

TALEX LED

Signage Solutions



Letter standard



Letter mini



Lightbox standard



Lightbox slim



Light contour

Perfect homogeneity, fewer modules – beam characteristic 155°

The next generation of P541, P551 and P561 modules, each equipped with three light points with individual lenses, provide extremely uniform illumination for signage applications. Thanks to the higher luminous flux and increased efficiency, fewer modules and fewer LED Drivers are needed for the same brightness. Installation costs are correspondingly low, which means that overall costs are much lower. Another benefit is that the small P541 and P551 modules with 155° wide-angle light points produce their optimum effect at a mounting depth of only 4 cm.

- ___ [Perfectly uniform illumination](#)
- ___ [Small mounting depth](#)
- ___ [Low material and assembly costs](#)

Small robust modules – IP68

IP 68 design and high-quality materials reliably protect the electronic components and in particular the phosphor of the light emitting diodes against environmental factors. Thanks to their reduced width the modules can be installed even in small applications.

- ___ [High-quality materials](#)
- ___ [Small modules](#)

Maximum flexibility

Optimum illumination and no annoying cables: TALEXchain EXCITE chains are available with two module spacings to keep installation costs as low as possible for all applications. Because the P541 and P551 modules are the same size it is possible to adapt the brightness of the sign to meet specific customer requirements by simply switching between the P541 and P551 modules without changing the layout and mounting arrangement.

- ___ [Low installation costs](#)
- ___ [Different brightness levels from the same mounting arrangement](#)



TALEXchain P551 / P541

Narrow white light tolerance – MacAdam 5

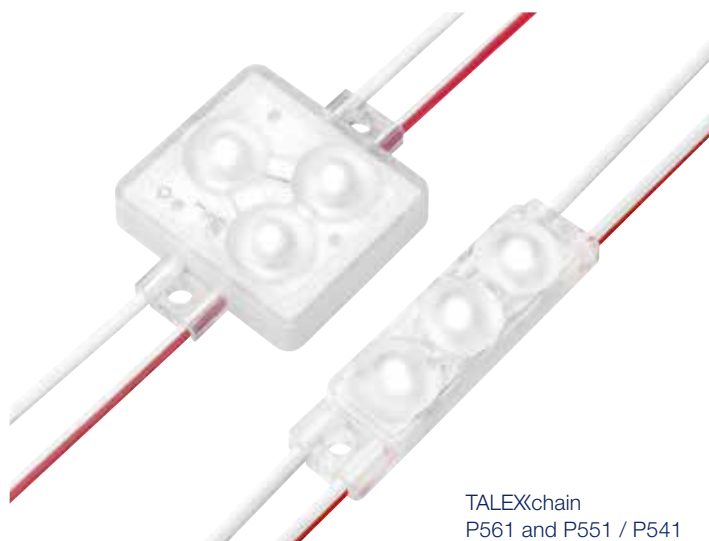
The human eye can detect the smallest differences in light colours. To ensure that the individual letters and signs are perfectly uniform the LED modules and LED chains must exhibit a very narrow white light tolerance. Tridonic is one of only a few manufacturers who can guarantee a MacAdam 5 white light tolerance for its TALEXchain EXCITE products and is constantly striving to improve the quality of white light still further. The new generation of TALEXchain EXCITE units has an improved colour mix for the individual light points, resulting in a light colour that is even more brilliant and uniform – even at low mounting depths.

- ___ [Brilliant uniform light colour](#)
- ___ [Perfect signage effect](#)
- ___ [No colour difference after replacement](#)

5-year guarantee

With a 5-year guarantee on TALEXchain EXCITE products, AgiLight is guaranteeing a lifetime of up to 50,000 hours – even at high ambient temperatures of up to 60°C. Thanks to AgiLight's robust TALEXchain EXCITE modules, equipment failure, high replacement costs and loss of light output can be avoided.

- ___ [High reliability](#)
- ___ [No consequential costs, no loss of advertising impact](#)



TALEXchain
P561 and P551 / P541

▼ At a glance

- Beam characteristic 155°:
uniform light distribution with fewer modules
- MacAdam 5: narrow white light tolerance
- Small robust modules with IP68 protection
- Maximum flexibility
- 5-year guarantee
- Matching LED Driver in IP20 and IP67 designs for 10W to 150W
- Dimmable with TALEXcontrol LNU PWM dimmers

Technical property	P561	P551	P541 ... X	P541
Luminous flux ¹⁾	154lm	60lm	45lm	31lm
Luminous efficacy	104lm/W	86lm/W	88lm/W	92lm/W
Power per module	1.48W	0.70W	0.50W	0.34W
Beam characteristic	155°	155°	155°	155°
Light colour ²⁾	CW (7,500K) DL (6,500K) NW (4,000K) WW (3,000K)	CW (7,500K) DL (6,500K) NW (4,000K) WW (3,000K)	CW (7,500K) DL (6,500K)	CW (7,500K) DL (6,500K) R (620–630nm) G (520–537nm) B (465–470nm) O (600–609nm) A (583–592nm)
White light tolerance	MacAdam 5	MacAdam 5	MacAdam 5	MacAdam 5
Type of protection	IP68	IP68	IP68	IP68
Number of modules per chain	50pcs	100pcs	100pcs	100pcs
Distance between modules	250mm / 300mm	150mm / 200mm	150mm / 200mm	100mm / 150mm
Ambient temperature t_a	-40 ... +60°C	-40 ... +60°C	-40 ... +60°C	-40 ... +60°C
Storage temperature t_s	-40 ... +85°C	-40 ... +85°C	-40 ... +85°C	-40 ... +85°C
Guarantee	5 years	5 years	5 years	5 years
Expected life time at t_a 60°C	50,000h	50,000h	50,000h	50,000h
Marks of conformity	CE	CE, ENEC, cRUus, cCSAus	CE, ENEC, cRUus, cCSAus	CE, ENEC, cRUus, cCSAus
Tape	3M VHB 5925	3M VHB 5925	3M VHB 5925	3M VHB 5925
Can depth	> 12 cm	> 4 cm	> 4 cm	> 4 cm

¹⁾ Luminous flux for light colour DL (6,500 K)

²⁾ Colour temperature for information only. Detailed information see data sheet.

TALEXchain P541, P551 & P561

TALEXchain P561	Art. No. Distribution Center Europe	Art. No. Distribution Center Asia-Pacific	Luminous flux per module	Light colour	Colour temperature ¹⁾	Spacing between modules
P561 G1 CW 154lm 250mm 50 68 EXC	tbd	n/a	154lm	Crystal white (CL)	7,500K	250mm
P561 G1 DL 154lm 250mm 50 68 EXC	28000958	n/a	154lm	Daylight white (DL)	6,500K	250mm
P561 G1 DL 154lm 300mm 50 68 EXC	28000959	n/a	154lm	Daylight white (DL)	6,500K	300mm
P561 G1 NW 142lm 300mm 50 68 EXC	28000960	n/a	142lm	Neutral white (NW)	4,000K	300mm
P561 G1 WW 130lm 300mm 50 68 EXC	28000957	n/a	130lm	Warm white (WW)	4,000K	300mm

¹⁾ Colour temperature for information only. Detailed information see data sheet.

TALEXchain P551	Art. No. Distribution Center Europe	Art. No. Distribution Center Asia-Pacific	Luminous flux per module	Light colour	Colour temperature ¹⁾	Spacing between modules
LED P551E-S CW 12 200 100 68 B G1	28000717	n/a	60lm	Crystal white (CL)	7,500K	200mm
LED P551E-S DL 12 150 100 68 B G1	28000365	87500297	60lm	Daylight white (DL)	6,500K	150mm
LED P551E-S DL 12 200 100 68 B G1	28000366	87500298	60lm	Daylight white (DL)	6,500K	200mm
LED P551E-S NW 12 200 100 68 B G1	28000432	n/a	66lm	Neutral white (NW)	4,000K	200mm
LED P551E-S WW 12 200 100 68 B G1	28000433	n/a	66lm	Warm white (WW)	3,000K	200mm

¹⁾ Colour temperature for information only. Detailed information see data sheet.

TALEXchain P541	Art. No. Distribution Center Europe	Art. No. Distribution Center Asia-Pacific	Luminous flux per module	Light colour	Colour temperature ¹⁾	Spacing between modules
LED P541E-C CW 12 150 100 68 B G1	28000715	n/a	31lm	Crystal white (CL)	7,500K	150mm
LED P541E-C CW 12 150 100 68 B G1 X	28000176	n/a	45lm	Crystal white (CL)	7,500K	200mm
LED P541E-C DL 12 100 100 68 B G1	28000361	87500293	31lm	Daylight white (DL)	6,500K	100mm
LED P541E-C DL 12 150 100 68 B G1	28000362	87500294	31lm	Daylight white (DL)	6,500K	150mm
LED P541E-C DL 12 150 100 68 B G1 X	28000363	87500295	45lm	Daylight white (DL)	6,500K	150mm
LED P541E-C DL 12 200 100 68 B G1 X	28000364	87500296	45lm	Daylight white (DL)	6,500K	200mm
LED P541E-C R 12 150 100 68 B G1	28000468	87500359	12lm	Red (R)	620–630nm	150mm
LED P541E-C G 12 150 100 68 B G1	28000471	n/a	35lm	Green (G)	520–537nm	150mm
LED P541E-C B 12 150 100 68 B G1	28000472	n/a	11lm	Blue (B)	465–470nm	150mm
LED P541E-C O 12 150 100 68 B G1	28000469	n/a	16lm	Orange (O)	600–609nm	150mm
LED P541E-C A 12 150 100 68 B G1	28000470	n/a	12lm	Amber (A)	583–592nm	150mm

¹⁾ Colour temperature for information only. Detailed information see data sheet.

Perfect backlighting for small mounting depths

The trend in luminaires, light boxes and even illuminated room dividers is for slimmer and slimmer designs. The smaller the mounting depth, the greater the demands on the light source to achieve homogeneous illumination.

TALEXpanel P581 has been developed for such applications. For mounting depths starting at 30 mm TALEXpanel P581 provides absolutely uniform backlighting.

___ [Perfect backlighting of slim systems with complex shapes](#)

Maximum freedom of design

The advent of LED light sources for illumination tasks has led to a huge rise in expectations regarding freedom of design.

TALEXpanel P581 has been developed with a view to meeting individual requirements in terms of freedom of design. Based on DIN formats, TALEXpanel P581 covers all possible shapes. TALEXpanel P581 always provides optimum illumination even for luminaires not compliant with DIN standards. This is thanks to its unique design. TALEXpanel P581 can be separated between any modules. If this is not sufficient it is also possible to remove the side components of the module.

___ [Great freedom of desing](#)

5-year guarantee

AgiLight provides a 5-year guarantee for TALEXpanel P581. Even at a high ambient temperature of 60°C the expected life is at least 50,000 hours. This avoids high replacement costs.

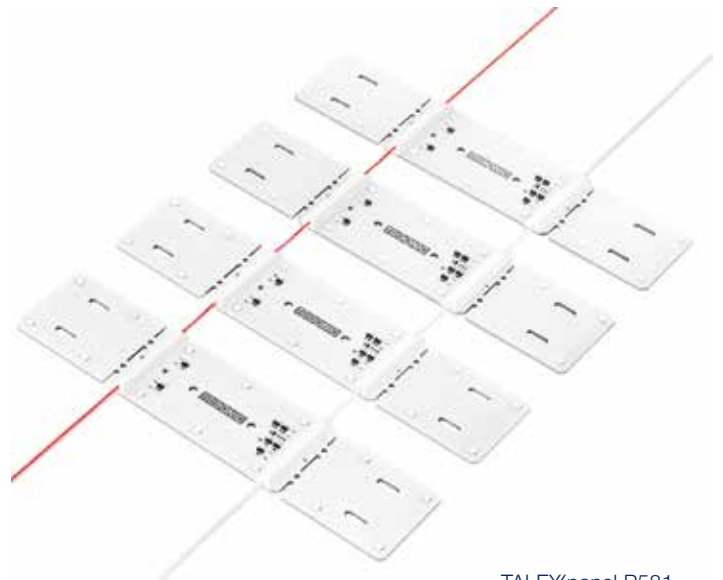
___ [Reliability/total operating costs](#)

Quick and easy installation

Providing large-area backlighting for systems with small mounting depths (≥ 30 mm) is an extremely time-consuming task.

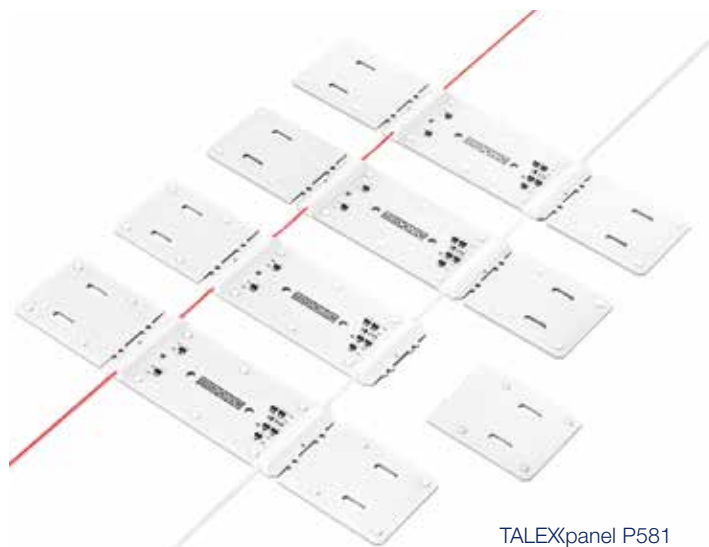
All this is a thing of the past thanks to TALEXpanel P581. Its flexible chain design means that installation is quicker and easier than ever before. Installation time is reduced to a minimum without compromising on freedom of design.

___ [Installation time minimized](#)



TALEXpanel P581

TALEXpanel P581



TALEXpanel P581

▼ At a glance

- __ Optimum backlighting for small mounting depths irrespective of the front material (fabric, PMMA, etc.)
- __ Quick, easy and reliable installation (24V DC)
- __ Great freedom of design
- __ 5-year guarantee/50,000 hours of operation

Technical property	TALEXpanel P581
Luminous efficacy	100lm
Luminous efficacy	106lm/W
Power per module	0.94 W
Beam characteristic	120°
Light colour ²⁾	DL (6,500 K) LW (5,000 K) NW (4,000 K) WW (3,000 K)
White light tolerance	MacAdam 4
Number of modules per chain	25 pieces
Distance between modules	60mm
Ambient temperature t_a	-40 ... +60°C
Storage temperature t_s	-40 ... +60°C
Guarantee	5 years
Expected life time at t_a 60°C	≥ 50,000h
Approval marks	CE, ENEC, UL, CSA
Optimum mounting depth	≥ 30mm

¹⁾ Luminous flux for light colour LW (5,000 K)

²⁾ Light colours only for information purposes. For detailed information see the relevant data sheet.

TALEXpanel	Art. No.	Luminous flux per module	Light colour	Colour temperature ¹⁾	Spacing between modules
P581 G1 WW 100lm 60mm 25 00 D EXC	TBD	100lm	Warm white (WW)	3,000K	60mm
P581 G1 NW 100lm 60mm 25 00 D EXC	TBD	100lm	Neutral white (NW)	4,000K	60mm
P581 G1 LW 100lm 60mm 25 00 D EXC	28000615	100lm	Lightwhite (LW)	5,000K	60mm
P581 G1 DL100lm 60mm 25 00 D EXC	28000614	100lm	Daylight white (DL)	6,500K	60mm

¹⁾ Colour temperature for information only. Detailed information see data sheet.

Small dimensions

LED light sources come in an extremely wide range of shapes and sizes, providing a high degree of flexibility in both luminaire design and illuminated signage.

To take account of this flexibility in terms also of the LED Driver, designers focused on achieving small dimensions when developing the new constant-current LED Driver in the LCU EXC product series, without compromising on the traditional robustness and durability. The LED Driver in the LCU EXC series are setting new standards in compactness

[__ Great freedom of design and flexibility](#)



Complies with the European EMC standard for lighting

Electrical equipment such as luminaires and advertising panels must not produce interference that impairs the operation of other devices, and must function properly in a defined electromagnetic environment. Luminaires or advertising panels must therefore comply with the statutory EMC regulations in Europe, Australia and China.

The LCU LED Driver from Tridonic meet the requirements of the relevant EMC regulations, particularly EN 61000-3-2 Class C for luminaires, across the entire output load range. This means that the LED Driver meet the EMC requirements in every case, irrespective of how many LEDs are connected to the LED Driver and irrespective of the dimming value of the LEDs.

[__ Legal requirements in Europe, Australia and China](#)

5-year guarantee

Tridonic offers a 5-year guarantee for LCU LED Driver. Even at an increased ambient temperature of up to 50°C for outdoor types and up to 45°C for indoor types, LCU LED Driver have an expected lifetime of at least 50,000 hours. Please note that ambient temperature has a significant impact on the expected life-time of a LED Driver. For detailed information on life-time and ambient temperature please check the correspondent datasheet.

[__ Aspect of reliability or total operating costs](#)



TALEXdriver LCU
indoor IP20

High efficiency

To make luminaires and signage systems as efficient as possible, not only the LED light sources have to be efficient but also the LED Driver. With an efficiency of up to 92% for the LCU EXC product series, these LED Driver provide the basis for optimum system efficiency.

[__ Energy savings](#)

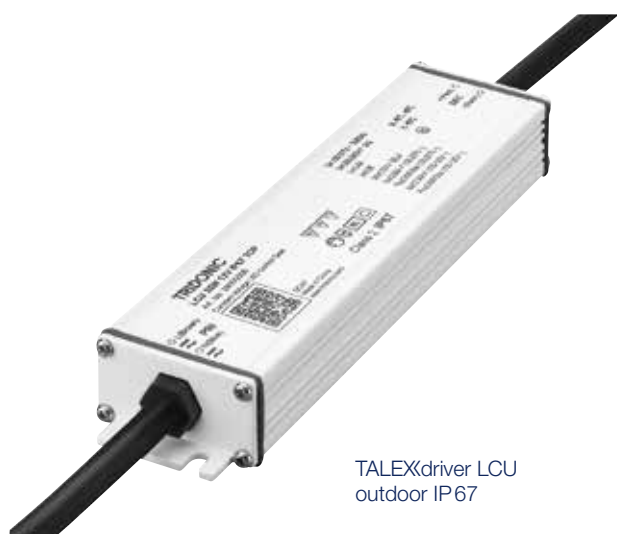
Wide input voltage range of 90 to 305 VAC

Temperature range -40 to +70°C

Thanks to an input voltage range of 90 to 305 VAC, they you can use the LED Driver in the LCU EXC series anywhere in the world. Even in very cold or very hot regions you will always have the right LED Driver if you choose an LCU EXC in type of protection IP67 which can be operated in ambient temperatures between -40 and +70°C.

[__ Universal use](#)

TALEXdriver LCU



TALEXdriver LCU
outdoor IP67

▼ At a glance:

- Small, robust design
- 5-year guarantee / 50,000 hours of operation
- Wide LED Driver range:
IP20 / IP67; 12 V DC / 24 V DC; 15 W–180 W
- Wide input range:
90 to 305 V AC 0/50/60 Hz
- Temperature range:
IP67: –40 to +70°C
IP20: –25 to +70°C

Technical property	TALEXdriver LCU outdoor					TALEXdriver LCU indoor					
IP Protection	IP67					IP20					
Available output voltage	12 V DC or 24 V DC										
Guarantee	5 years										
Lifetime	50,000 at t_a 50°C					50,000 at t_a 45°C			50,000 at t_a 40°C		
Rated input voltage ¹⁾	90–305 V AC 0/50/60 Hz										
Output power at 12 V DC	15 W	35 W	60 W	100 W	180 W	35 W	60 W	100 W	–	150 W	
Output power at 24 V DC			60 W	96 W	180 W	35 W	60 W	96 W	180 W	–	
Output tolerance	12 V types: –0% / +10% 24 V types: –0% / +5%										
Design	Height in mm	21	21	21	23 (12V) 21 (24V)	29	21	21	23 (12V) 21 (24V)	29 (24V)	40,5 (12V)
	Width in mm	40	40	40	40	60	40	40	44 (12V) 40 (24V)	60 (24V)	63 (12V)
	Length in mm	130	170	240	270	245	220	250	300	280 (24V)	270 (12V)
Temperature range ¹⁾	–40 ... +70°C					–25 ... +70°C			–25 ... +50°C		
Storage temperature	–40 ... +85°C										
Connection cable length in mm	300	300	500	500	500	–					
SELV	yes										
EMC compliant	yes / EN 61000-3-2 CLASS C full load range										
Emergency compliant EN 50172 / DC input	yes										
Protection CLASS	Class II ☉					Class II ☐					
Short circuit / overload / overtemp. protection	yes										
NEC Class 2	yes	yes	yes	yes ²⁾	no	yes	yes	yes ²⁾	no	no	
Certificates	CCC ³⁾ , CE, CSA, EL, ENEC, RCM, UL								CE, CSA, ENEC, RCM, UL		
Housing material	metal					plastic					

¹⁾ Detailed information and data you can find the correspondent datasheet on www.tridonic.com

²⁾ 24 V DC types only

³⁾ IP20 types only

12V DC

Type (Protection class IP67)	Order No.	U _{out}	P _{out}
LCU 180W 12V IP67 EXC	28000511	12VDC	18–180W
LCU 100W 12V IP67 EXC	28000510	12VDC	10–100W
LCU 60W 12V IP67 EXC	28000509	12VDC	6–60W
LCU 35W 12V IP67 EXC	28000508	12VDC	4–35W
LCU 15W 12V IP67 EXC	28000507	12VDC	2–15W

Type (Protection class IP20)	Order No.	U _{out}	P _{out}
LCU 150/12 E020	24166332	12VDC	20–150W
LCU 100W 12V SR EXC	28000408	12VDC	10–100W
LCU 60W 12V SR EXC	28000407	12VDC	6–60W
LCU 35W 12V SR EXC	28000406	12VDC	4–35W

24V DC

Type (Protection class IP67)	Order No.	U _{out}	P _{out}
LCU 180W 24V IP67 EXC	28000514	24VDC	18–180W
LCU 100W 24V IP67 EXC	28000513	24VDC	10–100W
LCU 60W 24V IP67 EXC	28000512	24VDC	6–60W

Type (Protection class IP20)	Order No.	U _{out}	P _{out}
LCU 180W 24V SR EXC	28000414	24VDC	18–180W
LCU 96W 24V SR EXC	28000413	24VDC	10–96W
LCU 60W 24V SR EXC	28000412	24VDC	6–60W
LCU 35W 24V SR EXC	28000411	24VDC	4–35W

Perfect visibility – twilightCONTROL

In twilightCONTROL mode, the lighting level of the signage installation automatically adjusts to ambient brightness thanks to the built-in light sensor. This ensures perfect illumination and energy savings.

In this mode of operation, the system is completely switched off during the day. In the evening, the signage switches on automatically, up to the maximum settable level. The high lighting level at dusk ensures perfect visibility, significantly enhancing the advertising effect. As it grows darker, brightness is reduced to the lowest settable level, thereby substantially improving signage legibility during the night. At day-break, the lighting is again adjusted to its maximum level, in order to optimise visibility. As soon as there is sufficient ambient brightness the sign is switched off.

- ___ Perfect visibility even on overcast days
- ___ Potential energy savings of up to 40 %
- ___ Reduction of light pollution in accordance with national directives and laws
- ___ Switches on and off depending on ambient brightness – no clock required
- ___ Increased LED service life

Quick and easy installation – no external light sensor – no programming

The TALEXcontrol LNU PWM dimmer with a built-in light sensor is installed in the signage installation so as to be invisible for the observer. The dimmer is simply connected between the LED Driver and the LEDs and does not need any programming.

- ___ No installation effort required for light sensor
- ___ Easy retrofitting of existing installations

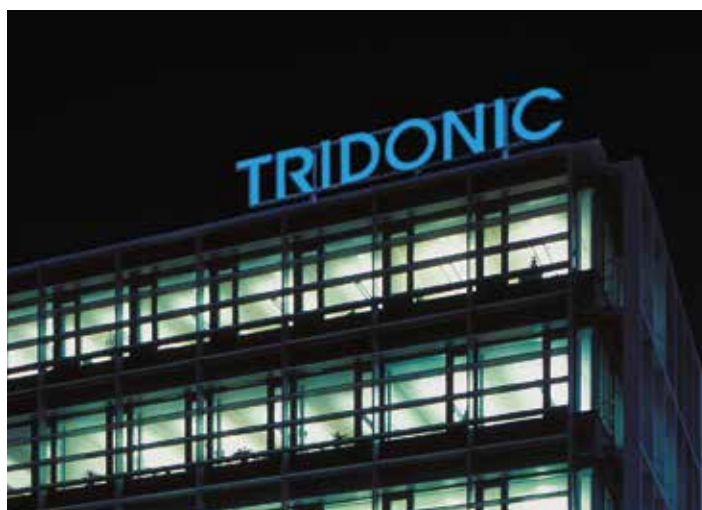
Easy dimming via touch switch – switchDIM

In another mode of operation, the so-called switchDIM mode, the lighting level of the LEDs and/or the signage installation can be changed by means of a connected touch switch.

- ___ Lighting level of signage installation adjusted to meet national laws and directives
- ___ Simple system for dimming LEDs for general-lighting applications such as cove lighting, shelf lighting, etc.



Without twilightCONTROL



With twilightCONTROL



▼ At a glance:

- ___ Perfect visibility – twilightCONTROL
- ___ Energy savings of up to 40 %
- ___ Reduction of light pollution – (“Dark Sky certified friendly devices”)
- ___ Quick and easy installation – no external light sensor – no programming
- ___ Rugged design – IP 67
- ___ Easy dimming via touch switch – switchDIM
- ___ Can be upgraded using LNU S extension units for installations with LED output in excess of 7,000 W
- ___ Built-in temperature monitoring function
- ___ Increased LED service life
- ___ Customised settings possible via LNU I service unit
- ___ 5-year guarantee

Technical features	LNU M	LNU S	LNU I
Input voltage	12 / 24 VDC		USB – 5 V
Max. input current	15 A		USB – 50 mA
No. of output channels	3 × PWM		Not applicable
DC voltage range output	12 / 24 VDC		Not applicable
Output current	max. 5 A / channel		Not applicable
PWM frequency	495 Hz		Not applicable
Voltage drop	150 mV max.		Not applicable
Ambient temperature t_a	–40 ... +60°C		0 ... +50°C
Storage temperature	–40 ... +85°C		–30 ... +85°C
Housing temperature t_c	max. 85°C		max. 60°C
Dimensions L × W × H	139 × 40 × 18.5 mm		48.5 × 53 × 13 mm
Protection rating	IP 67		IP 20
Input voltage range switchDIM	100–277 VAC 50/60Hz	Not applicable	Not applicable
Dimming range twilightCONTROL	0–98 % ²⁾	0–98 % ^{1)/2)}	Not applicable
Dimming range switchDIM	0 % / 0.1–100 %	0 % / 0.1–100 %	Not applicable
Marks of conformity	CE, ENEC, cRUus, IDA	CE, ENEC, cRUus	CE
Max. no. of LNU S per LNU M	Not applicable	19	Not applicable
Service life t_a +55°C	50,000 h	50,000 h	50,000 h

¹⁾The extension units are controlled by the master unit via the synchronisation cable.

²⁾Maximum level depends on the LEDs used and the mounting situation.

TALEXcontrol LNU PWM dimmer	Art. No.	Description
LNU M 12–24 V IP 67 G1	28000018	Master unit
LNU S 12–24 V IP 67 G1	28000050	Extension unit
LNU I IP 20 G1	28000163	Service unit for programming LNU M and LNU S

