) LED strip and 1pc (3000 mm) vertical profile

	Art. No.	Price* (MYR)
Option 1: Connecting lead 4M - L1,L2, L3, L4, L7, L8		
	833.88.294 🏛	19.00
Supplied with 1 piece 2000mm connecting lead and 1 piece 2000mm extension lead		

STEP 2 - SELECT DRIVER

STEP 3: SELECT FUNCTION

LED 2092

DOWNLIGHT, MODULAR

RoHS   IP20 / IP44   A+

Häfele Loox5 LED 2092

ENGINEERED BY HÄFELE   3 YEARS

Equipped with high-quality Samsung LEDs
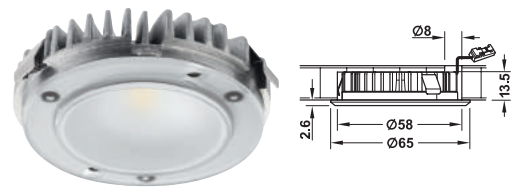
LED 2092		80°
3000 K	4000K	
1990 lx	2025 lx	250 mm
540 lx	540 lx	500 mm
230 lx	235 lx	750 mm
125 lx	130 lx	1000 mm

Ø8   13.5   2.6   Ø58   Ø65

TIPS: How to select the right driver (refer to Step 2)
a. 40 WATT driver - Max. for 13pcs LED lights
b. 60 WATT driver - Max. for 19pcs LED lights

Not enough light slot? (ONE driver has 6 light slots)
Add 6 way distributor for additional light slot-
833.74.798 (refer to STEP 2)

Silver coloured	Black	Anthracite (upon request)	Brown (upon request)	Matt nickel plated (upon request)	Stainless steel coloured (upon request)	White, RAL 9003 (upon request)

Descrip-tion	Light colour	Diame-ter (mm)	Height (mm)	Wattage (W)	Number of LEDs	Light output (lm)	Efficacy (lm/W)	Colour ren-dering index (CRI)	Housing colour finish	Art. No.	Price* (MYR)/ Set
Recess mounting	**3000K (Warm white)**	61.2	13.5	3.4	6	240	71	>90	Silver coloured	**833.88.266**	106.00
									Black	**833.88.268**	106.00
	4000K (Cool white)	61.2	13.5	3.4	6	250	74	>90	Silver coloured	**833.88.267**	106.00
									Black	**833.88.269**	106.00

! Supplied with
1pc LED 2092, 1pc housing for recess mounting, 1pc 2m connecting lead and 1pc 2m extension lead

STEP 2 - SELECT DRIVER

STEP 3: SELECT FUNCTION

LED 2040

DOWNLIGHT, MODULAR

RoHS   IP20 / IP44   A⁺

Häfele Loox5 LED 2040
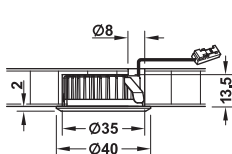
| 3000 K	4000 K	90°
660 lx	720 lx	250 mm
180 lx	185 lx	500 mm
80 lx	85 lx	750 mm
40 lx	50 lx	1000 mm

TIPS: How to select the right driver (refer to Step 2)
a. 40 WATT driver - Max. for 26pcs LED lights
b. 60 WATT driver - Max. for 38pcs LED lights

Not enough light slot? (ONE driver has 6 light slots)
Add 6 way distributor for additional light slot- 833.74.798 (refer to STEP 2)
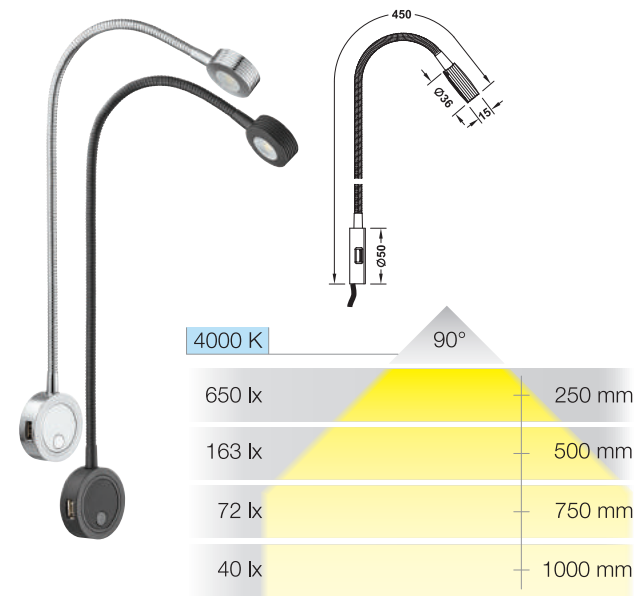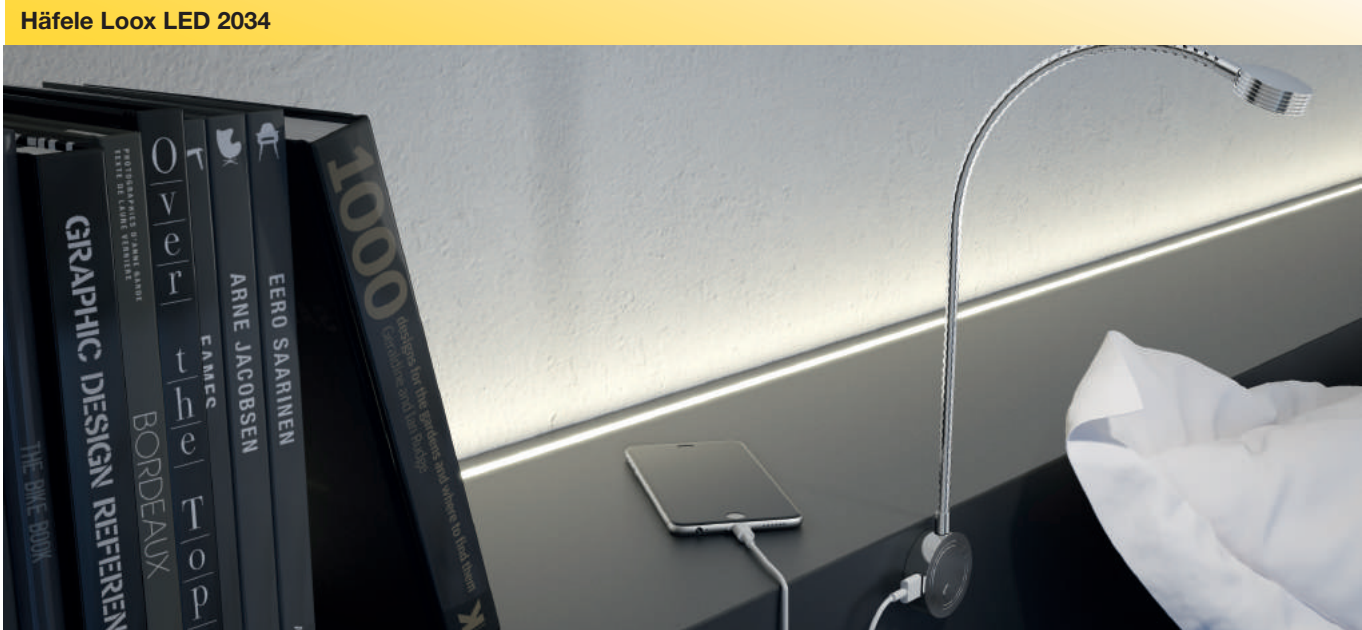
Silver coloured   Black   Matt nickel plated (upon request)   White, RAL 9003 (upon request)

Descrip-tion	Light colour	Diameter (mm)	Height (mm)	Wattage (W)	Number of LEDs	Light output (lm)	Efficacy (lm/W)	Colour rendering index (CRI)	Housing colour finish	Art. No.	Price* (MYR)/ Set
Recess mounting	3000K (Warm white)	38.5	13.5	1.5	3	88	59	90	Silver coloured	833.71.483	72.00
									Black	833.88.272	72.00
	4000K (Cool white)	38.5	13.5	1.5	3	96	64	90	Silver coloured	833.88.273	72.00
									Black	833.88.274	72.00

! Supplied with
1pc LED 2092, 1pc housing for recess mounting, 1pc 2m connecting lead and 1pc 2m extension lead

LED 2027

SURFACE MOUNTED DOWNLIGHT

III CE c(UL)us R36733 **RoHS** IP20 **A⁺**

ENGINEERED BY HÄFELE **3 YEARS**

Häfele Loox LED 2027

Ø8
Ø36
Ø65
2000
9

TIPS: How to select the right driver (refer to Step 2)
a. 40 WATT driver - Max. for 14pcs LED lights
b. 60 WATT driver - Max. for 22pcs LED lights

Not enough light slot? (ONE driver has 6 light slots)
Add 6 way distributor for additional light slot- 833.74.798
(refer to STEP 2)

| 3000 K	5000 K	117°	
867 lx	918 lx		250 mm
216 lx	229 lx		500 mm
96 lx	102 lx		750 mm
54 lx	57 lx		1000 mm

Description	Light colour	Diameter (mm)	Height (mm)	Wattage (W)	Number of LEDs	Light output (lm)	Efficacy (lm/W)	Colour rendering index (CRI)	Art. No.	Price* (MYR)/Set
Surface mounting	3000K (Warm white)	65	9	2.6	27	190	73	85	833.71.676 🏠	74.00
	5000K (Cool white)	65	9	2.6	27	218	84	85	833.71.677 🏠	74.00

! Supplied with
1pc LED 2027 with 2m lead, fixing material and 1pc 2m extension lead

We reserve the right to alter specifications without notice.

LED 2036

SURFACE MOUNTED DOWNLIGHT

III CE cULus R36733 RoHS IP20 IP44 A+

3 YEARS

ENGINEERED BY HÄFELE

Häfele Loox5 LED 2036

Ø8 18 12.5 6 50

3000 K	5000 K	100°
984 lx	1033 lx	250 mm
246 lx	255 lx	500 mm
109 lx	114 lx	750 mm
62 lx	66 lx	1000 mm
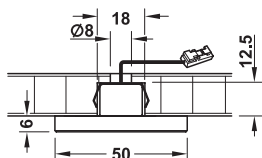
TIPS: How to select the right driver (refer to Step 2)
a. 40 WATT driver - Max. for 10pcs LED lights
b. 60 WATT driver - Max. for 16pcs LED lights

Not enough light slot? (ONE driver has 6 light slots)
Add 6 way distributor for additional light slot- 833.74.798
(refer to STEP 2)
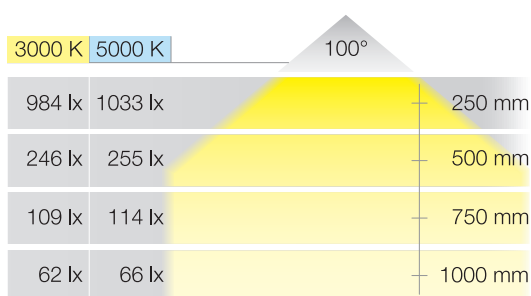
Description	Light colour	Size (L x W x H) mm	Wattage (W)	Number of LEDs	Light output (lm)	Efficacy (lm/W)	Colour rendering index (CRI)	Art. No.	Price* (MYR)/ Set
Surface mounting	3000K (Warm white)	250 x 50 x 18.5	3.6	36	182	51	82	833.71.678 🏠	139.00
	5000K (Cool white)	250 x 50 x 18.5	3.6	36	210	58	82	833.71.679 🏠	139.00

Supplied with
1pc LED 2036 with 2m lead, fixing material and 1pc 2m extension lead

HÄFELE

LED 2034

FLEXIBLE LIGHT WITH CHARGING STATION

III CE .UL.us R36733 **RoHS** IP20 A⁺

ENGINEERED BY HÄFELE

3 YEARS

Häfele Loox LED 2034

TIPS: How to select the right driver (refer to Step 2)
a. 40 WATT driver - Max. for 2pcs LED lights
b. 60 WATT driver - Max. for 3pcs LED lights

Not enough light slot? (ONE driver has 6 light slots)
Add 6 way distributor for additional light slot- 833.74.798
(refer to STEP 2)

450
Ø36 15
Ø50

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

Description	Light colour	Size (L x W x H) mm	Wattage (W)	Number of LEDs	Light output (lm)	Efficacy (lm/W)	Colour rendering index (CRI)	Finish/ Colour	Art. No.	Price* (MYR)/ Set
LED 2034	4000K (Cool white)	450 x 50 x 15.5	Max. 17	3	105	70	82	Chrome plated	**833.74.096** 🏠	**382.00**
	4000K (Cool white)	450 x 50 x 15.5	Max. 17	3	105	70	82	Black	**833.74.097** 🏠	**347.00**

❗ Supplied with
1pc LED 2034 with 2m lead and fixing material

LED 2028

SENSOR-CONTROLLED PLINTH LIGHT, IP44

III CE cULus R36733 RoHS IP20/IP44 A+

ENGINEERED BY HÄFELE

3 YEARS

Häfele Loox5 LED 2028

2.8
Ø8
Ø40
Ø54
15
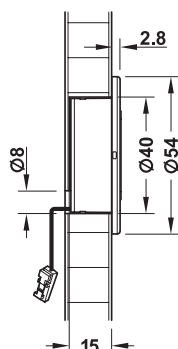
TIPS: How to select the right driver (refer to Step 2)
a. 40 WATT driver - Max. for 115pcs LED lights
b. 60 WATT driver - Max. for 175pcs LED lights

Not enough light slot? (ONE driver has 6 light slots)
Add 6 way distributor for additional light slot- 833.74.798
(refer to STEP 2)

2700 K	69°
26 lx	250 mm
7 lx	500 mm
3 lx	750 mm
1.6 lx	1000 mm
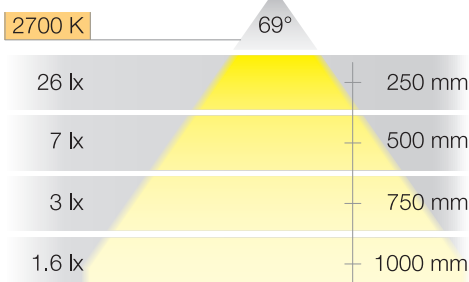
Light colour	Size (q x H) mm	Watta-ge (W)	Sensor range	Delay time	Number of LEDs	Light output (lm)	Efficacy (lm/W)	Colour rendering index (CRI)	Finish/ Colour	Art. No.	Price* (MYR)/ Set
2700K (Warm white)	54 x 17.3	0.34	0 - 3,000 mm	Approx. 2 mins	3	4	12	90	Satin	833.73.110 🏛	168.00
2700K (Warm white)	54 x 17.3	0.34	0 - 3,000 mm	Approx. 2 mins	3	4	12	90	Black	833.73.111 🏛	141.00

❗ Supplied with
1pc LED 2028 with 2m lead, fixing material

Step 2: Select driver

The intelligent drivers represent the core of the LOOX System. Not only do they provide different numbers of lights with the power that is required, but they are also suitable for the different voltages and frequencies all over the world, recognise different types of switch, can be used dimming and can be combined in many different ways. International testing and certification make the use thereof extremely safe and easy.

MAINS PLUG

DRIVER

SWITCH

LIGHTS

LOOX DRIVER

SELV IP20

ENGINEERED BY HÄFELE

3 YEARS
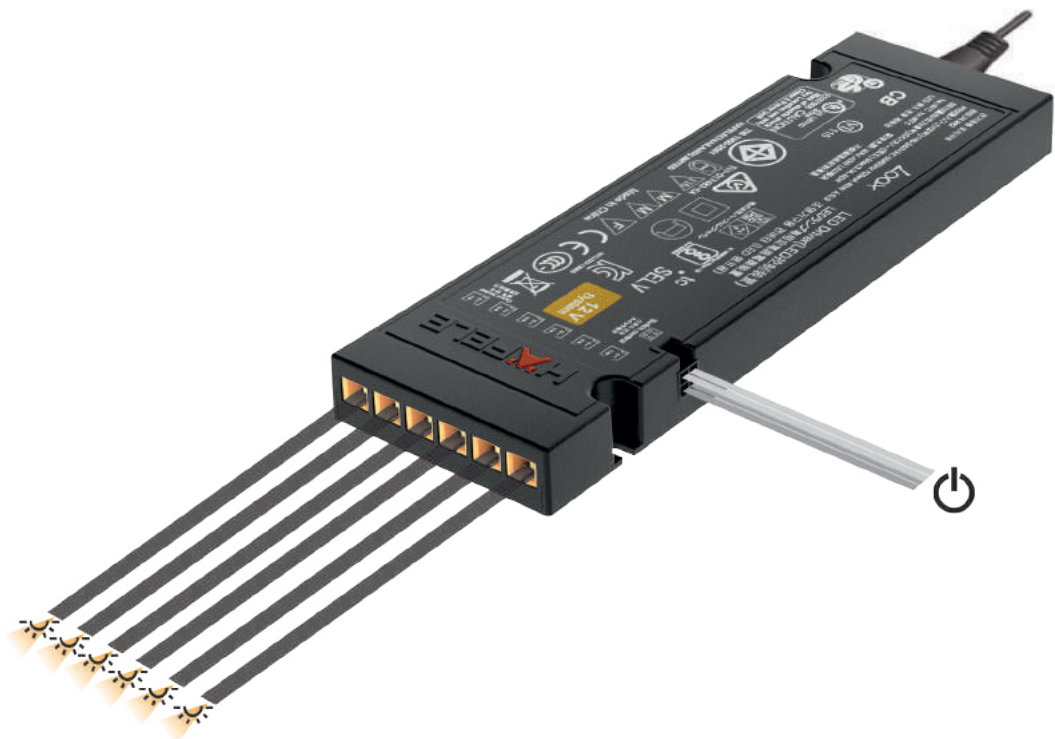
40 W

60 W

Intelligent drivers represent the core of the Loox system. Not only do they provide different numbers of lights with the power that is required, but they are also suitable for different voltages and frequecies all over the world. Loox drivers can also recognise different types of switch, can be used for dimming and can be combined in many different ways.

Wattage (W)	Input voltage	Output voltage	Output current	Degree of protection	Number of slots	Colour	Length (mm)	Width (mm)	Height (mm)	Art. No.	Price* (MYR)/ Set
0 - 40	100 - 240 V; 50 - 60 Hz	DC 12V	3.33 A	IP20	6 slots for 12V lights, 1 slot for switch, 1 slot for primary leads	Black	190	60	16	**833.71.692** 🏠	200.00
0 - 60	100 - 240 V; 50 - 60 Hz	DC 12V	3.35 A	IP20			208	56.5	30	**833.71.693** 🏠	244.00

❗ Supplied with
1pc driver and 1pc primary lead

➡ Not enough light slot? (ONE driver has 6 light slots)
Add 6-way distributor for additional light slot- 833.74.798 (refer to STEP 2)

Description	Art. No.	Price* (MYR)
6 way distributor	833.74.798 🏠	27.00

STEP 2 - SELECT DRIVER

STEP 3: SELECT FUNCTION

Step 3:
Select function

THE MOST IMPORTANT COMPONENTS OF THE
LOOX SYSTEM

Based on the plug and play driver, you can customise
the system in accordance with your requirements
using add-on modules. The flexible and modular
system components make it possible to have a wide
range of applications and solutions, simplify
installation or provide meaningful combinations of
different lights and switches.
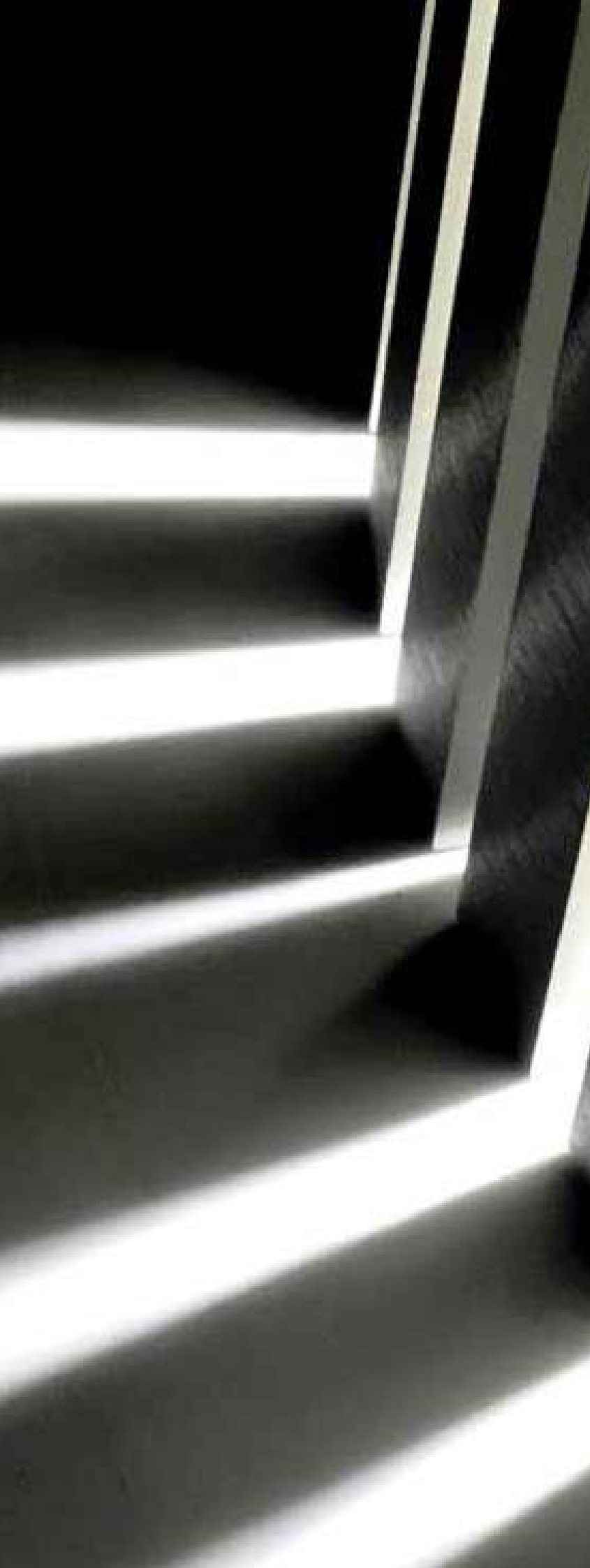
THE LOOX SYSTEM COMPONENTS

ENGINEERED BY HÄFELE

3 YEARS

6-WAY DISTRIBUTOR

With the 6-way distributor, up to 5 additional lights can be operated from one driver slot.

100–240V
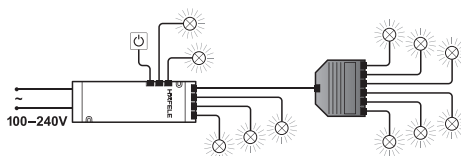
3-WAY DISTRIBUTOR WITH SWITCHING FUNCTION

The relevant lights can be operated separately and individually using the 3-way distributor with switching function connected to the output of the light.

100–240V
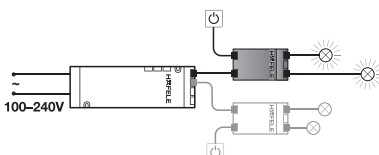
MULTI SWITCH BOX

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

100–240V
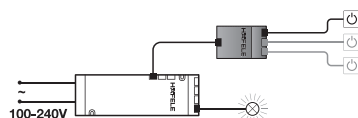
MULTI DRIVER BOX
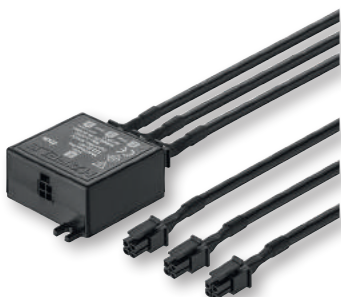
Up to 3 LED drivers can be controlled with 1 switch. Several drivers and therefore several lights in the room can be switched on and off with one switch. These can also be 3 of the same driver if you require additional power in a 12 V system, for example.

100–240V   12 V

100–240V   24 V

100–240V   350 mA
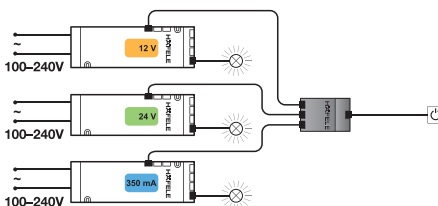
LOOX SWITCHES

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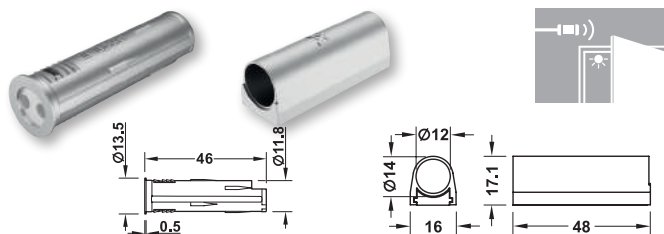
> Material/colour: Plastic, silver coloured
> Degree of protection: IP20
> Sensor range: 0-100 mm
> Power consumption: ≤0.3 W
> Drill hole Ø: 12 mm

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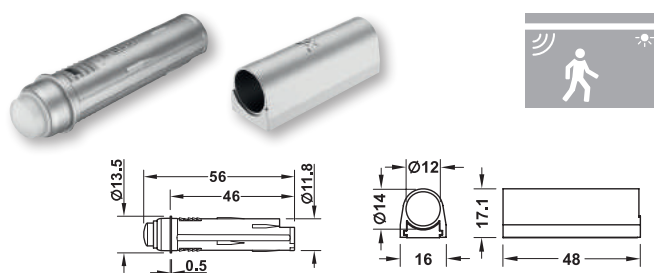
> Material/colour: Plastic, silver coloured
> Degree of protection: IP20
> Sensor range: 0-3000 mm
> Sensor angle: 120
> Power consumption: ≤0.1 W
> Delay time: 30 sec.
> Drill hole Ø: 12 mm

Häfele Loox dimmer, modular - automatic on/off switching

WITH TOUCH

10%   100%
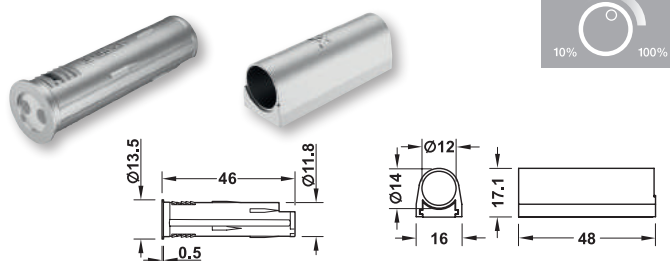
> Material/colour: Plastic, silver coloured
> Degree of protection: IP20
> Power consumption: ≤0.3 W
> Drill hole Ø: 12 mm

Häfele Loox door contact switch - on/off switching
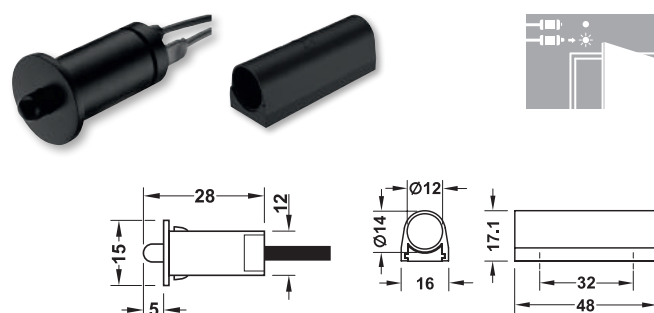
> Material/colour: Plastic, black
> Length: 28 mm
> Degree of protection: IP20
> Drill hole Ø: 12 mm

➡ Drill hole Ø for plug: 12 mm

Häfele Loox door contact switch - on/off switching
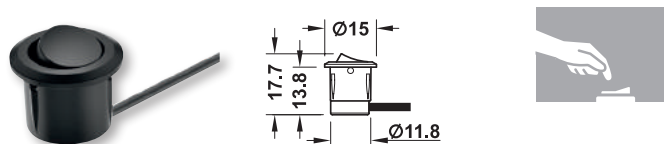
> Material/colour: Plastic, black
> Diameter: 15 mm
> Height: 17.7 mm
> Drill hole Ø: 12 mm

➡ Drill hole Ø for plug: 12 mm

APPLICATIONS AND SOLUTIONS

APPLICATION EXAMPLES: One driver is used in SINGLE module

12V DRIVER

(D1s) Dimmer switch /
(R1s) Rocker switch

Description	Art. No.	Price* (MYR)
D1s (Dimmer switch)	833.88.296	67.00
Supplied with 1pc dimmer switch , 1pc 2m connecting lead, 1pc housing and 1pc 2m extension lead		
R1s (Rocker switch)	833.88.404	25.00
Supplied with 1pc rocker switch with 2m lead and 1pc 2m extension lead		

12V DRIVER

(S1s) Door sensor switch /
(C1s) Door contact switch

Description	Art. No.	Price* (MYR)
S1s (Door sensor switch)	833.88.407	64.00
Supplied with 1pc door sensor switch, 1pc 2m connecting lead, 1pc housing and 1pc 2m extension lead		
C1s (Door contact switch)	833.88.400	28.00
Supplied with 1pc door contact switch with 2m lead, 1pc housing and 1pc 2m extension lead		

12V DRIVER

MS (no CROSS)

MS Multi switch box (NO cross)

(S2s) Door sensor switch /
(C2s) Door contact switch

Description	Art. No.	Price* (MYR)
S2s (Door sensor switch)	833.88.408	158.00
Supplied with 2pcs door sensor switch , 2pcs 2m connecting lead, 2pcs housing, 2pcs 2m extension lead and 1pc multi switch box		
C2s (Door contact switch)	833.88.401	86.00
Supplied with 2pcs door contact switch with 2m lead, 2pcs housing, 2pcs 2m extension lead and 1pc multi switch box		

Hinge door application

12V	12V 12V MS	12V 12V MS	12V 12V 12V MS	12V 12V 12V 12V
(S1s/C1s)	(S2s/C2s)	(S1s/C1s) (S2s/C2s)	(S1s/C1s) (S2s/C2s) (S1s/C1s)	(S1s/C1s) (S1s/C1s) (S1s/C1s) (S1s/C1s)

Sliding door and shelf unit application

12V
(S1s)

12V 12V
(S1s) (S1s)

12V 12V 12V
MS
(S1s) (S2s) (S1s)

12V 12V 12V
(S1s) (S1s) (S1s)

12V 12V 12V
MS
(S1s) (S2s) (S1s)

12V 12V 12V
Shelf unit
(D1s) (S1s) (S1s)

We reserve the right to alter specifications without notice.

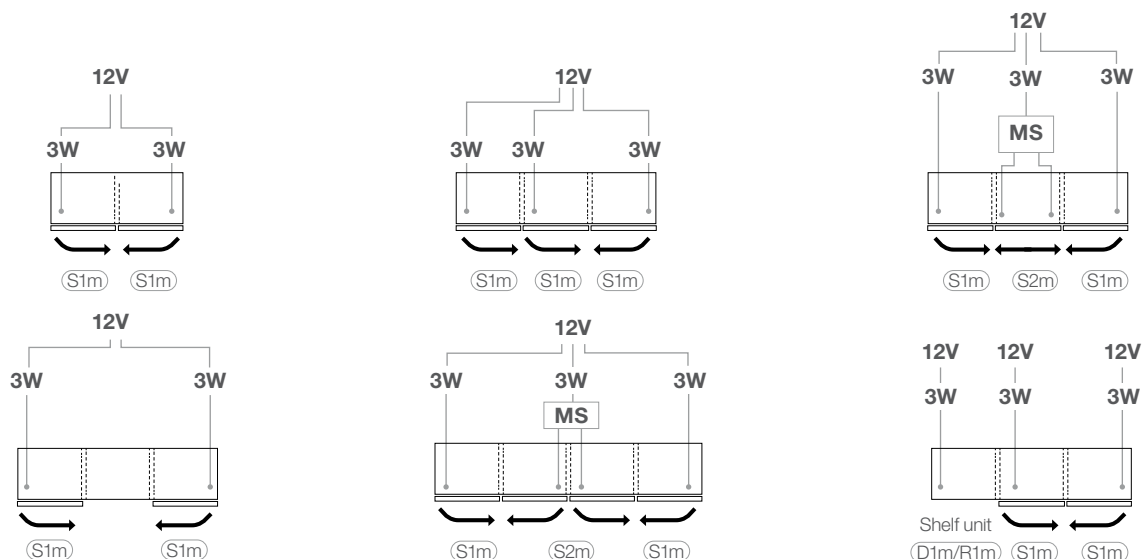# APPLICATIONS AND SOLUTIONS

HÄFELE

APPLICATION EXAMPLES: One driver is used in MULTIPLE modules

3W 3 Way distributor (3 lighting slots)
(D1m) Dimmer switch /
(R1m) Rocker switch

3W 3 Way distributor (3 lighting slots)
(S1m) Door sensor switch /
(C1m) Door contact switch

3W 3 Way distributor (3 lighting slots)
MS Multi switch box (NO cross)
(S2m) Door sensor switch /
(C2m) Door contact switch

Description	Art. No.	Price* (MYR)
D1m (Dimmer switch)	833.88.298	81.00
Supplied with 1pc dimmer switch , 1pc 2m connecting lead, 1pc housing, 1pc 2m extension lead and 1pc 3way distributor box		
R1m (Rocket switch)	833.88.405	39.00
Supplied with 1pc rocker switch with 2m lead, 1pc 2m extension lead and 1pc 3way distributor box		

Description	Art. No.	Price* (MYR)
S1m (Door sensor switch)	833.88.409	78.00
Supplied with 1pc door sensor switch, 1pc 2m connecting lead, 1pc housing, 1pc 2m extension lead and 1pc 3way distributor box		
C1m (Door contact switch)	833.88.402	42.00
Supplied with 1pc door contact switch with 2m lead, 1pc housing, 1pc 2m extension lead and 1pc 3way distributor		

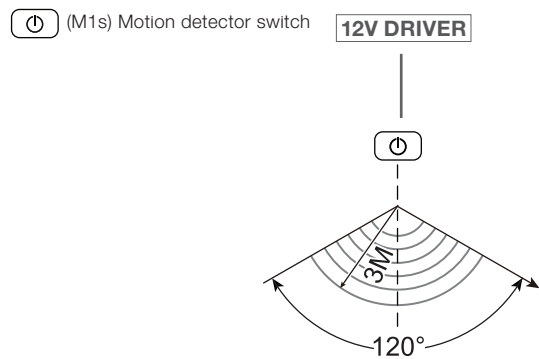| Description	Art. No.	Price* (MYR)
S2m (Door sensor switch)	833.88.410	172.00
Supplied with 2pcs door sensor switch , 2pcs 2m connecting lead, 2pcs housing, 2pcs 2m extension lead, 1pc 3way distribution and 1pc multi switch box		
C2m (Door contact switch)	833.88.403	100.00
Supplied with 2pcs door contact switch with 2m lead, 2pcs housing, 2pcs 2m extension lead, 1pc 3way distributor and 1pc multi switch box		

Hinge door application
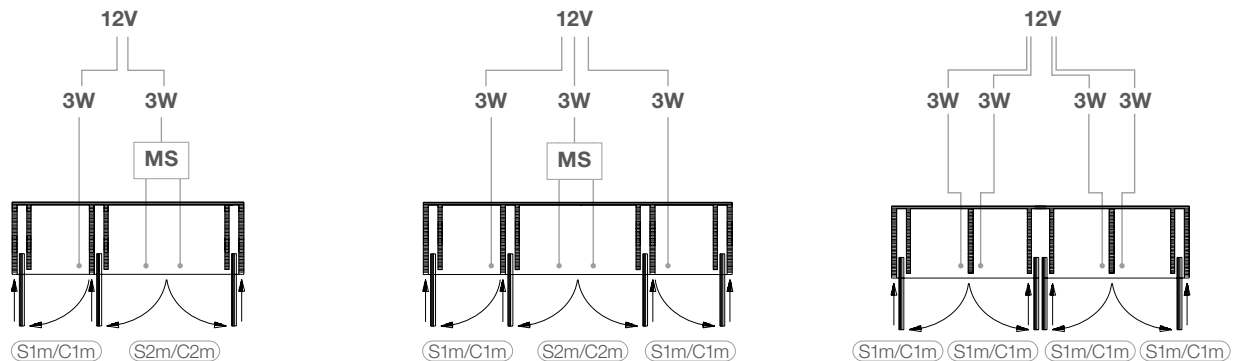
Sliding door and shelf unit application

APPLICATIONS AND SOLUTIONS

APPLICATION EXAMPLES: One driver is used in SINGLE module
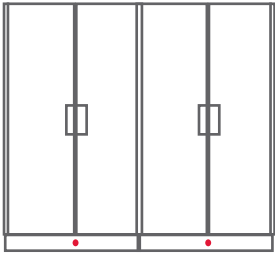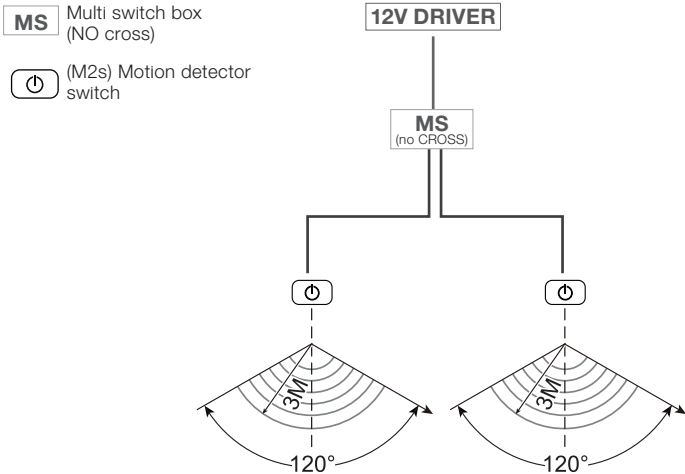
(M1s) Motion detector switch

(M1s) Motion detector switch | 12V DRIVER

3M | 120°
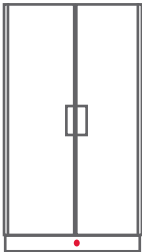
*Recommended switch position

Description	Art. No.		Price*(MYR)
(M1s) Motion detector switch	**833.88.411**	🏠	**69.00**

Supplied with 1pc motion detector switch, 1pc 2m connecting lead, 1pc housing and 1pc 2m extension lead
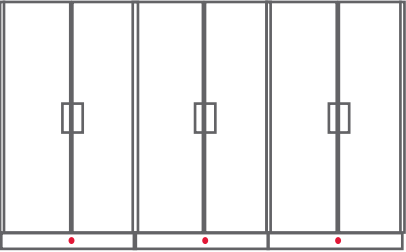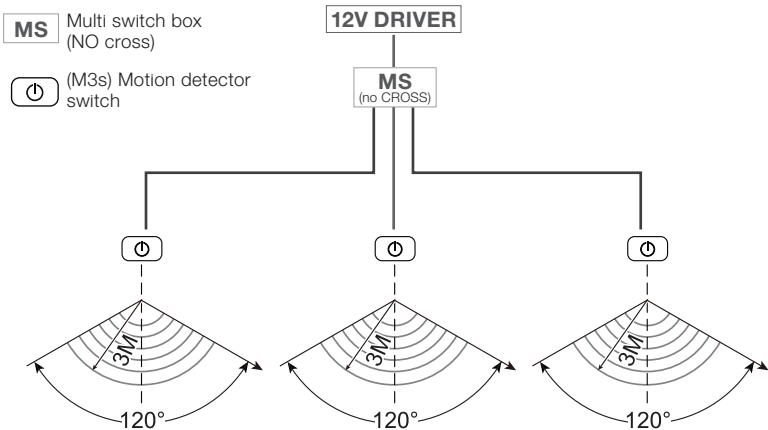
(M2s) Motion detector switch

MS Multi switch box (NO cross)

(M2s) Motion detector switch | 12V DRIVER

MS (no CROSS)

3M | 120° | 3M | 120°

*Recommended switch position

Description	Art. No.		Price*(MYR)
(M2s) Motion detector switch	**833.88.412**	🏠	**168.00**

Supplied with 2pcs motion detector switch, 2pcs 2m connecting lead, 2pcs housing, 2pcs 2m extension lead and 1pc multi switch box

(M3s) Motion detector switch

MS Multi switch box (NO cross)

(M3s) Motion detector switch | 12V DRIVER

MS (no CROSS)

3M | 120° | 3M | 120° | 3M | 120°

*Recommended switch position

Description	Art. No.		Price*(MYR)
(M3s) Motion detector switch	**833.88.413**	🏠	**231.00**

Supplied with 3pcs motion detector switch, 3pcs 2m connecting lead, 3pcs housing, 3pcs 2m extension lead and 1pc multi switch box

APPLICATIONS AND SOLUTIONS

APPLICATION EXAMPLES: One driver is used in SINGLE module

Bedside table light application

12V DRIVER

MS
(CROSS)

12V

MS

MS Multi switch box (cross)

⏻ (D2s) Dimmer switch /
(R2s) Rocker switch

D2s/R2s

Description	Art. No.	Price* (MYR)
D2s (Dimmer switch)	833.88.297 🏠	164.00
Supplied with 2pcs dimmer switch , 2pcs 2m connecting lead, 2pcs housing, 2pcs 2m extension lead and 1pc multi switch box		
R2s (Rocker switch)	833.88.406 🏠	80.00
Supplied with 2pcs rocker switch, 2pcs 2m extension lead and 1pc multi switch box		

ACCESSORIES

Hafele drilling jig

> Precision drill holes in furniture side panels for leads and switches for Loox lights

> Compact design for already assembled furniture

> For panel thickness: 16, 19 and 25mm

> Drilling sleeves: 8, 10 and 12mm

Description	Art. No.	Price*(MYR)
Hafele drilling jig	001.25.080	707.00

Interconnecting lead with clip 50mm
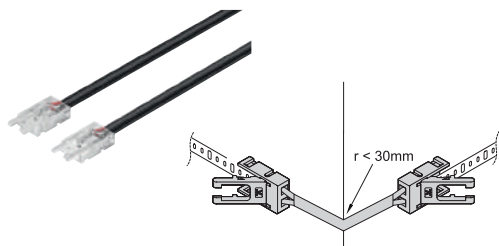
> Current carrying capacity: Max. 5 A

> Width: Clip 10mm

> Drill hole Ø: Clip 12mm

> Supplied with: 1 lead clip/clip

r < 30mm

Description	Art. No.	Price*(MYR)
Interconnecting lead with clip 50mm	833.89.191	16.00
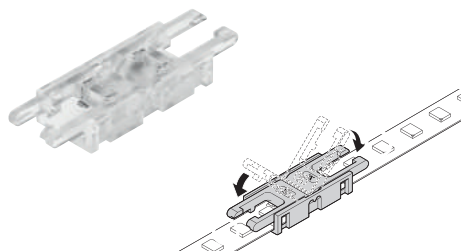
Clip connector

> Current carrying capacity: Max. 5 A

> Width: Clip 10mm

> Drill hole Ø: Clip 12mm

> Supplied with: 1 clip connector

Description	Art. No.	Price*(MYR)
Clip connector	833.89.206	5.00
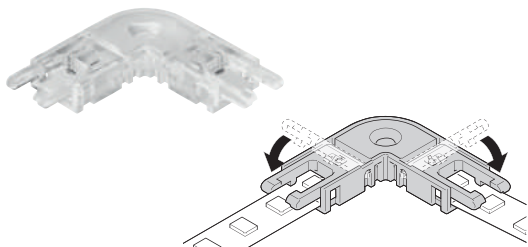
Corner connector

> Current carrying capacity: Max. 5 A

> Supplied with: 1 corner connector

Description	Art. No.	Price*(MYR)
Corner connector	833.89.187	9.00

We reserve the right to alter specifications without notice.

LIGHT EFECTS AND LIGHTING TECHNOLOGY

HÄFELE

Cone of light

Refraction angle

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

Illuminance value —

867 lx	884 lx	250 mm — Distance
216 lx	221 lx	500 mm
96 lx	98 lx	750 mm
54 lx	55 lx	1000 mm

Illuminance symbol
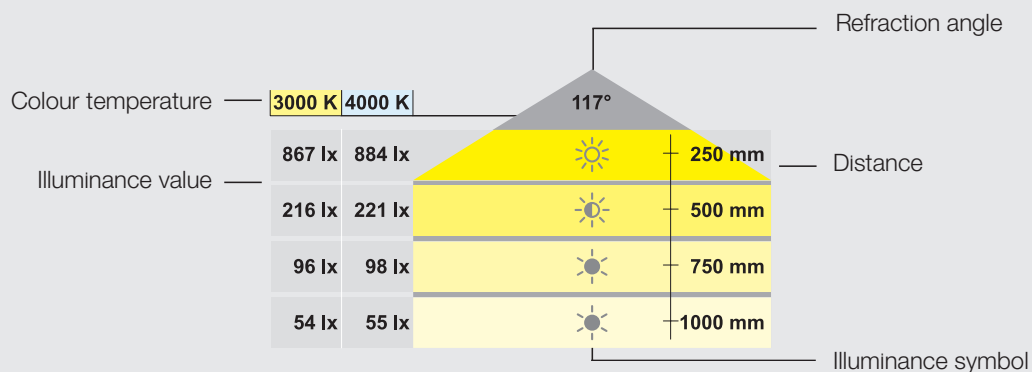
Symbol	Value
☀	>500 lx
☀	150-500 lx
☀	<150 lx

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 speciic 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 ixtures, 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

We reserve the right to alter specifications without notice.

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

Conirmation from manufacturer that the product complies with the product-speciic applicable
European norms and standards.
Häfele will not use the certiication in advertising.

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

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

Energy eiciency standard VI of the United States Department of Energy

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

Regulatory Compliance Mark
(for Australia)

China Compulsory Certiication

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

Korea Certiication Mark

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

Thai Industrial Standards Institute TISI

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

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 ≥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.

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
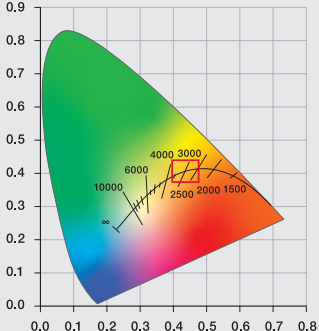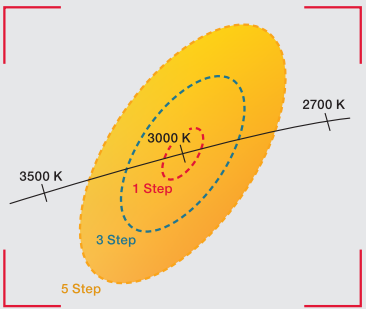
SELV   Safety Extra Low Voltage

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

Short-circuit proof with safety isolation

TECHNICAL TERMS

HÄFELE

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 lux** (lm) in relation to a surface (m) 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 difer from each other with regard to colour, luminous lux (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 lux 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 eiciency.
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 eiciency class	The energy eiciency 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 speciication 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 diferences	

Colour diferences are speciied 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 diference will be next to each other on the strip light or in the light and that the colour diference 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 diferences.
2	Most minimal colour diferences are visible.
3	Very small colour diferences are visible.
4	Colour diferences are visible.
5	Signiicant colour diferences are visible.
>5	Very clear colour diferences 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 deined by EU ordnance No. 874/2012.

TECHNICAL TERMS

Technical terms

ConstanLife time L80/B10	The same current lows through each LED. That means that the brightness of all LEDs is the same, and a **drop in luminous lux** is prevented. This increases the maximum visual length of the strip lights.
Life time	Speciied 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 speciied 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. 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 lux (Lumen maintenance) of an LED is tested at three diferent 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 eicacy	The luminous eicacy is the ratio of the luminous lux and the wattage absorbed. It is used to measure the operating eiciency of the light source. It is indicated in Lumen per Watt (lm/W).
Luminous lux	It is indicated in Lumen (lm). The luminous lux indicates the light output, i.e. the quantity of light a source emits. The value may be subject to measurement and production-related luctuations of 10 %.
Drop in luminous lux	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 lux from the irst to the last LED of up to 30% is imperceptible to the human eye. That's why Häfele speciies a **maximum strip light length** for this visual value. Generally, it is possible to operate strip lights with longer lengths, but a diference in brightness will be visible. Exception: The LEDs of the strip lights with constant current technology (LED 2077/3050/3051/3052) always have the same brightness.
Max. strip light length	**Visual value** Strip light length with an imperceptible **drop in luminous lux** of max. 30%. **Wattage-dependent value** 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 diference in brightness will be perceivable. Exception: The LEDs of the strip lights with **constant current technology** (LED 2077/3050/3051/3052) always have the same brightness.
Multi-white	The light colour of shades of white can be changed as required with Häfele Connect. Mesh, e.g. from warm white to cool white.
RGB	RGB is the abbreviation for red, green and blue. In combination with Häfele Connect Mesh, 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 ofered. 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 %.

LIGHTING TECHNOLOGY

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

THE ADVANTAGES:

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

> Insensitive
LEDs 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 incandescent 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 also be designed as colour changing lights.
This allows the colour temperature to be coordinated with furniture contents such as exhibits in the best possible way.

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LED FLEXIBLE STRIP LIGHT

QUALITY FEATURES

How to recognize our quality:

Light emitting diode (LED):

> Use of extremely bright high-power LEDs for maximum light quality

> Low light colour tolerance - subsequent purchases have the same colour

> At the end of their life time, the LEDs still have at least 70% of the luminous flux (ambient temperature ≤35°C)

Structure of strip:

> Multi-layer for transporting high currents with little heat development

> Flexible copper alloy for avoiding broken conductor tracks

> Gold-plated connections for a permanently reliable, corrosion-free contact

> White top coat with UV coating to prevent corrosion and yellowing, for permanent aesthetics

> Reflective white top coat for better light yield

> The rear 3M© adhesive tape provides secure adhesion to practically any surface

> Strips can be individually shortened, extended and are also flexible due to clip and corner connectors
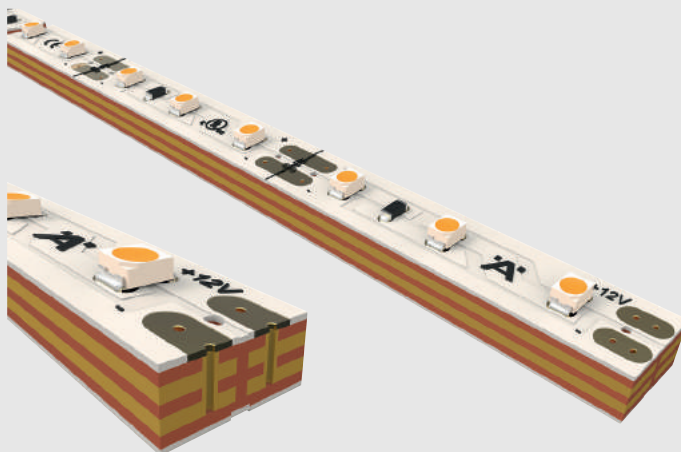
PLAN FLEXIBLY

Loox. The comprehensive kit of light and functions

To achieve different lighting effects is one thing. To respond to different installation situations, is something else altogether. With the large number of components in the Loox LED system both are possible. From the wide-angle beam of interior cabinet lighting incorporating a door contact switch combined with drawer lighting, to the combination of mood and functional lighting in an open kitchen.
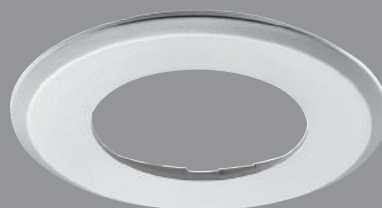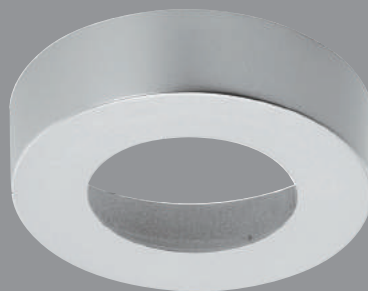
LED FLEXIBLE STRIP LIGHTS

MODULAR DOWNLIGHTS

SURFACE MOUNTED DOWNLIGHT

SWITCHES

LIGHTING INFORMATION

What is the life time of the products in permanent operation?	Loox5 drivers >50,000 hrs. at a maximum ambient temperature (40 C/45 C), wall plug drivers 30,000 hrs. at an ambient temperature of max. 40 C. Provide for suicient 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 proile is recommended from 9.6 W/m.

1. Illuminating

If the illuminance of an LED strip light measured with or without a difuser?	The illuminance is measured at the LED strip light without a difuser and without a proile, since the proile and the difusers can be variably combined with the strip lights. With difusers the light permeability is speciied in order to be able to estimate the loss. In case of doubt, we recommend carrying out a test to check out the efect of proiles.
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.
Can an LED lexible 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.
How is consistent bulb light colour guaranteed?	Häfele makes high demands on the selection of the materials. All Loox5 strip lights contain highquality and long-lasting LEDs from Samsung and Lumileds. Setting very tight quality speciications ensures not only luminous lux and breakdown voltage, but also consistent light colour for followup purchases.
Can Loox lights be used in RVs/boats/cars?	Yes. Constant current strip lights can compensate for voltage luctuations of the vehicles without problems. Standard LED strip lights can be used as well. It is important to note, however, that the voltage peaks may reduce the life time.
Can I use Loox in saunas and bathrooms?	Yes. This applies to all lights which provide protection of at least IP44 (preferably IP67) when installed. This is suicient for many applications. LED silicone strip lights are IP44 protected as well. However, it must be ensured that the driver and mains lead are dry. Attention must also be paid to the maximum ambient temperature.

2. Extending

What expansion options are possible?	The Loox system can be extended with charging stations (USB and inductive) and sound systems (e.g. exciter speakers).
What is the best way to use an exciter speaker?	Can be installed on glass and mirror glass (36 mm each), acrylic glass (3 mm), chipboard (1020 mm) and mineral composite boards.

3. Switching

How can sensor switch malfunctions be avoided (⌀12 mm)?	Check for correct switch installation. The TOP lettering on the switch must point upwards in the installation situation.
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.
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.

We reserve the right to alter specifications without notice.

LIGHTING INFORMATION

Technical questions

4. Distributing

Can multiple distributors be cascaded?	Yes, the individual limits are the output of the driver and the maximum lead length of 10 m from the driver to the light/charging station.
Can multiple 6-way distributors with a switching function be cascaded?	Yes, and switches can also be used. This makes the switch of the irst box the master switch. Note: only the last level in a cascade can contain dimmers. Dimmers at a higher level would interfere with the switching function of the downstream distributors.
How many Watts does a 6-way distributor use?	A 6-way distributor with switching function has power consumption of 0.1 W. A Häfele Connect Mesh 6-way distributor has power consumption of 0.5 W. No power consumption has to be taken into consideration for distributors without a switching function.
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. 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).
Can you use 12 V and 24 V lights on the same distributor?	Yes, please use the respective converter.
What does AWG mean in the speciication of cables?	AWG stands for American Wire Gauge. It is the coding for wire diameters in electrical leads that are mainly used in North America. This identiies the cross-section of wires in electrical leads that consist of strands and wire.
What is the current carrying capacity of a 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	36W	30W	60W	42W	84W	60W	120W

The cable type is printed on the sheathing of the cable.

5. Supplying

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 electrician 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 qualiied electrician.
Why do the lights have to be plugged in irst before the driver is connected to the mains voltage with the mains lead?	If the driver is connected to the mains voltage irst, electrical power is output at the secondary side, which leads to overvoltage and therefore damage to the lights if they are connected.
Why does my LED light lash?	Flashing is a sign of (under or) overloading. Use a driver with higher power or reduce the number of devices.
	Tip: install the drivers/distributors in the furniture plinth or above the cabinet top (with cover). Provide bases or cabinet tops with an opening and cover them with an additional removable positive-itting shelf. Only the shelf needs to be removed for inspecting.

HÄFELE

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