

IP68 

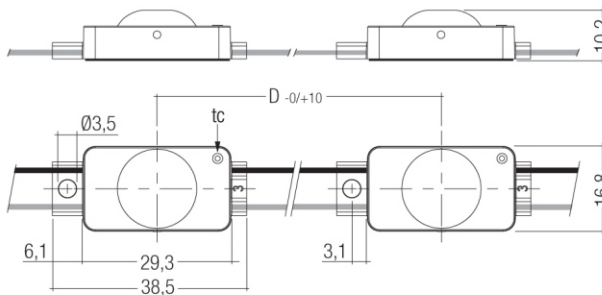
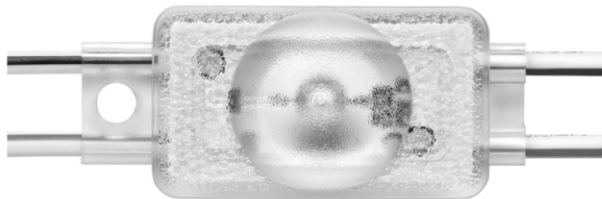
TALEXchain CRYSTAL SELECT
TALEXchain CRYSTAL

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^{D}	65 °C
Type of protection [®]	IP68
Risk group (EN 62471:2008)	0



Standards, page 4

Colour temperatures and tolerances, page 6, 7

Ordering data

Colour	Wavelength range	Colour temperature	Packing code	Type	Article number
1 light point per module					
Arctic white	–	13.000 K	1	LEDV P550-SEL AW 12 200 10 68 B	22176589
Arctic white	–	13.000 K	2	LEDV P550-SEL AW 12 200 100 68 B	22176588
Arctic white	–	13.000 K	2	LEDV P550-SEL AW 12 150 100 68 B	22176590
Crystal white	–	7.500 K	1	LEDV P550-SEL CW 12 200 10 68 B	22176602
Crystal white	–	7.500 K	2	LEDV P550-SEL CW 12 200 100 68 B	22176600
Crystal white	–	7.500 K	2	LEDV P550-SEL CW 12 150 100 68 B	22176611
Daylight white	–	6.500 K	1	LEDV P550-SEL DL 12 200 10 68 B	22176605
Daylight white	–	6.500 K	2	LEDV P550-SEL DL 12 200 100 68 B	22176673
Daylight white	–	6.500 K	2	LEDV P550-SEL DL 12 150 100 68 B	22176612
Neutral white	–	4.200 K	1	LEDV P550-SEL NW 12 200 10 68 B	22176618
Neutral white	–	4.200 K	2	LEDV P550-SEL NW 12 200 100 68 B	22176537
Neutral white	–	4.200 K	2	LEDV P550-SEL NW 12 150 100 68 B	22176622
Warm white	–	3.000 K	1	LEDV P550-SEL WW 12 200 10 68 B	22176625
Warm white	–	3.000 K	2	LEDV P550-SEL WW 12 200 100 68 B	22176676
Warm white	–	3.000 K	2	LEDV P550-SEL WW 12 150 100 68 B	22176626
Gold white	–	2.700 K	1	LEDV P550-SEL GW 12 200 10 68 B	22176541
Gold white	–	2.700 K	2	LEDV P550-SEL GW 12 200 100 68 B	22176542
Gold white	–	2.700 K	2	LEDV P550-SEL GW 12 150 100 68 B	22176543
Yellow white	570 nm	–	1	LEDV P550-SEL YW 12 200 10 68 B	22176623
Yellow white	570 nm	–	2	LEDV P550-SEL YW 12 200 100 68 B	22176632
Yellow white	570 nm	–	2	LEDV P550-SEL YW 12 150 100 68 B	22176624
Red	626 – 636 nm	–	1	LEDV P550-SEL R 12 200 10 68 B	22176606
Red	626 – 636 nm	–	2	LEDV P550-SEL R 12 200 100 68 B	22176682
Red	626 – 636 nm	–	2	LEDV P550-SEL R 12 150 100 68 B	22176613
Green	525 – 540 nm	–	1	LEDV P550-SEL G 12 200 10 68 B	22176617
Green	525 – 540 nm	–	2	LEDV P550-SEL G 12 200 100 68 B	22176683
Green	525 – 540 nm	–	2	LEDV P550-SEL G 12 150 100 68 B	22176619
Blue	455 – 460 nm	–	1	LEDV P550-SEL B 12 200 10 68 B	22176620
Blue	455 – 460 nm	–	2	LEDV P550-SEL B 12 200 100 68 B	22176684
Blue	455 – 460 nm	–	2	LEDV P550-SEL B 12 150 100 68 B	22176621

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

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

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Specific technical data

Type	Wavelength range	Colour temperature	Typ. luminous flux per module ^②	Colour rendering index CRI	Supply voltage DC ^③	Typ. current per module	Typ. power per module ^②	Luminous efficacy
1 light point per module								
LEDV P550-SEL AW	–	13,000 K	40 lm	> 70	12 V	47 mA	0.56 W	71 lm/W
LEDV P550-SEL CW	–	7,500 K	45 lm	72	12 V	47 mA	0.56 W	80 lm/W
LEDV P550-SEL DL	–	6,500 K	45 lm	72	12 V	47 mA	0.56 W	80 lm/W
LEDV P550-SEL NW	–	4,200 K	37 lm	85	12 V	47 mA	0.56 W	66 lm/W
LEDV P550-SEL WW	–	3,000 K	34 lm	88	12 V	47 mA	0.56 W	61 lm/W
LEDV P550-SEL GW	–	2,700 K	25 lm	> 90	12 V	47 mA	0.56 W	45 lm/W
LEDV P550-SEL YW	570 nm	–	52 lm	60	12 V	47 mA	0.56 W	93 lm/W
LEDV P550-SEL R	626 – 636 nm	–	12 lm	–	12 V	47 mA	0.56 W	21 lm/W
LEDV P550-SEL G	525 – 540 nm	–	24 lm	–	12 V	35 mA	0.42 W	57 lm/W
LEDV P550-SEL B	455 – 460 nm	–	8 lm	–	12 V	47 mA	0.56 W	14 lm/W

^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 tc point see the above diagram.

^② Tolerance range for optical and electrical data: ±15 % (optical data for blue: ±30 %).

^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 ta = 25 °C.

Product configurator

The products listed on page 1 are a predefined selection of possible product configurations.
The product configurator also offers the option of configuring chains optimized for the particular application:
The light colour, module spacing, number of modules and beam characteristics can be selected.

Selection parameters

Colour	Arctic white AW Crystal white CW Tageslichtweiß DL Neutral white NW Warm white WW Gold white GW Yellow white YW Red R Green G Blue B
Module distance D	90 – 300 mm in 10 mm steps
Number of modules	10 ^① , 20 – 100 in 1 piece steps ^②
Beam characteristic	140° (A), 155° (B)

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

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

Type code

Example: LEDV P550-SEL CW 12 200 10 68 B

LEDV P550-SEL	TALEXchain CRYSTAL SELECT
CW	Colour = crystal white
12	Supply voltage = 12 V
200	Module distance D = 200 mm
10	Number of modules = 10
68	Type of protection = IP68
B	Beam characteristic = 155°

For more information please call or email your Tridonic contact.

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Converter matrix – TALEXchain CRYSTAL SELECT

Type	IN-BUILT LCU ^①					REMOTE LCU ^②			
	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	Assignable converter										Assignable converter									
	Number of modules										Number of modules									
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.		
LEDV P550-SEL AW	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL CW	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL DL	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL NW	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL WW	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL GW	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL YW	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL R	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	
LEDV P550-SEL G	4	31	11	72	16	124	31	207	62	310	10	72	16	124	31	207	62	310	100	
LEDV P550-SEL B	3	23	9	54	12	93	24	155	47	232	7	54	12	93	24	155	47	232	100	

^① Type of protection IP67

^② Type of protection IP20

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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.

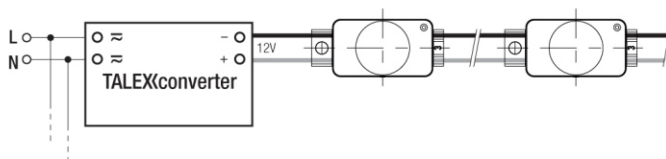
tc temperature in °C	Luminous flux in %	Life time in h
15	80	32,000
	70	52,000
	50	100,000
35	80	30,000
	70	50,000
	50	95,000
65	80	25,000
	70	45,000
	50	80,000

Wiring

Cable: AWG 18

Colour	red-white	black-white
Function	+	-

Wiring example



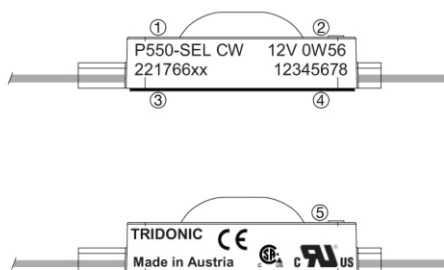
Empirical values for decrease of luminous flux over the chain

Colour	Module distance	Module distance	Module distance	Module distance	Number of modules
	100 mm	150 mm	200 mm	300 mm	
Arctic white	10 %	23 %	37 %	54 %	100
Crystal white	10 %	23 %	37 %	54 %	100
Daylight white	10 %	23 %	37 %	54 %	100
Neutral white	10 %	23 %	37 %	54 %	100
Warm white	10 %	23 %	37 %	54 %	100
Gold white	10 %	23 %	37 %	54 %	100
Yellow white	10 %	23 %	37 %	54 %	100
Red	0 %	0 %	0 %	19 %	100
Green	34 %	45 %	53 %	64 %	100
Blue	10 %	23 %	37 %	54 %	100

Heat value

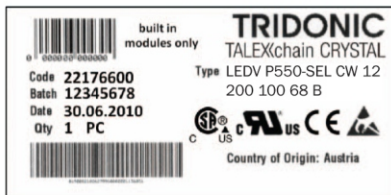
0.23 MJ/module

Label product

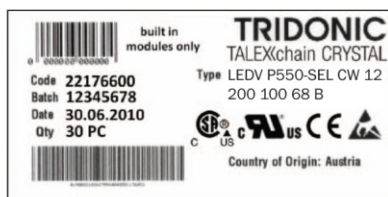


- ① Type
- ② Electr. specification
- ③ Article code
- ④ Production batch
- ⑤ Normative symbols

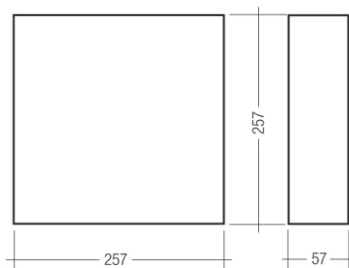
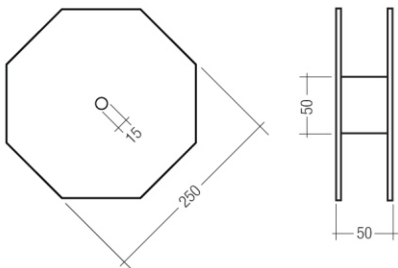
Label product packaging



Label carton

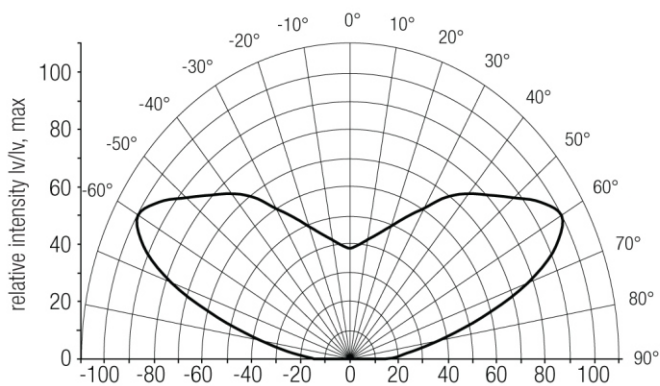


Dimensions roll packaging (packing code 2)



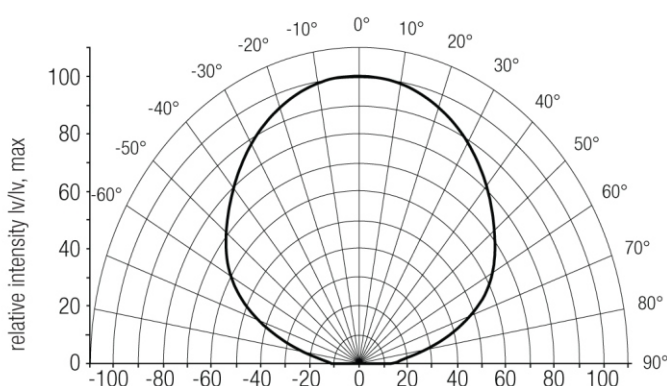
Beam characteristics 155°

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



Beam characteristics 140°

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



Coordinates and tolerances according to CIE 1964

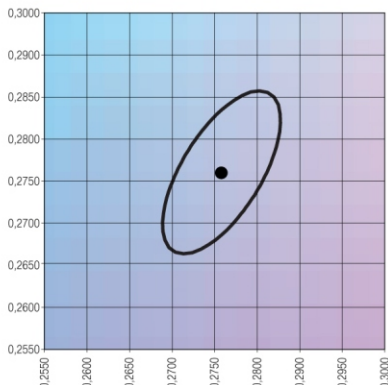
CIE-coordinates

13,000 K

	x0	y0
Centre	0.2769	0.2732

MacAdam ellipse: 5SDCM

Arctic white



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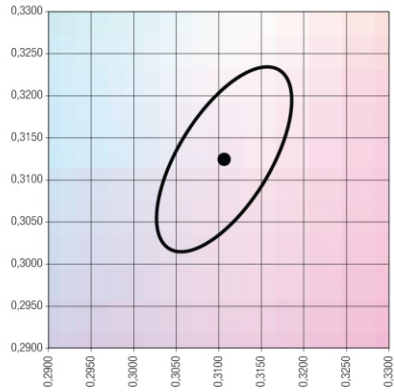
CIE coordinates

7,500 K

	x0	y0
Centre	0.3106	0.3124

MacAdam ellipse: 5SDCM

Crystal white



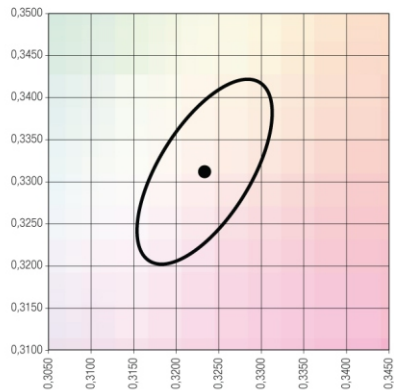
CIE coordinates:

6,500 K

	x0	y0
Centre	0.3230	0.3310

MacAdam ellipse: 5SDCM

Daylight white



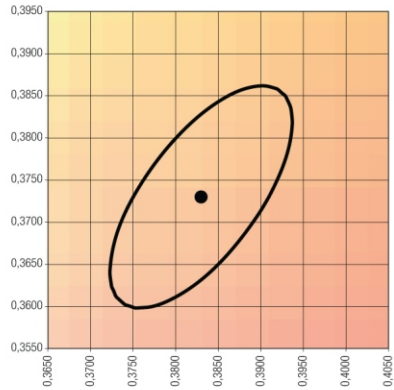
CIE coordinates:

4,200 K

	x0	y0
Centre	0.3833	0.3733

MacAdam ellipse: 5SDCM

Neutral white



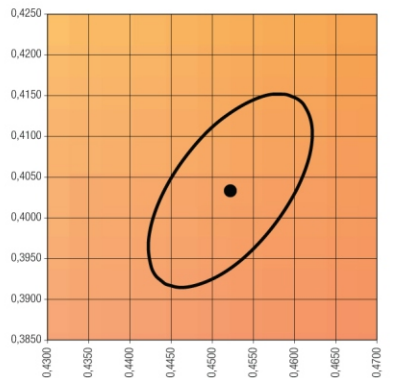
CIE coordinates:

3,000 K

	x0	y0
Centre	0.4520	0.4033

MacAdam ellipse: 5SDCM

Warm white



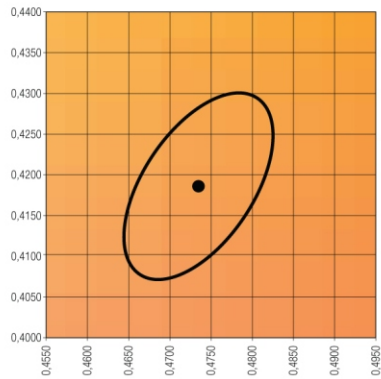
CIE coordinates:

2,700 K

	x0	y0
Mittelpunkt	0.4740	0.4186

MacAdam ellipse: 5SDCM

Gold white



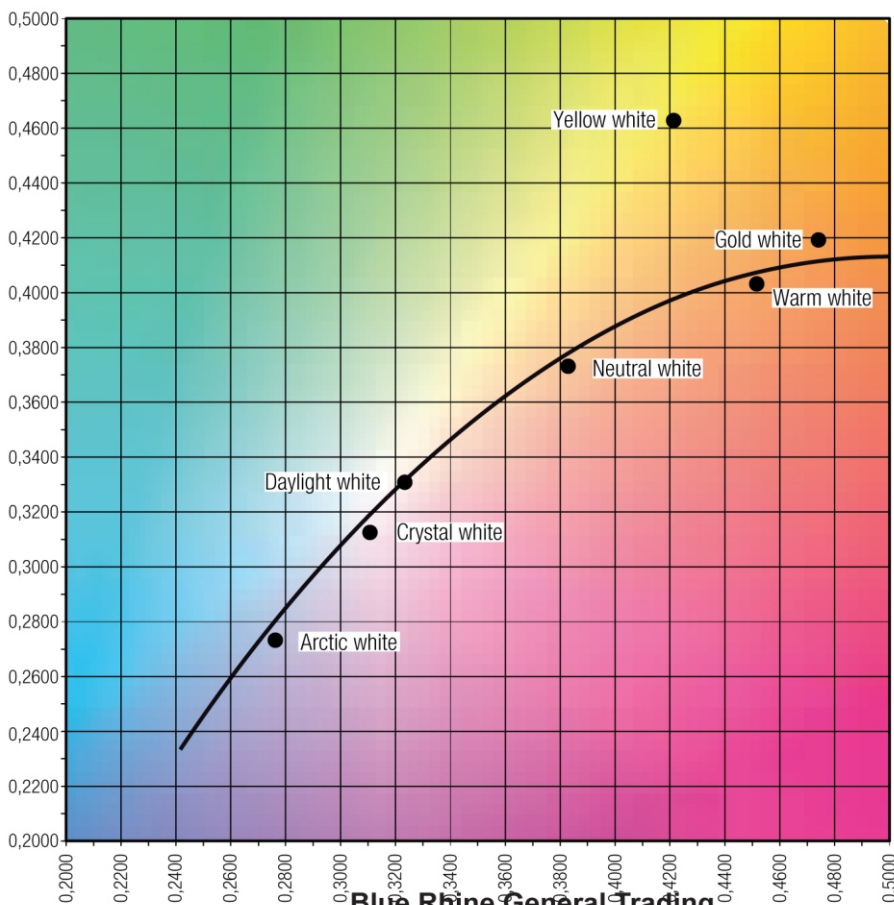
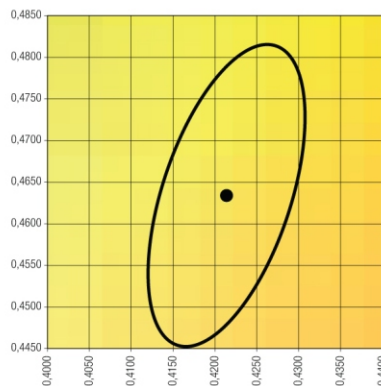
CIE coordinates:

570 nm

	x0	y0
Centre	0.4215	0.4632

MacAdam ellipse: 6SDCM

Yellow white



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