

IN.finite CASAMBI 2Ch CV EVO

Art.-#: 16000267-EVO

LED control gear based on CASAMBI

PRODUCT DESCRIPTION

- Two channel dimmable constant voltage LED control gear
- Dimming range from 0 % to 100 %
- Bluetooth Low Energy (BLE) mesh communication up to 250 nodes
- Compatible with any CASAMBI compliant device
- Usable as stand-alone or build-in unit
- Nominal lifetime up to 60,000 hrs (at Tc= 25 °C)
- 2 years warranty

TECHNICAL DETAILS

- Up to 384 W input (at 48 V_{DC} supply)
- Pulse Width Modulation (PWM) dimming at 1.6 kHz with non visible flicker in accordance to IEEE P1789
- Compact form factor - 21 mm x 30 mm x 220 mm (H x W x L including stand-alone strain relief)
- Push-in terminal block for easy wiring
- 2 separate output channels

PROTOCOL

- BLE based mesh network - CASAMBI



RELATED PRODUCTS

- LED Linear™ light source -
 White / Color: HYDRA PRO, EXL, LUMINARIS ECO, LINUS HD (+),
 VarioLED™ Flex HYDRA, NEXUS, SOL, ECO Color
- IQ-White: VarioLED™ Flex IQ HYDRA, NEXUS, SOL
- For more detailed information on LED flex tape,
 please visit our website.
- Switch: EnOcean, CASAMBI Xpress

BENEFITS



Perfect Dim-to-Warm & Tunable white

Achieve smooth, precise and consistent color mixing as the dimming curve is optimised with LED Linear's flex tapes for dim-to-warm and tunable white.



Non-visible Flicker

Avoid adverse health risks with PWM dimming at very high frequency of 1.6 KHz that has non visible flicker with no observable effect level (NOEL).



Long run length with one control gear

The compact LED control gear has output power up to 192 W @24 V_{in} enabling to connect approx. 18.2 m @24 V_{in} with cove lighting in white or 6.4 m with cove lighting in tunable white 10 W/m.



Easy configuration

Create groups and program scenes with ON/OFF cycles based on calendar/time or sunset/sunrise with ease in the CASAMBI App.

APPLICATION AREAS



Restaurants & Residential

Mimic the dimming behaviour as in old halogen lamps using dim-to-warm, design a pleasant and relaxed atmosphere with VarioLED™ Flex IQ White HYDRA.



Office & Museum

Color of the natural light changes during the course of the day, achieve this behaviour with tunable white, design a space which activates and promotes concentration with VarioLED™ Flex IQ White SOL.



Cove lighting

A type of indirect or accent lighting providing an overall diffusive illumination, realised by mounting the luminaire in wall or ceiling. Easily implement cove lighting in combination with LED Linear's XOOCOVE.



Individualised task lighting

Customization of individual light (warm or cold/bright or dim) according to personal preference and achieve a efficient environment. Task lighting can be realised easily in combination with LED Linear's MARS NANO or LYRA.

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TECHNICAL CHARACTERISTICS

All values listed below are measured at an ambient temperature of 25°C (+/-2°C) and after 30 minutes of operation.

INPUT

Voltage	12 - 50 V _{DC} ($V_{IN} = V_{OUT}$)
Current (max.)	8 A @ 24 V _{DC}
Max. input power	96 - 384 W @ 12 - 48 V _{DC}
Stand-by consumption	288 mW @ 24 V _{DC}

OUTPUT

LED outputs	2
Output voltage	$V_{IN} = V_{OUT}$
Output current	$I_{IN} = I_{OUT}$ (max. 4 A per channel)

DIMMING

PWM frequency	f = 1.6 KHz
Digital dimming protocols	Bluetooth 4.0 low energy, proprietary bluetooth protocol (CASAMBI)
Dimming range	0 % - 100 %
Dimming curves	Linear, logarithmic, dim to warm, tunable white
Dimming resolution	625 steps ~ 9 bit
IN.finite control gear commissioning	Via CASAMBI App (iOS & Android)

LIFETIME

@ T _{c,max} = 70°C	30,000 hrs
@ T _c = 25°C	60,000 hrs

HOUSING

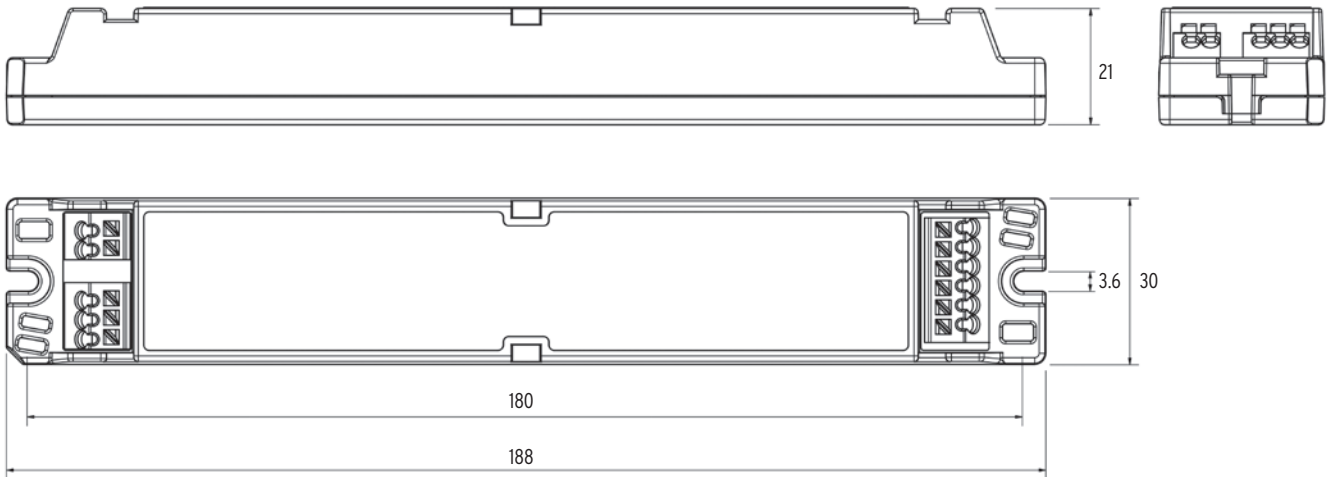
Ingress protection	IP20
Material	PC / ABS V0 125°C (UL listed)
Color	White
Storage conditions	(-40°C to +70°C) / 10 to 95 % humidity (non-condensing)

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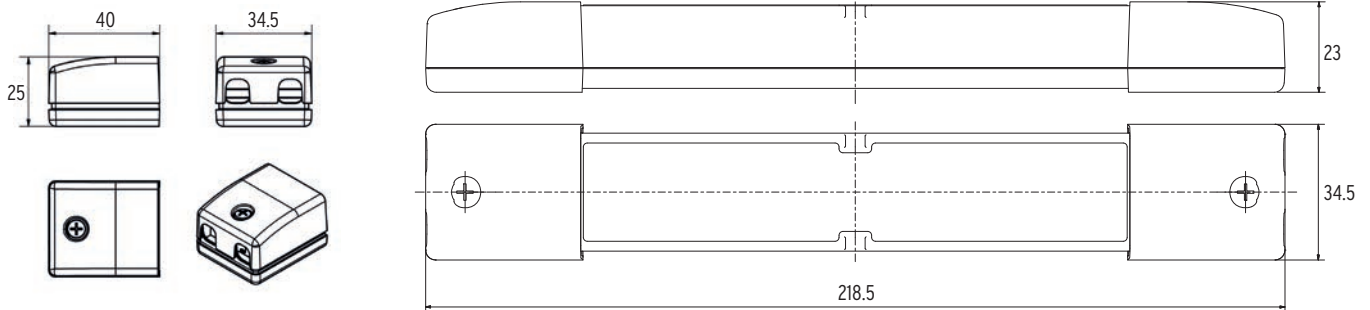
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DIMENSIONS

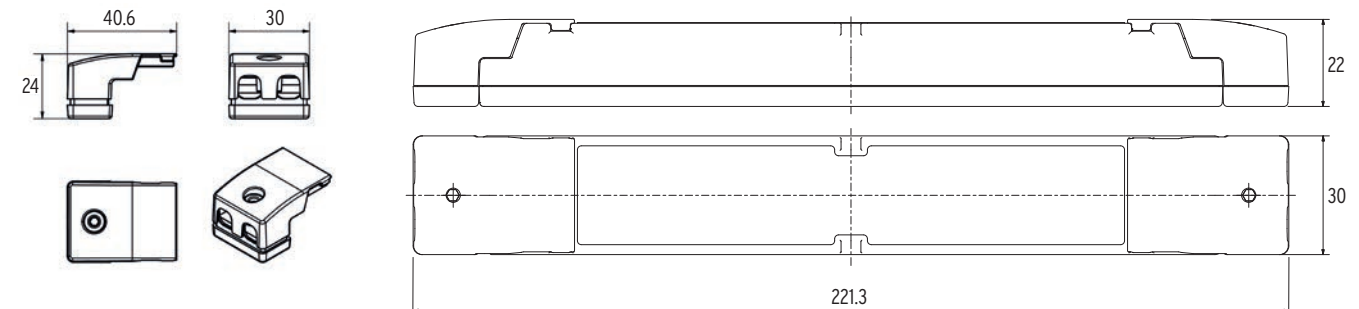


ACCESSORIES - END CAPS FOR STAND-ALONE

VarioPSU Slim Cap Stand-alone (Set of 2)
 Art.-#: 14000068



VarioPSU Slim Cap (Set of 2)
 Art.-#: 16000091



IN.finite dimensions (without end caps)	L x H x W - 188 mm x 21 mm x 30 mm
Weight	66 g
Min. order quantity	10 pcs

IN.finite CASAMBI 2Ch CV EVO

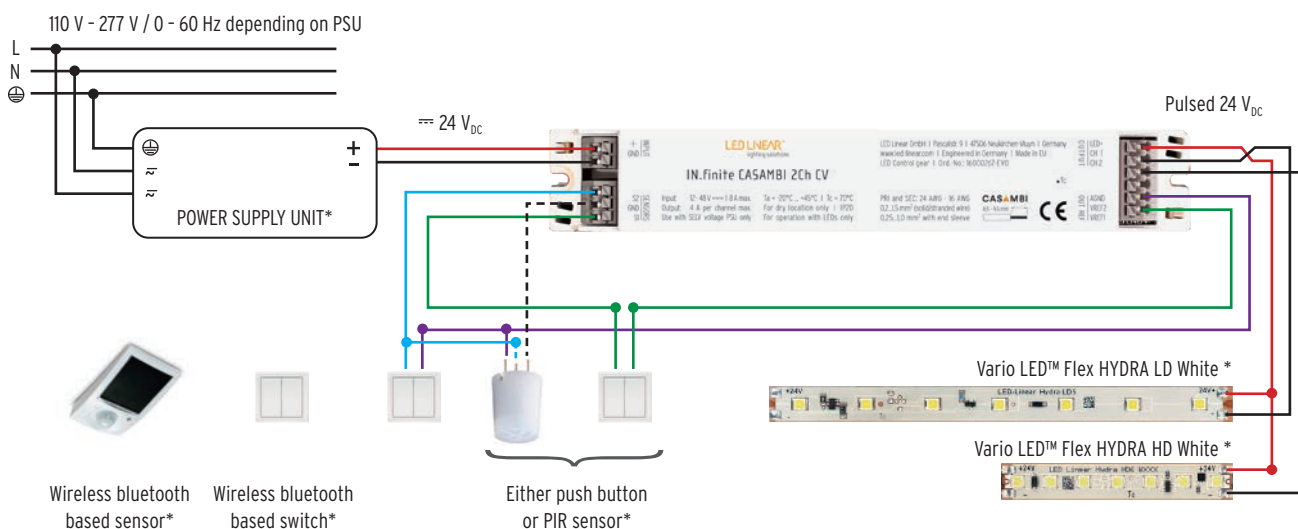
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INPUT

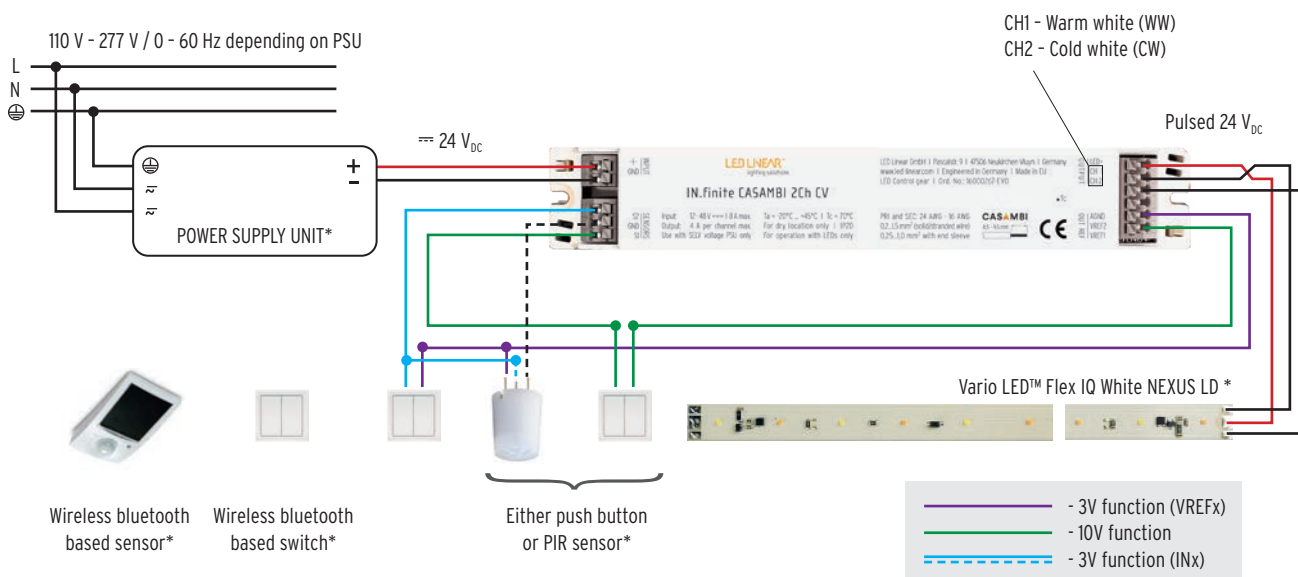
Wire type	0.2 - 1.5 mm ² (solid wire / stranded wire) 0.25 - 1.0 mm ² (with electrical connection terminal)
Wire preparation	8.5 - 9.5 mm wire stripping

TYPICAL WIRING - STATIC WHITE FLEX TAPES



The same wiring applicable to all the LED Linear's static white flex tapes

TYPICAL WIRING - DYNAMIC WHITE FLEX TAPES



The same wiring applicable to all the LED Linear's dynamic white flex tapes

IMPORTANT SAFETY NOTE

Mounting of both protective covers is recommended to ensure strain relief.

* Not included. To be ordered separately.

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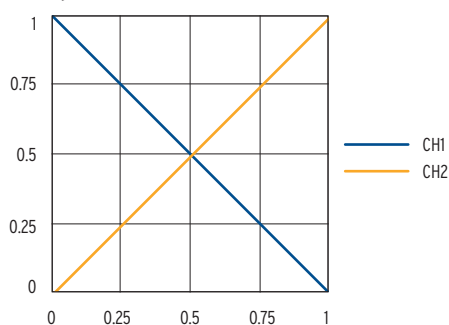
DIMMING PROFILES

IN.finite CASAMBI 2Ch EVO unit can be setup as tunable white, dim to warm or two channels controller during commissioning by simply uploading predefined profiles to match the light source to the desired application.

TUNABLE WHITE

Dimming curves for white tuning from warm white (CH1) to cold white (CH2) with intuitive control interface.

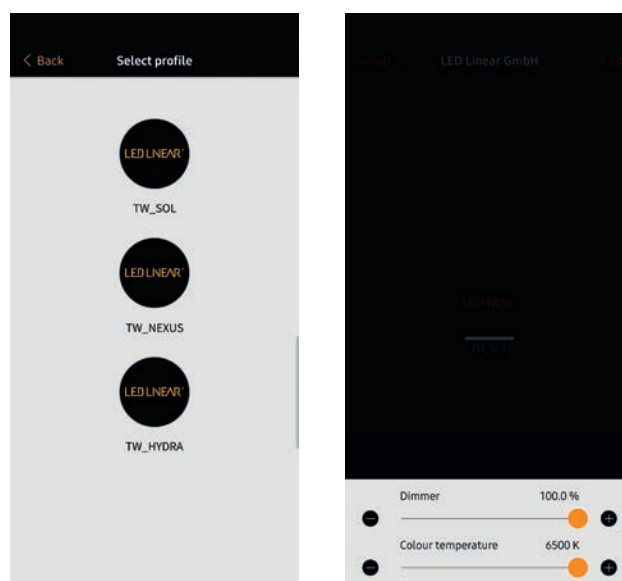
Dimming curves



Profiles in App Interface

TW_SOL	Profile for VarioLED™ Flex IQ White SOL From 2500 K to 6500 K
TW_NEXUS	Profile for VarioLED™ Flex IQ White NEXUS From 2200 K to 5000 K
TW_HYDRA	Profile for VarioLED™ Flex IQ White HYDRA From 2500 K to 4000 K

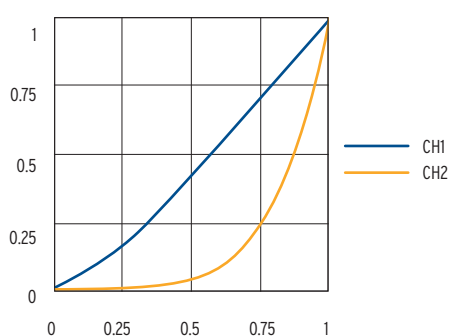
App interface



DIM TO WARM

Optimal dimming curve to follow a dim to warm effect from cold white (CH2) to warm white (CH1).

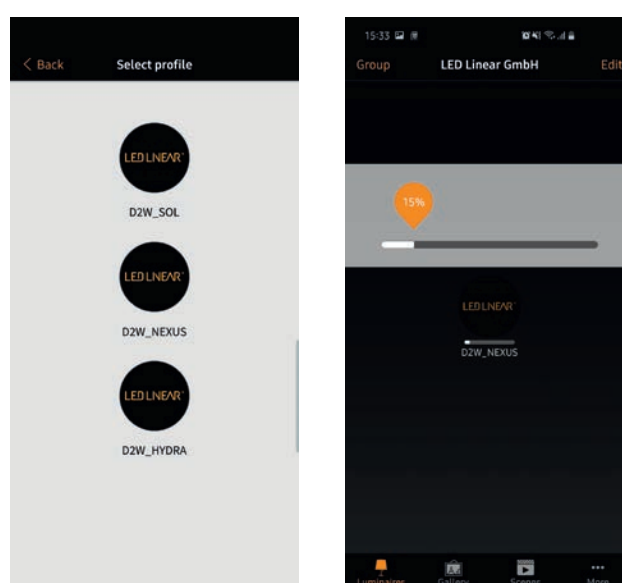
Dimming curves



Profiles in App Interface

D2W_SOL	Profile for VarioLED™ Flex IQ White SOL From 2500 K to 6500 K
D2W_NEXUS	Profile for VarioLED™ Flex IQ White NEXUS From 2200 K to 5000 K
D2W_HYDRA	Profile for VarioLED™ Flex IQ White HYDRA From 2500 K to 4000 K

App interface



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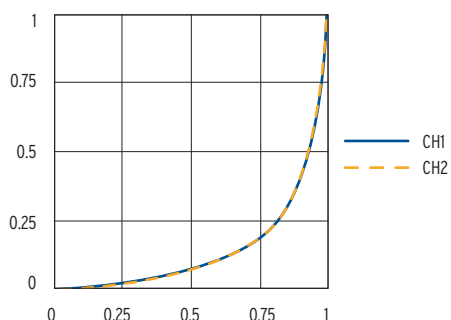
DIMMING PROFILES

IN.finite CASAMBI 2Ch EVO unit can be setup as tunable white, dim to warm or two channels controller during commissioning by simply uploading predefined profiles to match the light source to the desired application.

TWO INDEPENDANT CHANNELS

2CH_LOG - Two channels log curve - perfectly matching IN.finite DALI DT6 & DT8 dimming curve.

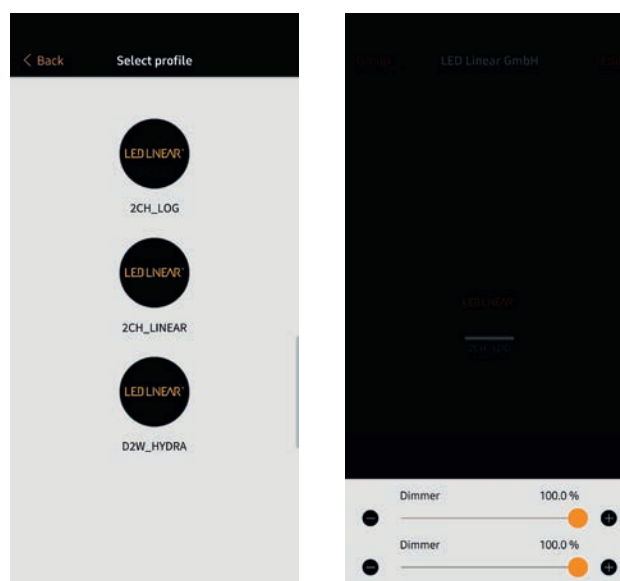
Dimming curves



Profiles in App Interface

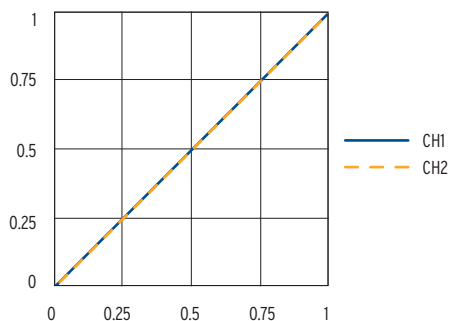
2CH_LOG	Logarithmic profile for all LED Linear™ Flex tapes
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App interface



2CH_LINEAR - Two channels linear curve.

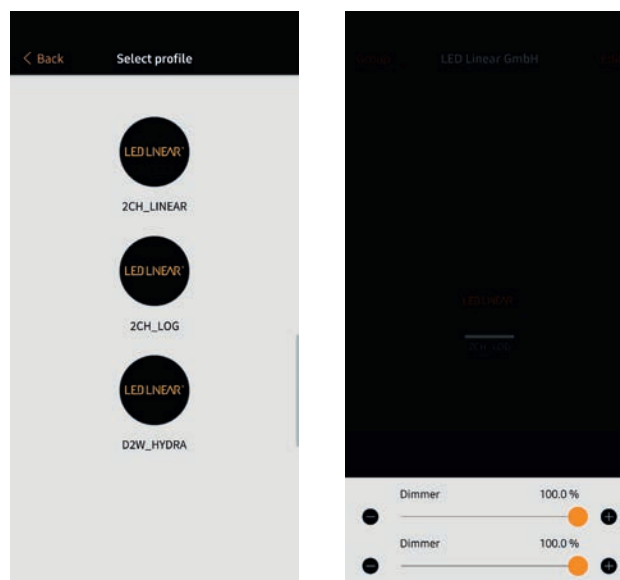
Dimming curves



Profiles in App Interface

2CH_LINEAR	Default linear profile in IN.finite LED control gear for all LED Linear™ Flex tapes
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App interface



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CERTIFICATIONS & STANDARDS

- CE
- EN61347-1 (04/2009)
- EN61347-1 (04/2002)
- EN55015 (11/2009)
- EN61547 (03/2010)
- UL (for built-in). Provided on request.

SAFETY DETAILS

Safety standard	EN 61437-1
Separation (Primary - Secondary)	No
Ambient temperature range (ta)	(-20°C to +45°C)
Relative humidity range	0 - 85 % humidity (non-condensing)
IP protection	IP20

IN.finite CASAMBI INSTALLATION NOTE

Power supply unit for IN.finite LED control gear	IN.finite LED control gear must not be directly connected to mains voltage (220 V). It should be connected using VarioPSU with SELV output without integrated dimmer.
IN.finite CASAMBI range	Maximum distance between two IN.finite CASAMBI LED control gear is up to 20 m indoor and 40 m outdoor in ideally but is highly dependent on installation and building material.
IN.finite CASAMBI signal blocking	IN.finite CASAMBI LED control gear should not be placed inside structures (e. g. metal) which effectively block its radio communication signals.

CASAMBI APP & SUPPORT

IN.finite CASAMBI 2Ch CV EVO must be configured using the CASAMBI App available for Android and Apple devices (free of charge).



Full user manual is available here: <https://casambi.com/downloads.html>

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IN.FINITE CASAMBI CONTROL GEAR IN COMBINATION WITH LED LINEAR'S FLEX TAPES

The IN.finite LED control gear can be used to connect to any of the LED Linear™ Flex tapes

Voltage	24 V _{IN}
Current	4 A per channel
Power	96 W per channel

STATIC WHITE FLEX TAPE

Max. length of tape per IN.finite unit (ideal case)	Power range W/m								
	<=6,5 W/m	6,5 - 10 W/m	10 - 15 W/m	15 - 20 W/m	20 - 25 W/m	25 - 30 W/m	30 - 35 W/m	35 - 40 W/m	40 - 45 W/m
LUMINARIS ECO P12	38 m	21 m	·	12 m	9 m	·	·	·	·
LUMINARIS ECO P23	32 m	21 m	·	12 m	9 m	·	·	·	·
LINUS HD	38 m	·	16 m	11 m	·	7 m	·	·	4 m
LINUS HD+	·	·	19 m	11 m	·	7 m	·	·	4 m
VarioLED™ Flex HYDRA LD	38 m	·	19 m	12 m	·	7 m	·	·	4 m
VarioLED™ Flex HYDRA HD	32 m	·	19 m	12 m	·	7 m	·	5 m	·
VarioLED™ Flex NEXUS LD	38 m	·	19 m	12 m	·	7 m	·	·	4 m
VarioLED™ Flex NEXUS HD	32 m	·	19 m	12 m	·	7 m	·	·	4 m
VarioLED™ Flex NEXUS UHD	·	·	·	12 m	·	7 m	·	·	·
HYDRA ECO	·	27 m	14 m	10 m	8 m	·	·	·	·
HYDRA PRO	48 m	27 m	14 m	10 m	8 m	·	·	5 m	·
HYDRA EXL	48 m	32 m	17 m	12 m	9 m	·	6 m	·	·
VarioLED™ Flex SOL LD	·	·	·	12 m	·	7 m	·	·	·
VarioLED™ Flex SOL HD	·	·	·	12 m	·	7 m	·	5 m	·
VarioLED™ Flex ECO Color P12	·	·	19 m	·	·	·	·	·	·

DYNAMIC WHITE FLEX TAPE

Max. length of tape per IN.finite unit (ideal case)	Power range W/m								
	<=6,5 W/m	6,5 - 10 W/m	10 - 15 W/m	15 - 20 W/m	20 - 25 W/m	25 - 30 W/m	30 - 35 W/m	35 - 40 W/m	40 - 45 W/m
VarioLED™ Flex IQ White HYDRA LD	·	·	·	·	·	7 m	·	·	·
VarioLED™ Flex IQ White HYDRA HD	·	·	16 m	·	8 m	·	·	·	·
VarioLED™ Flex IQ White NEXUS LD	·	·	·	·	·	·	·	·	4 m
VarioLED™ Flex IQ White NEXUS HD	·	·	16 m	·	8 m	·	·	·	4 m
VarioLED™ Flex IQ White SOL LD	·	·	·	·	9 m	·	·	·	·

For more information on our flex tapes and application areas, please visit our official website www.led-linear.com



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