

IP68 

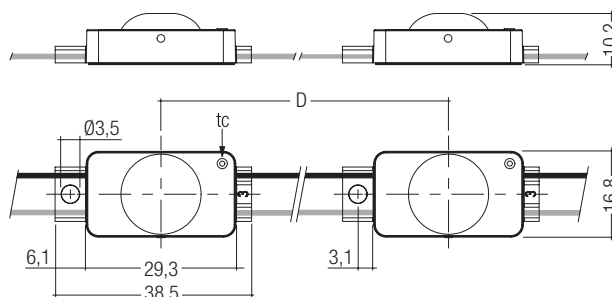
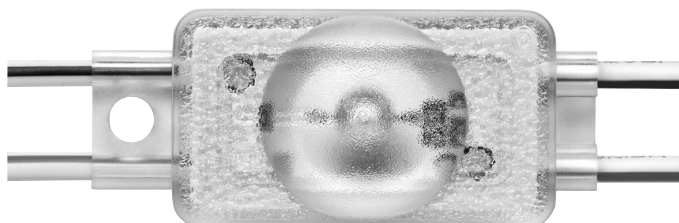
### TALEXchain CRYSTAL SELECT TALEXchain CRYSTAL

#### Product description

- LED chain for highlighting lines and edges and for backlighting complex contours, letters and symbols in signage applications
- Optimised for use in signage (lettering, surface backlighting)
- 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 $t_c$ <sup>①</sup>	65 °C
Type of protection <sup>②</sup>	IP68
Risk group (EN 62471:2008)	0



#### Ordering data

Colour	Wavelength range	Colour temperature	Packing code	Type	Article number
<b>1 light point per module</b>					
Crystal white	–	7,500 K	2	LED P550-SEL CW 12V 240 100 68 B000	22176677
Crystal white	–	7,500 K	1	LED P550-SEL CW 12V 150 10 68 B000	22176604
Crystal white	–	7,500 K	2	LED P550-SEL CW 12V 100 100 68 B000	22176650
Daylight white	–	6,500 K	2	LED P550-SEL DL 12V 100 100 68 B000	22176679
Green	525 – 540 nm	–	2	LED P550-SEL G 12V 240 100 68 B000	22176678
Blue	455 – 460 nm	–	2	LED P550-SEL B 12V 100 100 68 B000	22176688
Blue	455 – 460 nm	–	2	LEDV P550-SEL B 12 250 100 68 B	22176561

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



Standards, page 3

Colour temperatures and tolerances, page 5

#### Specific technical data

Type	Number of modules	Typ. luminous flux per module <sup>②</sup>	Colour rendering index CRI	Supply voltage DC <sup>③</sup>	Typ. current per module	Typ. power per module <sup>②</sup>	Luminous efficacy	Module distance D	Total length
<b>1 light point per module</b>									
LED P550-SEL CW 12V 240 100 68 B000	100	45 lm	72	12 V	47 mA	0.56 W	80 lm/W	240 mm	24,160 mm
LED P550-SEL CW 12V 150 10 68 B000	10	45 lm	72	12 V	47 mA	0.56 W	80 lm/W	150 mm	1,750 mm
LED P550-SEL CW 12V 100 100 68 B000	100	45 lm	72	12 V	47 mA	0.56 W	80 lm/W	100 mm	5,300 mm
LED P550-SEL DL 12V 100 100 68 B000	100	45 lm	72	12 V	47 mA	0.56 W	80 lm/W	100 mm	10,300 mm
LED P550-SEL G 12V 240 100 68 B000	100	24 lm	–	12 V	35 mA	0.42 W	57 lm/W	200 mm	24,160 mm
LED P550-SEL B 12V 100 100 68 B000	100	8 lm	–	12 V	47 mA	0.56 W	14 lm/W	100 mm	10,300 mm
LEDV P550-SEL B 12 250 100 68 B	100	8 lm	–	12 V	47 mA	0.56 W	14 lm/W	250 mm	25,150 mm

<sup>①</sup> 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.

<sup>②</sup> Tolerance range for optical and electrical data: ±15 % (optical data for blue: ±30 %).

<sup>③</sup> 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.

<sup>④</sup> Maximum submerge depth 1 m.

All values at  $t_a = 25$  °C.

**Converter matrix – TALEXchain CRYSTAL SELECT**

		IN-BUILT LCU					REMOTE LCU													
Type		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										
		Assignable converter					Assignable converter													
Type	Article number	Number of modules										Number of modules				Max. chaining				
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		Min.	Max.		
LED P550-SEL CW 12V 240 100 68 B000	22176677	2	26	7	62	10	107	20	178	40	267	6	62	10	107	20	178	40	267	100
LED P550-SEL CW 12V 150 10 68 B000	22176604	2	26	7	62	10	107	20	178	40	267	6	62	10	107	20	178	40	267	100
LED P550-SEL CW 12V 100 100 68 B000	22176650	2	26	7	62	10	107	20	178	40	267	6	62	10	107	20	178	40	267	100
LED P550-SEL DL 12V 100 100 68 B000	22176679	2	26	7	62	10	107	20	178	40	267	6	62	10	107	20	178	40	267	100
LED P550-SEL G 12V 240 100 68 B000	22176678	2	35	10	83	14	142	27	238	53	357	8	83	14	142	27	238	53	357	100
LED P550-SEL B 12V 100 100 68 B000	22176688	2	26	7	62	10	107	20	178	40	267	6	62	10	107	20	178	40	267	100
LEDV P550-SEL B 12 250 100 68 B	22176561	2	26	7	62	10	107	20	178	40	267	6	62	10	107	20	178	40	267	100

The mentioned number of modules is based on the typical electrical values of LED module and converter.  
In individual cases it is possible that the actual number of modules can be different to the values stated in the table because of the tolerance of electrical values.

**Standards**

- EN 62031
- 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 62031. The product passed the salt spray test (degree of severity: 6) according to EN 60068-2-52-1.

**Certificates**

- UL file: e313318
- CSA certificate: 249699

**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.

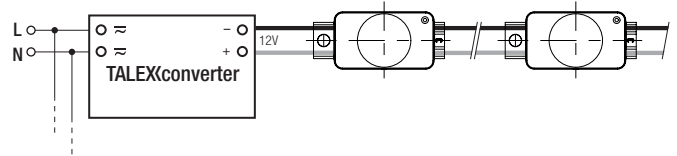
tc temperature in °C	Luminous flux in %	Life time in h
15	80	32,000
	70	52,000
	50	100,000
35	80	30,000
	70	50,000
	50	95,000
65	80	25,000
	70	45,000
	50	80,000

**Wiring**

Cable: AWG 18

Colour	red-white	black-white
Function	+	-

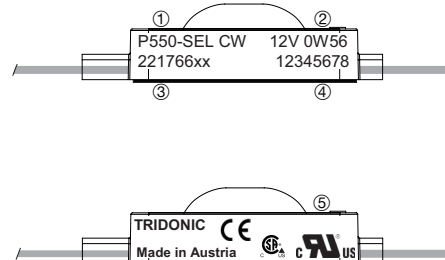
**Wiring example**



**Empirical values for decrease of luminous flux over the chain**

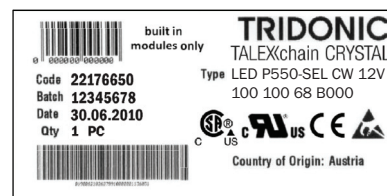
Colour	Module distance	Module distance	Module distance	Number of odules
	100 mm	150 mm	240 mm	
white	10 %	23 %	45 %	100
green	–	45 %	–	100
blue	10 %	–	–	100

**Label product**

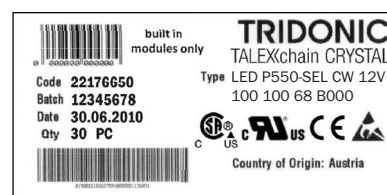


- ① Type
- ② Electr. specification
- ③ Article code
- ④ Production batch
- ⑤ Normative symbols

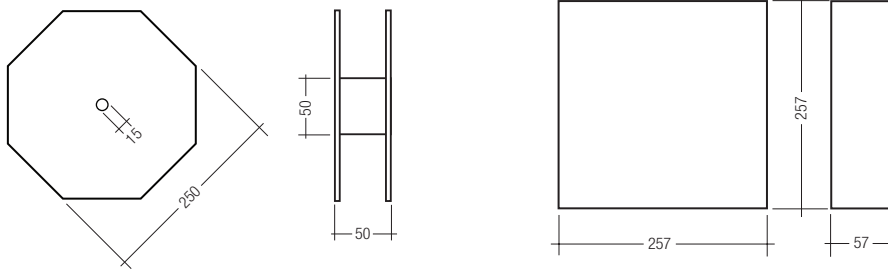
**Label product packaging**



**Label carton**

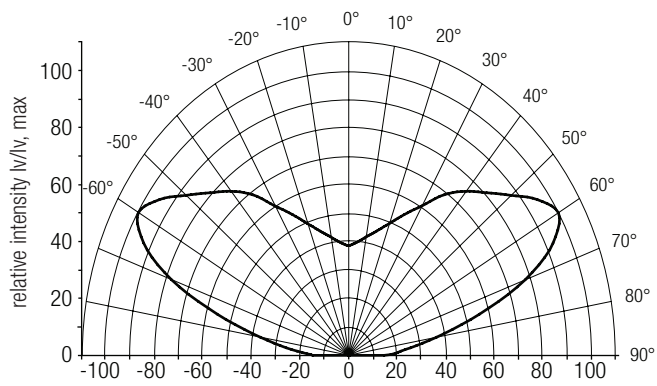


Dimensions roll packaging (packing code 2)



Optical characteristics

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



Coordinates and tolerances according to CIE 1964

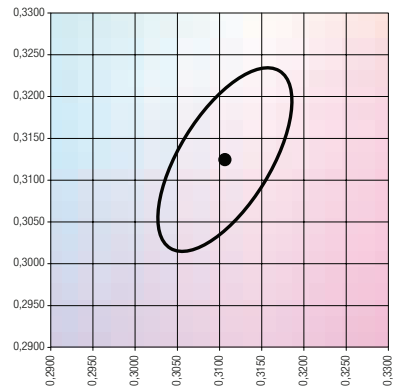
CIE coordinates

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

