

**TALEXchain P531 ESSENCE**

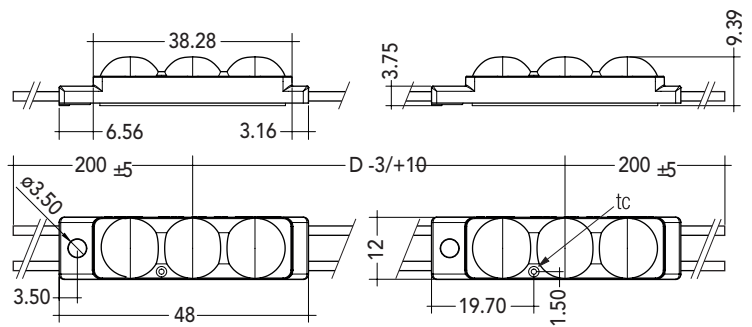
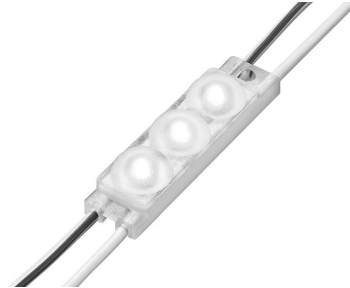
IP68  

**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)
- High colour consistency (MacAdam 5)
- Beam characteristic: 155°
- LED module with plastic casing and strain relief with IP68 protection
- Integrated current source to stabilise luminous flux
- Flexible chain, can be split between any module
- Mounting with screw or premounted double-sided adhesive tape possible
- Nominal life-time up to 30,000 h (at ta 50 °C with a failure rate max. 0.2 % per 1,000 h)

**Technical data**

Ambient temperature ta	-25 ... +50 °C
Max. surface temperature on module tc <sup>1</sup>	65 °C
Storage temperature ts	-40 ... +85 °C
Type of protection <sup>4</sup>	IP68
Risk group (EN 62471:2008)	1



**Ordering data**

Type	Article number	Colour	Wavelength range	Colour temperature <sup>5</sup>
3 light points per module				
P531 G1 DL 31lm 150mm 100 68 SNC	87500374	Daylight white	-	6,500 K
P531 G1 DL 70lm 200mm 100 68 SNC	87500375	Daylight white	-	6,500 K

Packaging: 1 piece/roll, 10 pieces/carton, 120 pieces/pallet

**Specific technical data**

Type	Photometric code <sup>2</sup>	Wavelength range	Colour temperature <sup>5</sup>	Typ. luminous flux per module <sup>2</sup>	Colour rendering index CRI <sup>2</sup>	Supply voltage DC <sup>3</sup>	Typ. current per module <sup>2</sup>	Typ. power per module	Luminous efficacy
3 light points per module									
P531 G1 DL 31lm 150mm 100 68 SNC	765	-	6,500 K	31 lm	> 80	12 V	28 mA	0.34 W	92 lm/W
P531 G1 DL 70lm 200mm 100 68 SNC	765	-	6,500 K	70 lm	> 80	12 V	58 mA	0.70 W	100 lm/W

<sup>1</sup>If the max. temperature limits are exceeded, the life of the module will be greatly reduced or the module maybe damaged. For the precise position of the tc point see the above diagram.

<sup>2</sup> Tolerance range for optical and electrical data: ±20%.

<sup>3</sup> Exceeding the max. operating voltage leads to an overload on the TALEXchain.

This may in turn result in a reduction in life-time or even in destruction. Tolerance range for the supply voltage: 12 V: +2 V / -0 V. <sup>4</sup>

Maximum submerge depth 1 m / 60 min.

<sup>5</sup> Colour temperature for information only. Valid colour see 'Coordinates and tolerances according to CIE 1931'.

All values at ta = 25 °C.

**Typecode**

Example: P531 G1 DL 31lm 150mm 100 68

**SNC**

LED P531	TALEXchain P531 ESSENCE
G1	Generation = 1
DL	Colour = Daylight white
31lm	Luminous flux per module = 31 lm
150mm	Module distance D = 150 mm
100	Number of modules = 100
68	Type of protection = IP68
SNC	Layer = ESSENCE

For more information please call or email your Tridonic contact.

**Photometric code**

Key for photometric code, e. g. 765

1 <sup>st</sup> digit		2 <sup>nd</sup> + 3 <sup>rd</sup> digit	
Code	CRI	Colour temperature in Kelvin x 100	
7	67 – 76		
8	77 – 86		
9	87 – ≥90		

**LED control gear matrix – TALEXchain P531 ESSENCE**

IN-BUILT LCU					
Type	LCU 15W 12V IP67	LCU 35W 12V IP67	LCU 60W 12V IP67/ LC 60W 12V IP66	LCU 100W 12V IP67/ LC 100W 12V IP66	LCU 180W 12V IP67
Article number	28000507	28000508	28000509/ 28001026	28000510/ 28001027	28000511

**Assignable LED control gear**

Type	Number of modules										Max. chaining
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
P531 G1 DL 31lm	4	36	9	85	15	147	25	245	45	441	100
P531 G1 DL 70lm	2	17	5	41	8	71	12	119	22	214	100

**Standards**

- EN 62031
- EN62471

The product meets the "inbuilt LED module" classification according to EN 62031. The product passed the glow-wire test with 850°C according to EN 62031.

**Thermal behaviour**

operation temperature (operation, no defects)	ta	- 25 → + 50 °C
storage temperature	ts	- 40 → + 85 °C
max. temperature tc point	tc	- 20 → + 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.

**Lumen maintenance<sup>1</sup>**

Lumen depreciation	tc temperature 65 °C
L70B10	36,000 h
L70B50	40,000 h
L80B10	23,000 h
L80B50	25,000 h
L90B10	12,000 h
L90B50	13,000 h

**Remarks:**

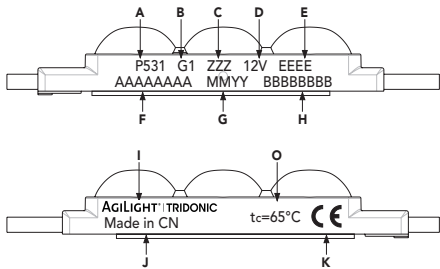
- Lumen depreciation – the decrease in lumen output that occurs as a lamp is operated.
- L70 or L70 – shorthand for lumen depreciation to 70 % of initial lumen output indicates 70 % lumen maintenance. L50 would be lumen • depreciation of 50 %.
- B50 – another aspect of LED life projection, used in conjunction with the lumen depreciation.
- B50 indicates no more than 50% of a sample of LED devices would be expected to fail before a certain number of operating hours. Failure means light output drops below a target lumen maintenance level (such as L70 or L50). B10 would mean no more than 10% of the sample fails within the given time.

<sup>1</sup>reference: LM-80 Test Report LED package supplier.

**Maintenance note**

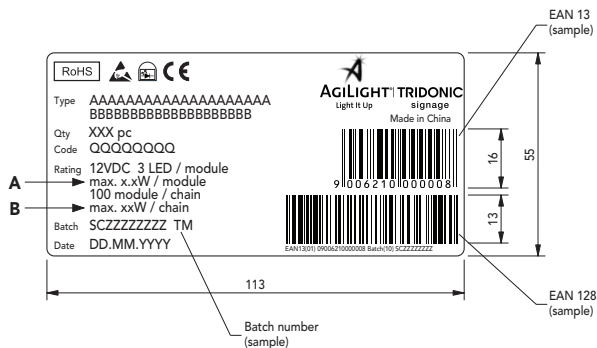
The product is maintenance free. If cleaning during application only clear water without the addition of cleaning agents should be used.

**Label product (sample)**



- A ... product name
- B ... generation
- C ... colour code
- D ... rated supply voltage
- E ... typical power consumption
- F ... Tridonic article number
- G ... manufacturing date
- H ... Tridonic batch number
- I ... Tridonic logo
- J ... country of origin
- K ... CE mark
- O ... tc value

**Label product packaging (sample)**



- A ... Z1 text characters 1-20 (field length max. 20)
- B ... Z1 text characters 21-40 (field length max. 20)
- X ... package quantity (field length max. 3)
- Y ... Tridonic article number (field length 8)
- Z ... Batch number

DD.MM.YY ... production date

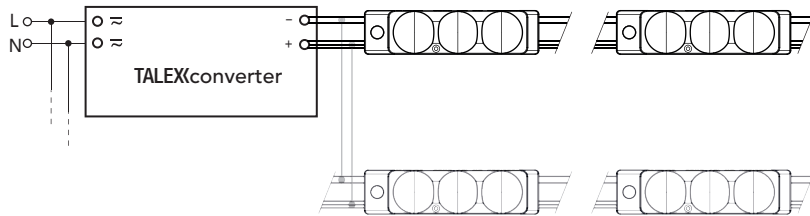
EAN 128 ... Barcode EAN 128 (includes EAN 13 + Batch number)  
 EAN 13 ... Barcode EAN 13 (EAN 13 for packaging unit)

### Wiring

Cable: AWG 18

Colour	red-white	white
Function	+	-

### Wiring example

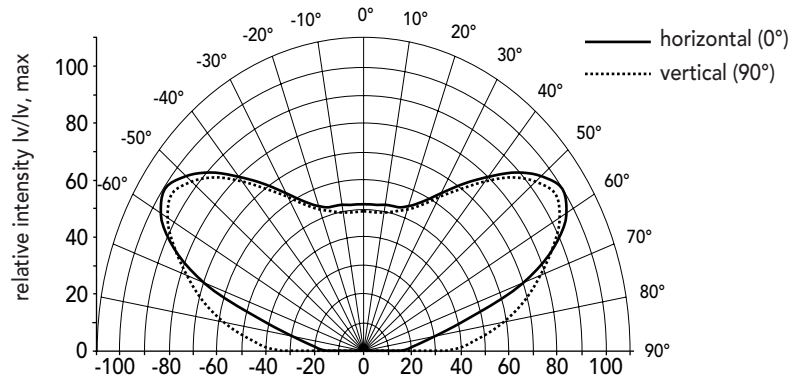


### Empirical values for decrease of luminous flux over the chain

Type	Colour	Module distance 150 mm	Module distance 200 mm	Number of modules
P531 G1 DL	Daylight white	15 %	35 %	100

**Beam characteristics 155°**

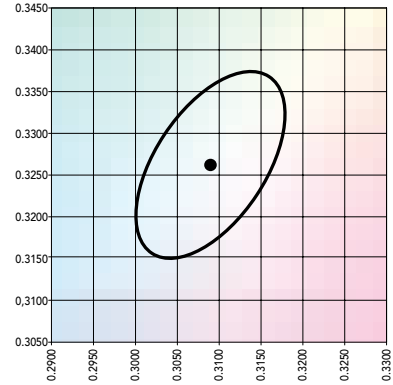
Light distribution  $I_v/I_{v,max}$ .



**Coordinates and tolerances according to CIE**

1931 Daylight white (DL)

	x0	y0
Centre	0.3090	0.3260



MacAdam ellipse: 5SDCM

