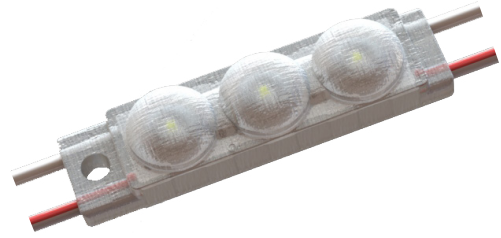




- LED chain for highlighting lines and edges and for backlighting complex contours, letters and symbols in signage applications
- Optimised for use in signage (lettering, surface backlighting)
- High color consistency (MacAdam 5)
- Beam characteristic: 155°
- LED module with plastic casing and strain 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 hours (at Ta 50 °C)
- 5-year warranty



IP68



RoHS

ORDERING GUIDE

Type	Article Number	Color	Wavelength Range	Color Temperature ⁵
(3 Light Points per Module)				
P531 G1 DL 31lm 150mm 100 68 SNC	28000374	Daylight White	--	6500K
P531 G1 DL 70lm 200mm 100 68 SNC	28001375	Daylight White	--	6500K

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

TECHNICAL DATA

Ambient Temperature T _a	-25 — 50 °C
Max Surface Temperature on Module T _c	65 °C
Storage Temperature T _s	-40 — 85 °C
Type of Protection ⁴	IP68
Risk Group (EN 62471:2008)	1
Warranty	5-year warranty

SPECIFIC TECHNICAL DATA

Type	Photometric Code ²	Wavelength Range	Color Temperature ⁵	Typ. Luminous Flux Per Module ²	CRI ²	Supply Voltage DC ³	Typ. Current per Module ²	Typ. Power per Module	Luminous Efficacy
P531 G1 DL 31lm 150mm 100 68 SNC	765	--	6500K	31 lm	>80	12 V	22 mA	0.26 W	119 lm/W
P531 G1 DL 70lm 200mm 100 68 SNC	765	--	6500K	70 lm	>80	12 V	55 mA	0.66 W	106 lm/W

¹ If the max temperature limits are exceeded, the life of the module will be greatly reduced or the module maybe damaged.

² Tolerance range for optical and electrical data: ±15% (electrical data for red and blue: +15/-30%)

³ Exceeding the max operating voltage leads to an overload on the chain. This may, in turn, result in a reduction in life-time or even in destruction.

⁴ Tolerance range for the supply voltage: 12 V: +2 V / -0 V.

⁴ Maximum submerge depth 1 m / 60 min.

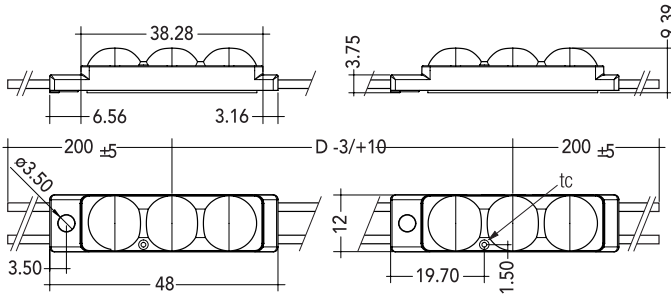
⁵ Colour temperature for information only. Valid colour see „Coordinates and tolerances according to CIE 1931“. All values at Ta = 25 °C.

MODULE DIMENSIONS

Part Number	Length (in/mm)	Width (in/mm)	Height (in/mm)
P531 G1 DL XXlm XXXmm 100 68 SNC	1.89/48	0.47/12	0.37/9.4



DIMENSION DRAWING



TYPECODE

EXAMPLE: P531 G1 DL 31 150 100 68

Category	SNC	LED P531	G1	DL	31	150	100	68
Sub-Category	Layer	TALEXChain	Generation	Color	Lum. Flux per Module	Module distance D	# of Modules	Protection
Spec.	ESSENCE	P531 ESSENCE	Gen. 1	Daylight White	31 lumens	150 mm	100 modules	IP68

PHOTOMETRIC CODE

Key for photometric code, e.g. 765.

1st Digit		2nd + 3rd Digit	LED Control Gear Matrix P531 ESSENCE					
Code	CRI	Color temperature in Kelvin x 100	IN-BUILT LCU					
7	67 - 76		Type	LCU 15W 12V IP67	LCU 35W 12V IP67	LCU 60W 12V IP67 / LCU 60W 12V IP66	LCU 100W 12V IP67 / LCU 100W 12V IP66	LCU 180W 12V IP67
8	77 - 86		Article Number	28000507	28000508	28000509 / 28001026	28000510 / 28001027	28000511
9	87 - ≥90							

Type	Assignable LED Control Gear										Max. Chaining
	Number of Modules										
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
PS31 G1 DL 31 lm	4	36	9	85	15	147	25	245	45	441	100
PS31 G1 DL 70 lm	2	17	5	41	8	71	12	119	22	214	100



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 850 °C according to EN 62031.

THERMAL BEHAVIOR

Operation temperature (operation, no defects)	T _a	-25 — 50 °C
Storage temperature	T _s	-40 — 85 °C
Max. temperature Tc point	T _c	-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 T_c 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 MAINTENANCE¹

Lumen depreciation – the decrease in lumen output that occurs as lamp is operated.

L70 or L50 – 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.

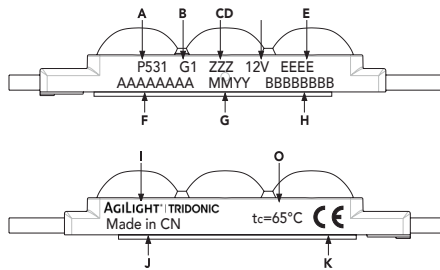
B50 indicates no more than 50% of a sample of LED devices would be expected to fail before a certain number of operating hours. Failure means light output drops below a target lumen maintenance level (such as L70 or L50). B10 would mean no more than 10% of the sample fails within the given time.

¹reference: LM-80 Test Report LED package supplier.

MAINTENANCE NOTE

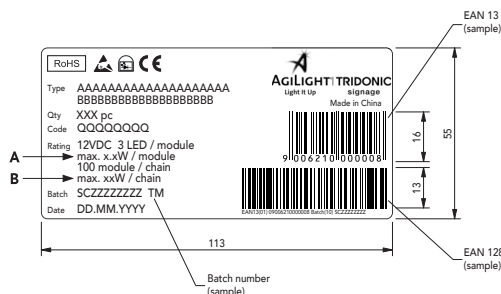
The product is maintenance free. If cleaning during application only clear water without the addition of cleaning agents should be used.

LABEL PRODUCT (SAMPLE)



KEY		F	Tridonic Article Number
Type		G	Manufacturing Date
A	Product Name	H	Tridonic Batch Number
B	Generation	I	Tridonic Logo
C	Color Code	J	Country of Origin
D	Rated Supply Voltage	K	CE Mark
E	Typical Power Consumption	O	Tc Value

LABEL PRODUCT PACKAGING (SAMPLE)



KEY	
Type	
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)
Q	Tridonic Article Number (field length 8)
Z	Batch Number
DD.MM.YYYY	Production Date
EAN 128	Barcode EAN 128 (includes EAN 13 + Batch Number)
EAN 13	Barcode EAN 13 (EAN 13 for Packaging Unit)

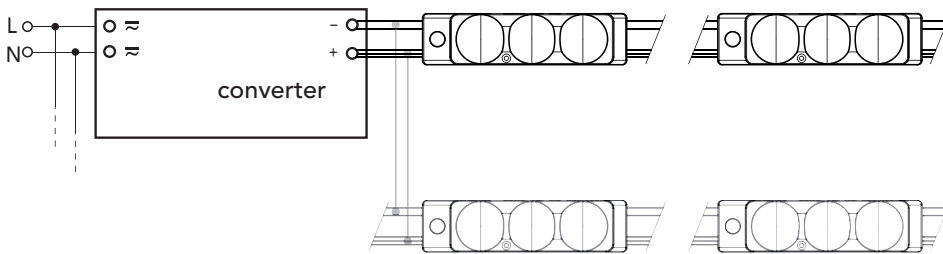


WIRING

Cable: AWG 18

Color	Red-White	White
Function	+	-

WIRING DIAGRAM



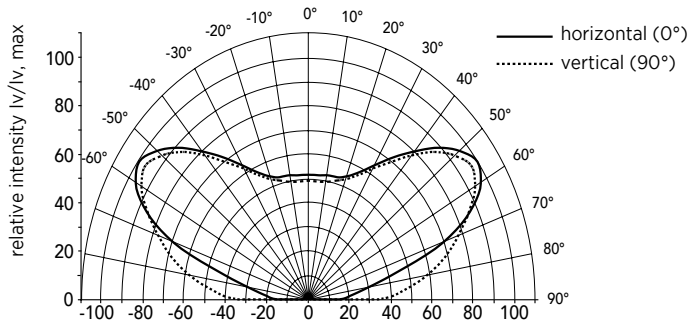
EMPIRICAL VALUES FOR DECREASE OF LUMINOUS FUX OVER CHAIN

Type	Color	Module Distance 150 mm	Module Distance 200 mm	# of Modules
P531 G1 DL	Daylight White	15%	35%	100



BEAM CHARACTERISTICS 155°

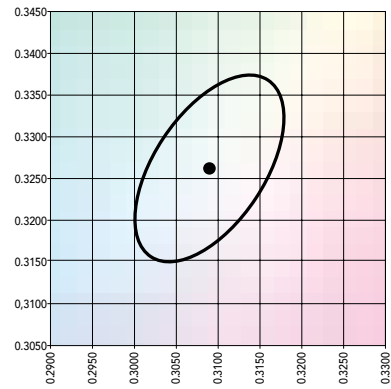
Light distribution Iv/Ivmax



COORDINATES AND TOLERANCES ACCORDING TO CIE 1931

Daylight White (DL)

	x0	y0
Centre	0.3090	0.3260



McAdam ellipse: 5 SDCM

COLOR DIAGRAM

