

IP68 

TALEXchain CRYSTAL PREMIUM TALEXchain CRYSTAL

Product description

- LED chain for highlighting lines and edges and for backlighting complex contours, letters, symbols and light boxes in signage applications
- Optimised for use in light boxes and sail installation backlighting
- High luminous efficacy
- Beam characteristic: 155°
- LED module with plastic casing and strain relief with IP68 protection
- High-power LED in chip-on-board technology (COB)
- Integrated current source to stabilise luminous flux
- Flexible chain, can be split between any module
- Attached with M3 screw or premounted double-sided adhesive tape
- Connection: Cable 180 mm, both sides

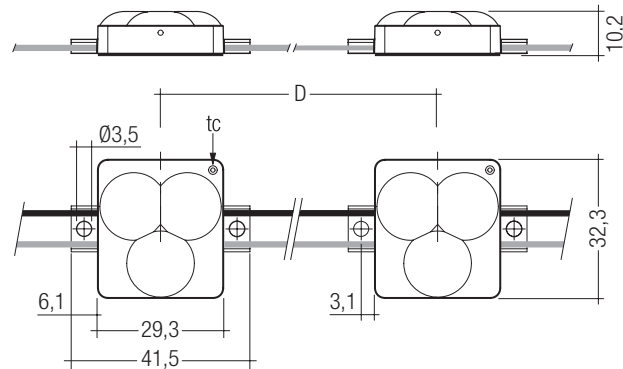
Technical data

Ambient temperature t_a	-30 ... +55 °C
Max. surface temperature on module t_c ^①	65 °C
Type of protection ^④	IP68



Standards, page 3

Colour temperatures and tolerances, page 5



Ordering data

Colour	Wavelength range	Colour temperature	Packing code	Type	Article number
3 light points per module					
Crystal white	–	7,500 K	1	LED P560-PRE CW 12V 200 10 68 0000	22176627
Crystal white	–	7,500 K	2	LED P560-PRE CW 12V 200 48 68 0000	22176630
Crystal white	–	7,500 K	2	LED P560-PRE CW 12V 150 48 68 0000	22176629
Daylight white	–	6,500 K	1	LED P560-PRE DL 12V 200 10 68 0000	22176628
Daylight white	–	6,500 K	2	LED P560-PRE DL 12V 200 48 68 0000	22176657
Daylight white	–	6,500 K	2	LED P560-PRE DL 12V 150 48 68 0000	22176631

Packaging code 1: 1 piece/bag, 100 pieces/carton, 600 pieces/pallet

Packaging code 2: 1 piece/roll, 30 pieces/carton, 180 pieces/pallet

Specific technical data

Type	Number of modules	Typ. luminous flux per module ^②	Supply voltage DC ^③	Typ. current per module	Typ. power per module ^②	Luminous efficacy	Module distance D	Total length
3 light points per module								
LED P560-PRE CW 12V 200 10 68 0000	10	100 lm	12 V	104 mA	1.25 W	80 lm/W	200 mm	2,200 mm
LED P560-PRE CW 12V 200 48 68 0000	48	100 lm	12 V	104 mA	1.25 W	80 lm/W	200 mm	9,800 mm
LED P560-PRE CW 12V 150 48 68 0000	48	100 lm	12 V	104 mA	1.25 W	80 lm/W	150 mm	7,450 mm
LED P560-PRE DL 12V 200 10 68 0000	10	103 lm	12 V	104 mA	1.25 W	82 lm/W	200 mm	2,200 mm
LED P560-PRE DL 12V 200 48 68 0000	48	103 lm	12 V	104 mA	1.25 W	82 lm/W	200 mm	9,800 mm
LED P560-PRE DL 12V 150 48 68 0000	48	103 lm	12 V	104 mA	1.25 W	82 lm/W	150 mm	7,450 mm

^① If the max. temperature limits are exceeded, the life of the module will be greatly reduced or the module may be damaged.
For the precise position of the t_c point see the above diagram.

^② Tolerance range for optical and electrical data: $\pm 15\%$.

^③ Exceeding the max. operating voltage leads to an overload on the TALEXchain.
This may in turn result in a reduction in lifetime or even in destruction.
Tolerance range for the supply voltage: 12 V: +2 V / -0 V.

^④ Maximum submerge depth 1 m.

All values at $t_a = 25\text{ °C}$.

Converter matrix – TALEXchain CRYSTAL PREMIUM

Type	IN-BUILT LCU					REMOTE LCU			
	LCU 015/12 D010	LCU 035/12 D010	LCU 060/12 D010	LCU 100/12 D010	LCU 150/12 D010	LCU 035/12 E020	LCU 060/12 E020	LCU 100/12 E020	LCU 150/12 E020
Article number	24166316	24166318	24166322	24166326	24166331	24166319	24166323	24166327	24166332

Type	Article number	Assignable converter										Assignable converter								Max. chaining
		Number of modules										Number of modules								
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
LED P560-PRE CW 12V 200 10 68 0000	22176627	2	10	4	24	6	41	11	69	21	104	4	24	6	41	11	69	21	104	50
LED P560-PRE CW 12V 200 48 68 0000	22176630	2	10	4	24	6	41	11	69	21	104	4	24	6	41	11	69	21	104	50
LED P560-PRE CW 12V 150 48 68 0000	22176629	2	10	4	24	6	41	11	69	21	104	4	24	6	41	11	69	21	104	50
LED P560-PRE DL 12V 200 10 68 0000	22176628	2	10	4	24	6	41	11	69	21	104	4	24	6	41	11	69	21	104	50
LED P560-PRE DL 12V 200 48 68 0000	22176657	2	10	4	24	6	41	11	69	21	104	4	24	6	41	11	69	21	104	50
LED P560-PRE DL 12V 150 48 68 0000	22176631	2	10	4	24	6	41	11	69	21	104	4	24	6	41	11	69	21	104	50

Standards

- EN 62031
- EN 61347-1
- EN 62471

The product meets the “inbuilt LED module” classification according to EN 62031. The product passed the glow-wire test with 650 °C according to EN 61347-1.

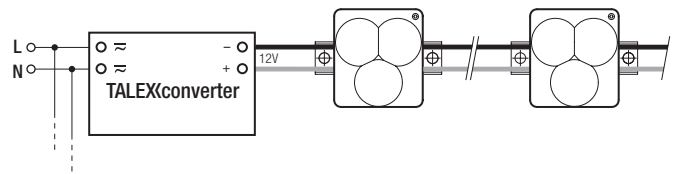
Thermal behaviour

operation temperature (operation, no defects)	ta	- 30 → + 55 °C
storage temperature	ts	- 30 → + 80 °C
max. temperature tc point	tc	- 30 → + 65 °C

The values apply to operation at 100 % output, natural convection. If the maximum temperature limits are exceeded, the life of the module will be greatly reduced. The module can fail within a short time. The tc point temperature of the module has to be measured in the thermally stable state and under operating conditions. Measurement setup e.g. according to IEC/EN 60598-1.

tc temperature in °C	Luminous flux in %	Life time in h
15	80	32.000
	70	52.000
	50	100.000
35	80	30.000
	70	50.000
	50	95.000
65	80	25.000
	70	45.000
	50	80.000

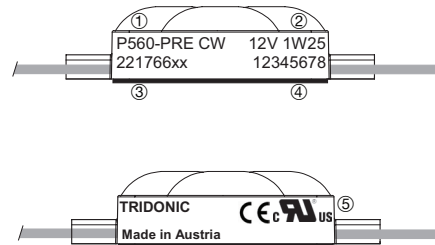
Wiring example TALEXchain CRYSTAL PREMIUM



Empirical values for decrease of luminous flux over the chain

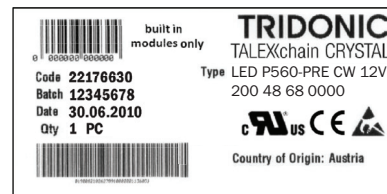
Module distance D	Chaining 50 modules	Max. number of chained modules without decrease of luminous flux
150 mm	0 %	50
200 mm	0 %	50

Label product

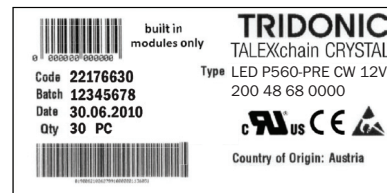


- ① Type
- ② Electr. specification
- ③ Article code
- ④ Production batch
- ⑤ Normative symbols

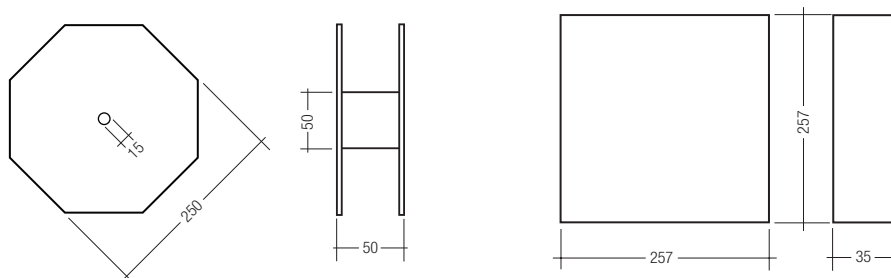
Label product packaging



Label carton

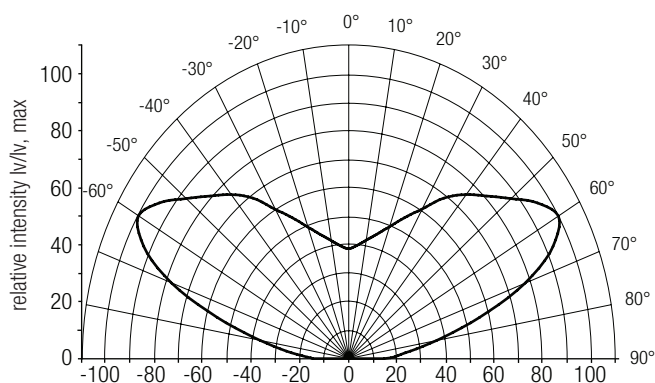


Dimensions roll packaging (packing code 2)



Optical characteristics TALEXchain CRYSTAL PREMIUM

Light distribution $I_v/I_{v,max}$.



The evaluation to the eye safety is according to the EN 62471:2008

(Photobiological safety of lamps and lamp systems)

Type	Article number	Colour	Actinic UV	near UV	blue light	retinal thermal	IR radiation, eye
			E_s	E_{UVA}	L_B	L_R	E_{IR}
			200–400 nm	315–400 nm	300–700 nm	380–1,400 nm	780–3,000 nm
LED P560-PRE CW 12V 200 10 68 0000	22176627	Crystal white	exempt	exempt	exempt	exempt	exempt
LED P560-PRE CW 12V 200 48 68 0000	22176630	Crystal white	exempt	exempt	exempt	exempt	exempt
LED P560-PRE CW 12V 150 48 68 0000	22176629	Crystal white	exempt	exempt	exempt	exempt	exempt
LED P560-PRE DL 12V 200 10 68 0000	22176628	Daylight white	exempt	exempt	exempt	exempt	exempt
LED P560-PRE DL 12V 200 48 68 0000	22176657	Daylight white	exempt	exempt	exempt	exempt	exempt
LED P560-PRE DL 12V 150 48 68 0000	22176631	Daylight white	exempt	exempt	exempt	exempt	exempt

Exempt:

The LED does not pose any photobiological hazard.

Low risk:

The LED does not pose a hazard due to normal behavioral limitations on exposure.

Moderate risk:

The LED does not pose a hazard due to the aversion response to very bright light sources or due to thermal discomfort.

High risk:

The LED may pose a hazard even for momentary or brief exposure.

Coordinates and tolerances according to CIE 1964

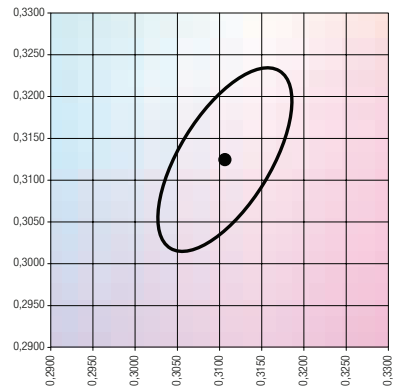
CIE coordinates

7,500 K

	x0	y0
Centre	0.3106	0.3124

MacAdam ellipse: 5SDCM

Crystal white



CIE coordinates:

6,500 K

	x0	y0
Centre	0.3230	0.3310

MacAdam ellipse: 5SDCM

Daylight white

