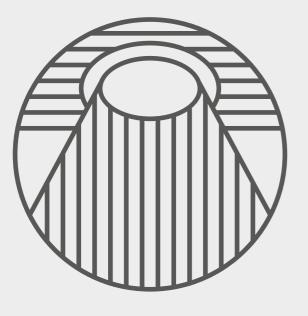
LUMICA® Lighting technology

LUMICA® LIC LED system



Smart lighting – skilfully staged!





Lighting technology

LUMICA® Lighting technology

Custom room lighting design for just the right light

LUMICA® LIC LED system

Design lighting just the way you want it – fast, inviting, clever



Small accents, big impact: lighting cues in the kitchen

They've been gracing the stage for centuries: lighting cues where different lights and colours are controlled centrally. Now you can get this same effect, albeit much more refined, in your own home with "smart lighting" for making your ideal atmosphere a reality. Based on the latest in LED lighting technology and network-capable control units that communicate with each other and with external devices, the new LIC LED system from Naber is the perfect platform for smart lighting – and as always is of the absolute best quality. Thanks to modular Plug-and-Play technology, the system is safe and easy to install and configure.

The standard packages comes with four modules that can be combined as required. And of course we have a wide range of available lights with different designs and functions to satisfy every desire.



More information and lighting products can be found in our 1 BASIC catalogue and online at: www.naber.com/lic



Naper LIC LED system

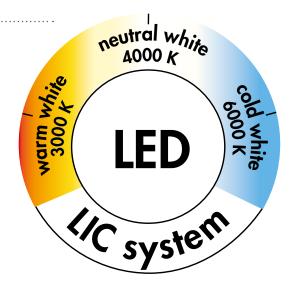
With the LIC LED system from Naber, there are all sorts of ways to achieve individual lighting concepts in the kitchen and adjacent living areas. Installation is quick and uncomplicated thanks to simple Plug-and-Play technology. And thanks to the comprehensive range of LIC products, you can combine all sorts of lights and lighting types into lighting groups to create an incredibly individual LED lighting installation.

My individual lighting set-up in the kitchen,

. . .

Every light in the Naber catalogue that has this symbol can be combined and controlled using the converter and control units. And all lights also function as individual lights.

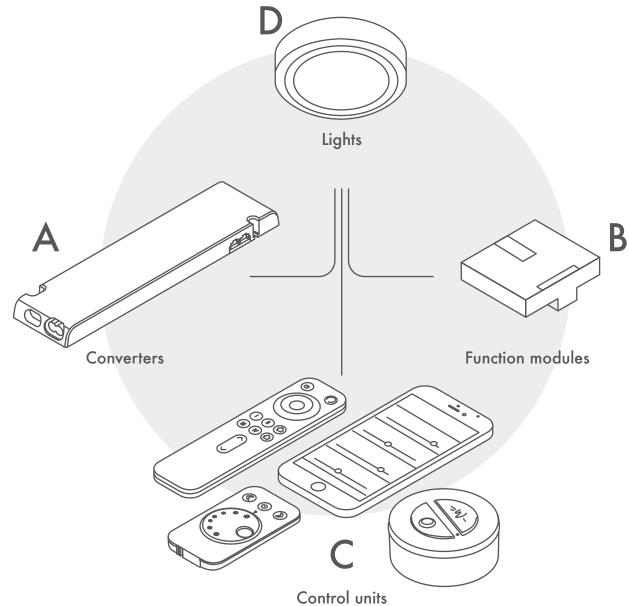
> ... in the office, and in all the other areas of my home.

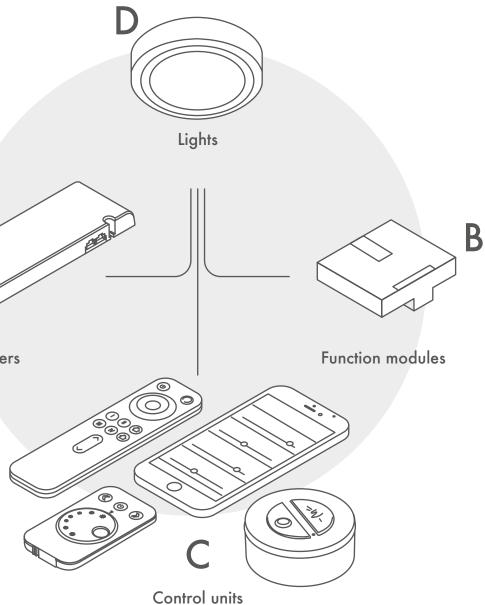




Lighting types used

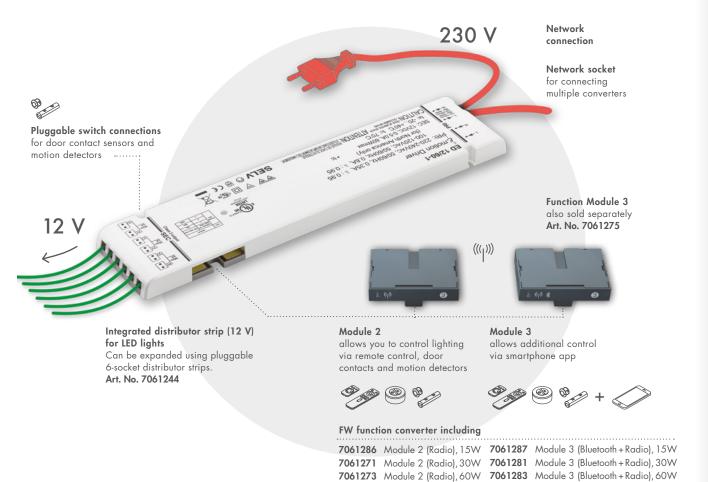
- 1. Recess lights: pleasant basic lighting that distributes light evenly
- 2. Under-cabinet lighting/linear lighting: glare-free to help you see what you're working on
- 3. Pendant lighting: active light above the kitchen bar
- 4. Flex strips and baseboard lights: delicate accents to round off and emphasise your lighting design





The LIC LED system is made up of 4 system modules:

On the following pages, we look at the system modules in detail.



A Converter

The LIC LED system is built on converters and the various connection options they offer. The converters convert network voltage (100–240V, 50–60Hz) to the 12V output voltage used by all lights in the LIC LED range. The first converter in a group has to be set to "Master" mode before it can be connected to the LIC Home Base module or the Bluetooth app! Up to 10 converters can be connected to one central mains supply. The optional Function Modules 2 and 3 be trained to recognise the control unit. This allows add different control options to the converters.

3 different converter models



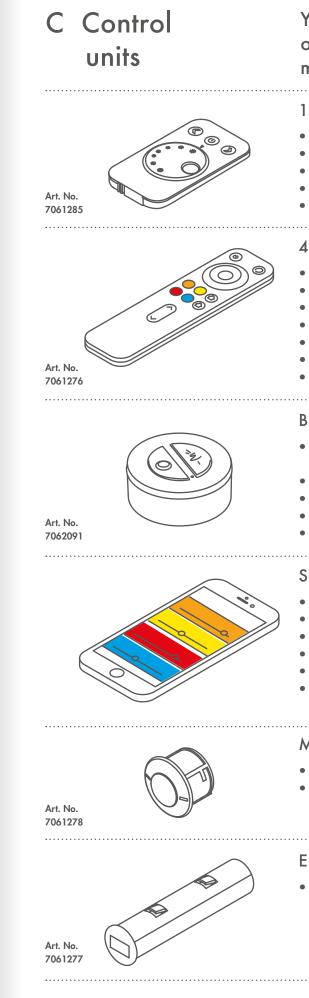
15W model with 4×12V sockets, 30W and 60W models both with 6 x 12V sockets

B Function modules

The converters can be fitted with two different function modules - Module 2 or Module 3. With wireless communication between converters, these modules offer users a number of different control options.

The switch signal is sent from the control unit to all wirelessly connected converters. To achieve this, every converter fitted with Function Module 2 or 3 has to you to be as flexible as you want when installing your desired LED lighting system.

The function modules simply plug into the slots on the converters. Without a function module, the converter acts like a classic switch device. You can expand the functionality of your existing systems at a later time effortlessly.



You need to select the correct control unit based on the configuration you select and the function module you are using.

1-channel colour change remote control

- Fully-adjustable colour temperature
- Dimmer function
- Auto memory: saves your most recent setting
- One controller can be used for multiple converters
- Control one light or a group

4-channel colour change remote co	ontrol

- Colour temperature fully-adjustable per channel
- Dimmer function per channel
- Auto memory: saves your most recent setting
- All functions individually adjustable for up to 4 lighting groups
- Can store 2 different lighting scenarios (home buttons)
- Colour temperature cycle (warm white/cold white)

• One light or a group of lights can be controlled per channel

Branco radio remote control

- Can be used with Function modules 2 and 3. Can operate with multiple remote controls. Allows toggle switching.
- Fully-adjustable brightness
- Choose from one of three preset colour temperatures or adjust as desired
- Can be used as a socket insert, fixed installation or handheld remote control
- Can be used as central switch unit for the LIC LED system

Smartphone/Tablet (App)

- Control up to 6 lighting groups via Bluetooth
- Fully-adjustable light temperature
- Dimmer function
- Create lighting groups independently of lighting channels
- Store an unlimited number of lighting scenarios
- Available in the Apple App Store and Google Play Store
- (requires Version iOS 7 or Android Version 4.3 or higher)

Motion switch

• Light switches on if motion is detected in front of the senor • 3 programmable switch-off times: 16 seconds, 3 minutes or 10 minutes

Emotion IR sensor/door contact sensor

• Comes with two operating modes: "InDoor Mode" and "Touch Mode" (selectable using the button on the back). "InDoor Mode": for installing in cupboards or drawers, switches on and off with opening and closing. "Touch Mode": for installation underneath furniture, switches on and off when touched



D Lighting overview LIC LED system



You will find all the lights shown and many more in our main catalogue 1 BASIC and in our webshop www.naber.com/lic

Pendant, ceiling, unit top, island lights

Nose Subsequent lamp Colour change LED

Surface mounted lamp for kitchen islands, not suitable for mounting above a hob, 9,5 watt, 180° rotatable

7061130 Subsequent lamp

Guidance LED

Pendant light, aluminium body, anodised in stainless steel colour, incl. converter and 1-channel colour change remote control

7065040 L 900 mm, 12,4 watt 7065041 L 1200 mm, 18,6 watt 7065042 L 1500 mm, 21,7 watt

Asta Colour change LED

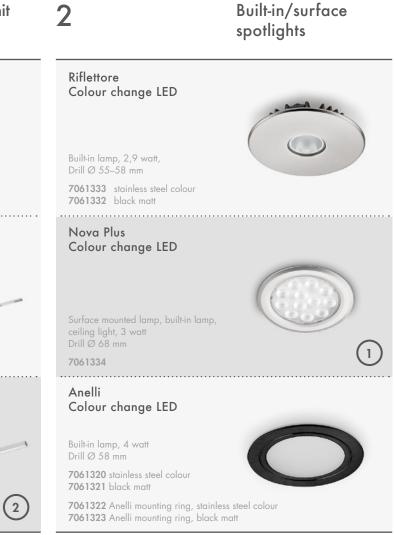
Pendant light, aluminium body, anodised in stainless steel colour, incl. FW functional converter 30 module 2 and 1-channel colour change remote control

7065055 L 900 mm, 13,9 watt 7065056 L 1200 mm, 18,6 watt 7065057 L 1500 mm, 23,2 watt

The LIC LED system offers countless custom ideas for kitchens, livings rooms and offices for designing lighting in and on furniture. Attractive matching pendant lights round off the LIC LED system. Switched on individually or in groups, a wide array of different lights can be controlled via remote control, tablet or voice command.



Every light in the Naber catalogue that has this symbol can be combined and controlled using the converter and control units. And all lights also function as individual lights.



3	Lamps for mounting from below		lex Stripes and base lighting
Flip® Colour change LED Lamp mounted from below, 4,8 watt 7061155		Prova Colour change LED Top-mounted lamp for rear walls, can be shortened, 31,2 watt 7061207 stainless steel colour, 2600 mm 7061209 black matt, 2600 mm	Prova 90° connecting corner elemen 7061208 stainless steel colour 7061220 schwarz
Hull Colour change LED Lamp mounted from below, 5,5 watt 7061140		Manubrio Colour change LED Handle strip lighting, can be shortened, 7,8 watt per meter 7061298 stainless steel colour, L 1500 mm 7061197 stainless steel colour, L 2600 mm	
Stretto Colour change LED Lamp mounted from below, 3 watt 7062206		Light profile Colour change LED Ambient light, can be shortened, 7,8 watt per meter, light length 2600 mm 7061039	and a second sec
Livello Colour change LED Lamp mounted from below, 4 watt 7062320 aluminium coloured 7062330 black		LED Flex Stripe Colour change 1,2 watt, can be shortened 7061183 L 335 mm 1,2 watt, can be shortened 7061168 L 1500	m for LED Flex Stripes
1	Surface mounted lamps	Cosi Colour change LED Built-in lamp, base lamp, 0,3 watt, Drill Ø 55 mm 7061245	4
Vidula Colour change LED Unterbodenleuchte, 12 watt per meter, 7061294 stainless steel colour L 1500 7061225 black matt, L 1500 mm 7061223 stainless steel colour, L 260 7061224 black matt, L 2600 mm	0 mm	Calamaro LED Flex Stripes colour change Flexible LED strips, 7,2 watt per meter, can be shortened, 2000 mm two-sided supply line	*
Pertura Colour change LED Unterbodenleuchte, 12 watt per meter, 7061296 stainless steel colour, L 150 7061240 stainless steel colour, L 260 7061241 black matt, L 2600 mm Ricol Colour change LED	0 mm 0 mm	7061242 L 2600 mm	•



7061184 L 2600 mm



shelves Duo Colour change LED Glass shelf lamp, For mounting on glass shelves with metal spring clip, 0,8 watt 7061079 Velato lit glass shelf Colour change LED LED lit glass shelf, bearing capacity approx. 1,0 kg/100 mm 7061291 L 600 mm, 9,3 watt 7061292 L 900 mm, 14,0 watt 7061293 L 1200 mm, 18,6 watt

6

*

Lit glass

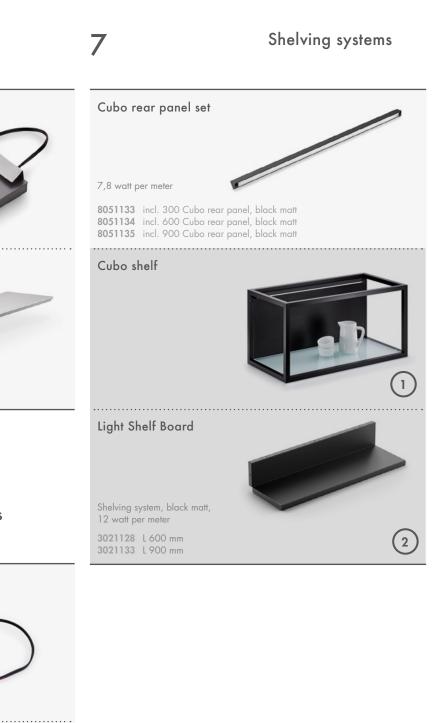
Accessories Distributor 6-fold With 200 mm of supply line, for 12 V DC 7061244 LED connection line

LED connection line, white, length 1800 mm 7061049



Lighting types used

- 1. Cubo shelving system with Cubo rear panel set
- 2. Light Shelf Board





You will find all the lights shown and many more in our main catalogue 1 BASIC and in our webshop www.naber.com/lic

Installation example

Achieve and control networked lighting scenarios easily

The LIC Converter with Function Module 2 or 3 allows you to connect LED lights to a 230-Volt power supply centrally or locally, depending on where you install them. The various different control units (1-channel colour-change remote control, 4-channel colour-change remote control, Branco remote control, motion detectors, door contact switch or smartphone/tablet plus app) control the lighting systems in the room individually, or according to a defined lighting group or channel.

This means that networked lighting scenarios can be achieved quickly and easily, even with converters installed locally in different locations.

Lighting groups in the example on the opposite page

L1

Lighting group 1 Nova Plus LED (Surface mounted lamp) Lighting group 2

Prova Colour change LED

(Top-mounted lamp for rear walls)

Home I

5000K / 100% / Working light Function of saved lights

L3 Lighting group 3 Hull Colour change LED (Lamp mounted from below) Guidance Colour change LED (Pendant light) **L**4 Lighting group 4 Manubrio Colour change LED (Handle strip lighting)

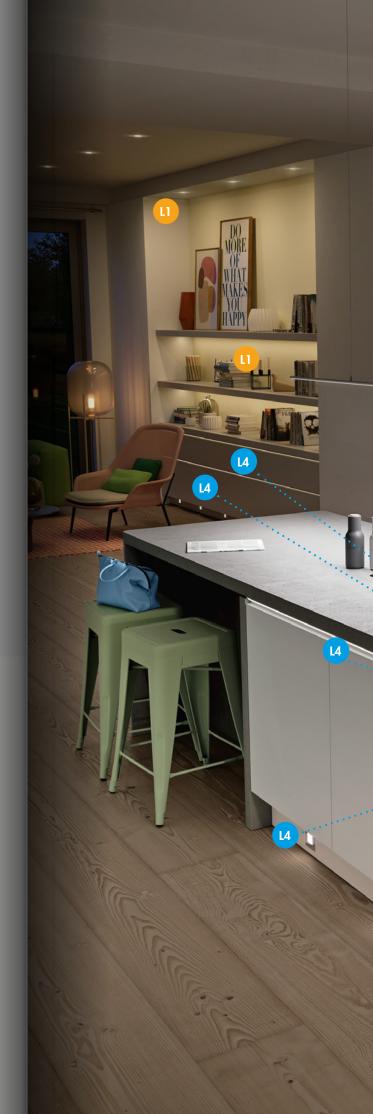
Cosi Colour change LED (Base lamp)

Home II

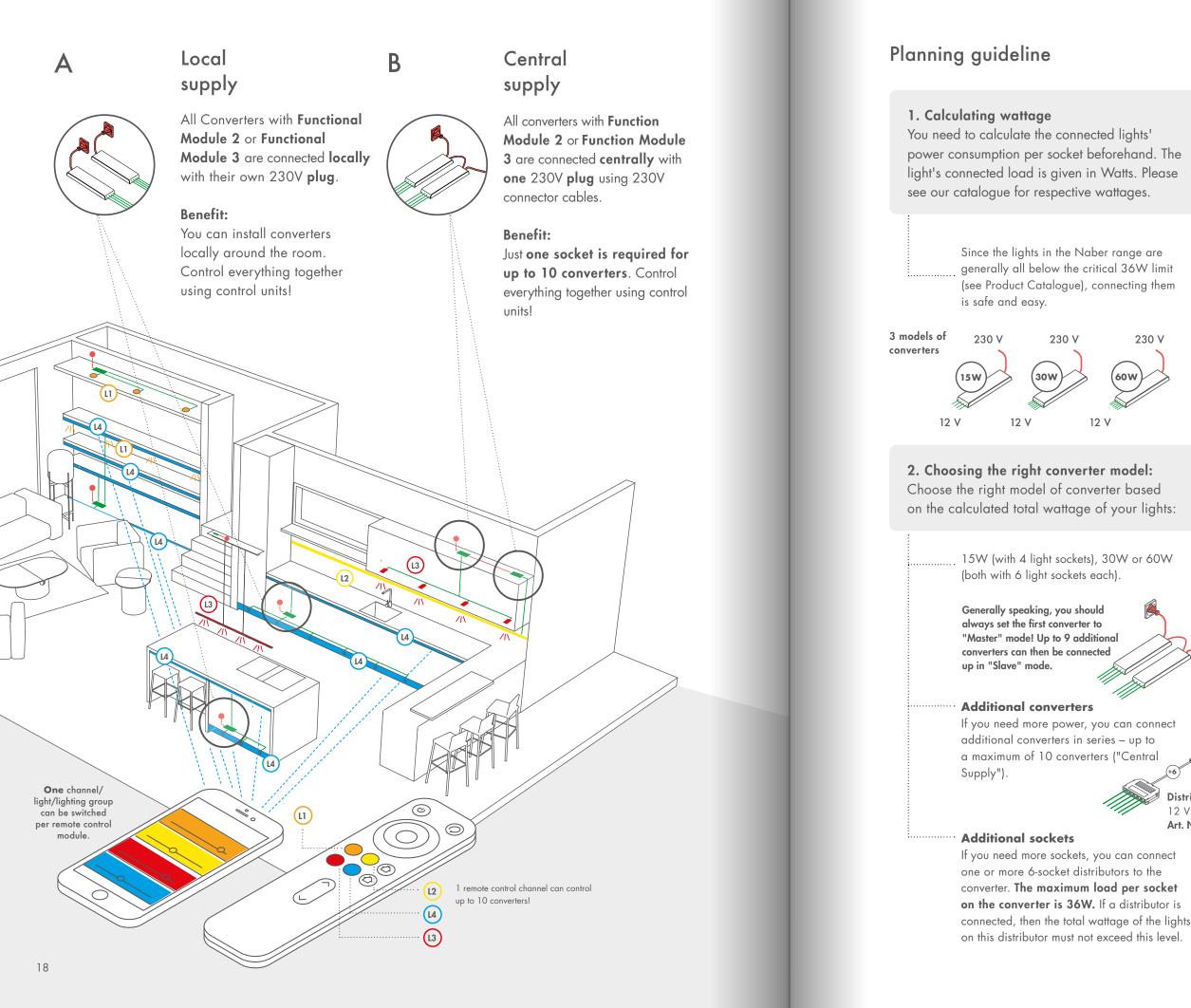
2700 K / 40% / Ambient light Function of saved lights



vidually for lighting groups 1 to 4.











Distributor 6-fold 12 V Art. No. 7061244

Power supply cables

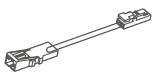
The power supply cables for LIC-compatible lights are generally 200 cm in length and fitted with an LED mini-plug system. Because of its design, a 12V Mini LED Plug can only take a maximum load of 36W – regardless of the wattage of the converter. Since the lights in the Naber range are generally all below this limit (see Catalogue), connecting them is easy.

Extension cables

If the power supply cable for your LIC-compatible lights is not long enough, you can extend it using an LED connector cable (length 180 cm with LED Mini Plug system).

LED Mini Plug system

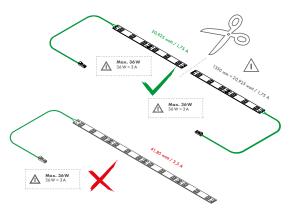
for extending power supply cables



Because of its design, a 12V Mini LED Plug can take a maximum load of 36W = 3 Amps – regardless of the wattage of the converter.

Light profile special feature

With light profiles (such as Ricol), you can exceed the maximum 36W load (total length 260 cm, total wattage approx. 42W). However, the profile or LED strips can be cut to size. They are easy to split and connect separately (wattage 15.5W per metre).





Safety

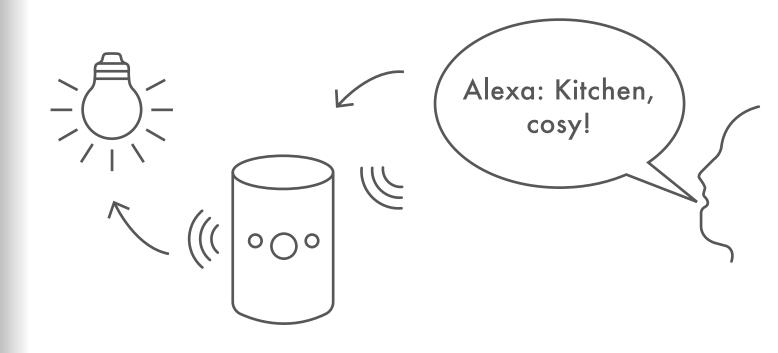
Safety requirements are inspected accor ding to the latest and strictest European norms (e.g. EN 60 598 for lights and EN 60 742 for converters). Lights and converters with this symbol are interference suppressed according to European norm EN 55 015.

Compatible with Philips Hue

LIC Smart Home Lighting HOME BASE MODULE

With the LIC Home Base Module, controlling your smart Naber LIC lighting systems just got even more convenient. Now, you can define and control lighting scenarios via remote control or the smartphone app, and also with the convenience of a voice command and Smart Speaker (e.g. Amazon Echo or Google Home).





The **LIC Home Base Module** acts as a gateway for connecting **LUMICA® LIC converters** to Smart Home networks. This requires a standard retail internet router and Philips Hue Zigbee Bridge. Alternatively, you can use a Smart Home Controller (such as a Bosch Smart Home Controller). This makes controlling lighting – and a number of other repetitive processes and functions around the home – error-free and largely automated thanks to pre-defined scenarios or routines.



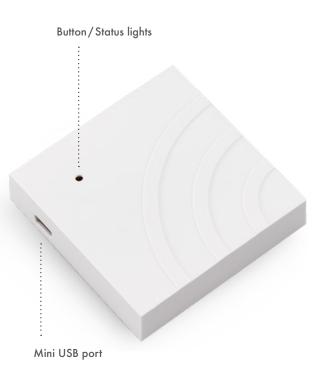
Control via Philips Hue App Control via Bosch App Just like with the LIC LED system, you can control up to four lighting groups (or individual lights as well) via the LIC Home Base Module, making it super easy to set up a whole array of precision-designed individual lighting scenarios (such as "work", "cooking", "eating"). The LIC Home Base Module is connected wirelessly to the "Zigbee Bridge" (Philips Hue) for voice command control. The Zigbee Bridge in turn receives its commands from a Smart Speaker with integrated "Intelligent Personal Assistant" or IPA (such as Amazon Alexa or Google Assistant). Alternatively, you can also control Zigbee Bridge with a smartphone or tablet app.

Preset lighting controls from the LUMICA® LIC converter range can then be retrofitted to be "smart" with minimal effort.

All you need for WiFi control using the Philips Hue app or a Smart Speaker is the **Function Module 2**!

The Philips Hue Bridge and Smart Home Controller are connected to your internet router using a **LAN cable**.

LUMICA[®] LIC Home Base Module





Dimensions (in mm)

64

14.4

64

For training, you will require a 1-channel or 4-channel remote control

- Gateway module with mains adapter 230 Volts
- Control 1 to max. 4 lighting groups
- Compatible with 1-channel or 4-channel colour-changing remote control
- Compatible with smartphone and Smart Speaker
- 5 Volt DC
- Compatible with ZigBee 3.0 Wireless Standard (Philips Hue)
- Wireless connection to ZigBee Bridge

Home Base Module + USB cable and mains adapter Art. No. 7061288



The function of the LUMICA® LIC Home Base Module with Amazon Alexa and Google Assistant, and with Philips **Hue Bridge** has been checked at the time the brochure was written. We have no control over changes or developments to apps since this time. We therefore assume no liability for the correctness and completeness of this information. Other Intelligent Personal Assistants (voice assistants) can also be used. Please refer to the respective manufacturer's user manual



LUMICA® Home Base Module



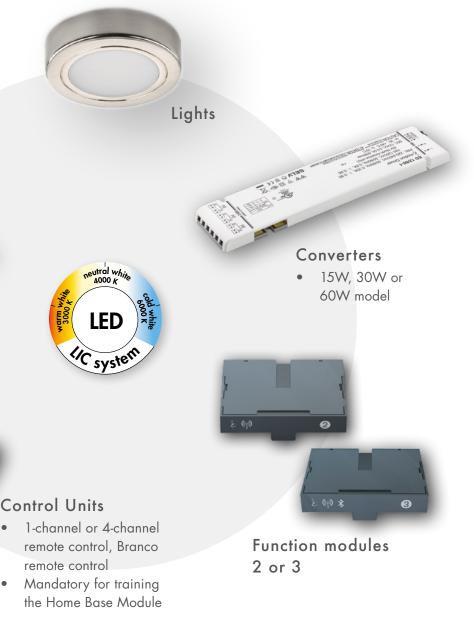
What you will need (not included)



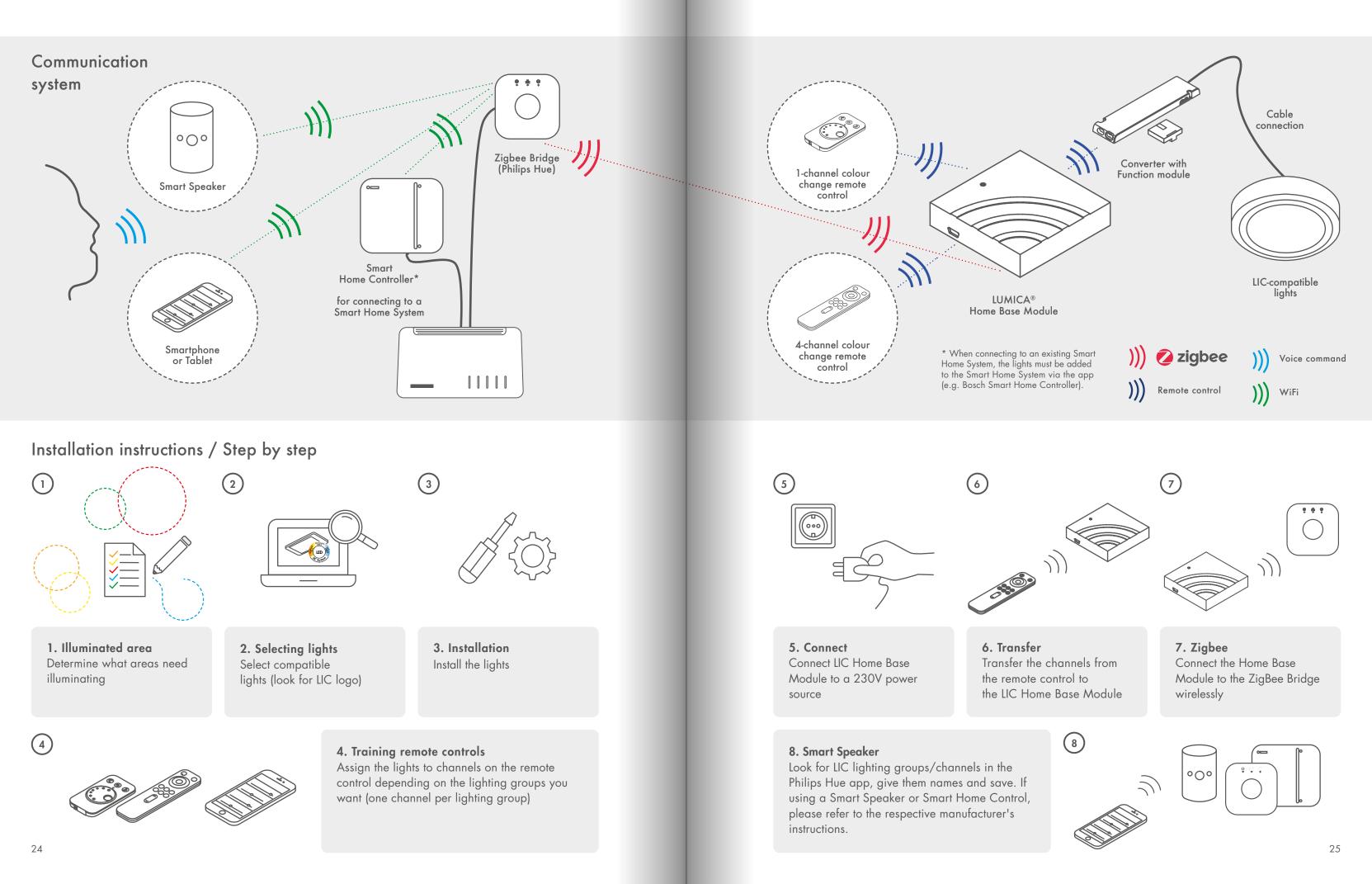


Internet router • Standard retail internet router (e.g. AVM Fritz!Box)

LUMICA[®] Lighting technology







App control

User software for programming and controlling mobile operating systems (smartphones, tablets). → S. 21

B

Bluetooth

Bluetooth is an industry standard for transferring data between devices over short distances using radio waves. It is only ever possible to establish one connection between sender and receiver.

С

Central supply

All converters in an LIC lighting installation with Functional Module 2 or Function Module 3 are connected centrally as a chain of converters with a plug using 230V connector cables. → S. 18

Channel (remote control)

In radio technology, a channel (radio channel) is a frequency or frequency range, on which a radio signal is transmitted. In the LIC system, different lights can be assigned to and controlled by different channels.

→ S. 9

Colour temperature/ change

Within the colour impression of white light, we generally differentiate between warm white, neutral white and cold white. This difference in colour is also known as colour temperature and is given in Kelvin (K). The colour temperature 3000 K means a warm light, whilst 6000 K means a cold colour similar to daylight. LED lights that have been set up accordingly can switch between colour temperatures to allow for different lighting scenarios.

Control units

Control units might be devices such as (radio) remote controls or mobile end devices (smartphones and tablets), or even motion detectors and door contact switches. Specific functions such as lighting control (e.g "on/off", "warm white/cold white", "light/dark") and other Smart Home functions can be easily controlled remotely with these devices. → S. 9

Converter

(LED converter)

LED converters, which convert mains power from 230V to 12V operating voltage, ensure that LED lights and LED strips work smoothly. → S. 8

D

Dimmer function The dimmer function allows you to freely adjust the intensity of a light. With modern LED lights, this is achieved electronically using defined interruptions in the LED's power supply and not by reducing the level of power, as is the case with halogen bulbs.

Function Module

The converters can be fitted with two different function modules: Module 2 (switch and remote control transmitter) or Module 3 (switch, remote control and Bluetooth transmitter). Thanks to wireless communication between the converter, these Modules offer users a number of different control options. The switch signal is sent from the control unit to all wirelessly connected converters. To achieve this, every converter fitted with Function Module 2 or 3 has to be trained to recognise the control unit. This allows you to be as flexible as you want when installing your desired LED lighting system. → S. 8

Remote control (radio technology)

Radio is a term describing the method of transmitting all kinds of signals wirelessly using modulated electromagnetic waves within a radio frequency range (radio waves). G

Gateway

A gateway is a component (hardware and/or software) which establishes a connection between two systems. The term gateway implies that the data transmitted are processed. → S. 21

Н

Home Base Module

The Home Base Module acts as a gateway to connect the remote controlled LIC function converter to the internet via the Zigbee Bridge (Philips Hue) that is controlled with the Zigbee 3.0 wireless standard. → S. 20, 21, 22

Internet router

An internet router is a connectivity device that connects home networks to the internet and also functions as a wireless local area network access point (WLAN). The router is used to access the internet or a private computer network.

IR sensor

An infra-red (IR) sensor is an optoelectrical component that is sensitive to radiation. IR senors are widely used in motion sensors that are used in in-home technology for switching on lights. → S.9

26

LED Light Emitting Diode

The LED (= the light in the light emitting diodes) is a semi-conductor component (e.g. made of silicon) that emits light when an electrical current passes through it in a forward direction. The light from the LED does not contain any IR or UV radiation, requires zero maintenance, and does not cause illuminated objects to heat up.

LED lighting technology

LED lighting technology allows you to generate light in different temperatures and brightness whilst saving energy. LED lighting technology is very safe to use thanks to its low voltage.

→ S. 4

LIC LED Logo

All lights with this symbol can be combined with one another and switched using the LIC LED system converters and control units. And all lights of course also function as individual lights.

Lighting groups

Different lights in an LIC installation can be combined and configured in lighting groups. The converters can only ever control one lighting group together per channel. → S. 16

Lighting strength, lux (lx)

The lighting strength generated by a light source is stated using the lux unit of measurement.

Luminosity and lumen (lm)

The luminosity of an LED depends on how much light is being emitted from the light source in all directions. This is measured in lumen (lm). Modern LED lighting systems provide much more luminosity than older lamps. At the same time, the energy consumption of LEDs, measured in Watts (W), is significantly lower and they last much longer.

Local supply

Every converter in an LIC lighting installation with Function Module 2 or Function Module 3 is connected to the mains locally using its own 230-Volt plug. → S. 18

Μ

Motion detectors

A motion detector is an electronic sensor which can recognise movement in its immediate surroundings and thereby act as an electronic switch.

→ S. 9

S

Smart Home Controller

The Smart Home Controller (e.g. from Bosch[®], Homematic[®] etc.) is the central component of a Smart Home System in a building. It gathers all information locally on one device. When connected to an internet router, it organises communication between the devices in

your home and allows you to net-

work them wirelessly. But it doesn't

just act as a Smart Home hub, it is

also an interface with your Smart

Home app. With this app, various

adjusted, triggered or saved in

a finger.

calls etc.

→ S. 21, 23

→ S. 21, 23

Smart Speaker

functions and devices can be easily

individual programs with the tap of

sic, radio programmes, telephone

V

Voice control

With voice controls, preset programs can be transmitted to smart lighting controls or a Smart Home system and switched on super-fast using voice commands. → S. 21

W

WiFi

The Smart Speaker is a wirelessly WiFi is a portmanteau that was crenetworked input device for conated along the lines of HiFi. It is used trolling Smart Home devices and in the industry to describe products lights conveniently using voice and networks of WLAN devices that commands. At the same time, the have been certified according to integrated loudspeaker can broad-IEEE 802.11. cast all sorts of content, such as mu-

WLAN

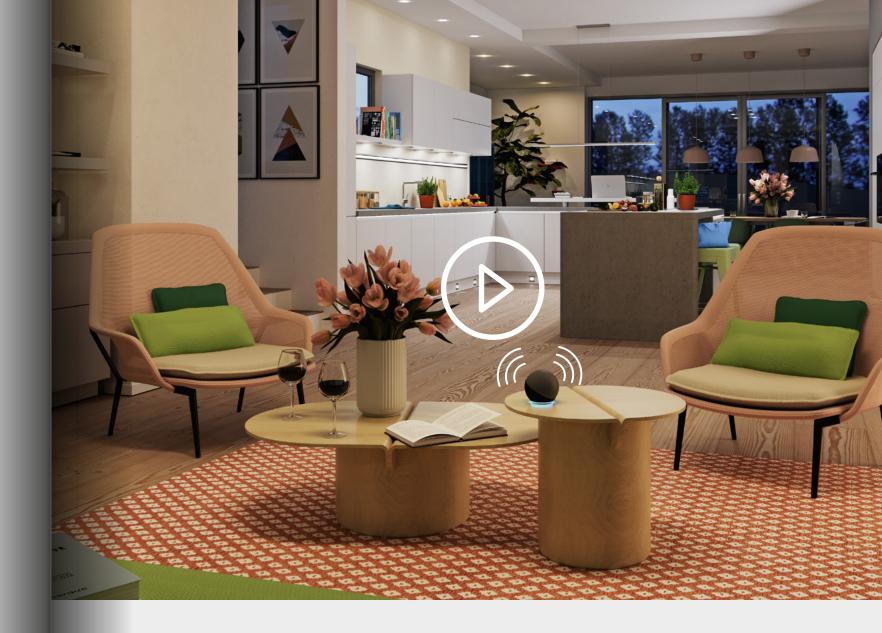
Wireless Local Area Network, or Wireless LAN/WLAN for short, describes a wireless (usually password-protected) local network (radio network) within a home or building.

Ζ

Zigbee wireless standard

The ZigBee wireless standard is a specification for wireless networks with low data volumes, such as lighting technology and in-home automation. ZigBee is a common communication protocol in the world of the IOT ("Internet of Things"). A network (mesh network) is spread across all connected Smart Home devices or Access Points so that they can communicate with one another.

→ S. 23, 24, 25





The video and even more info on our LIC LED lighting technology can be found at: www.naber.com/lic



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03/2021 EN

Naber - The original

Naber is a medium-sized family company headquartered in Nordhorn, Germany. Kitchen professionals will find solutions for virtually every design and every installation at Naber – including for lighting technology. Our own in-house development team regularly produces technological and conceptual trailblazers to make kitchens around the world better, more comfortable and more efficient.