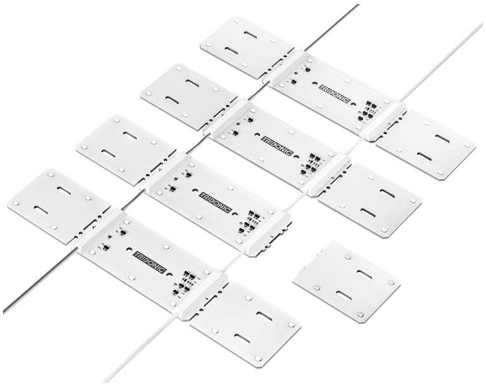
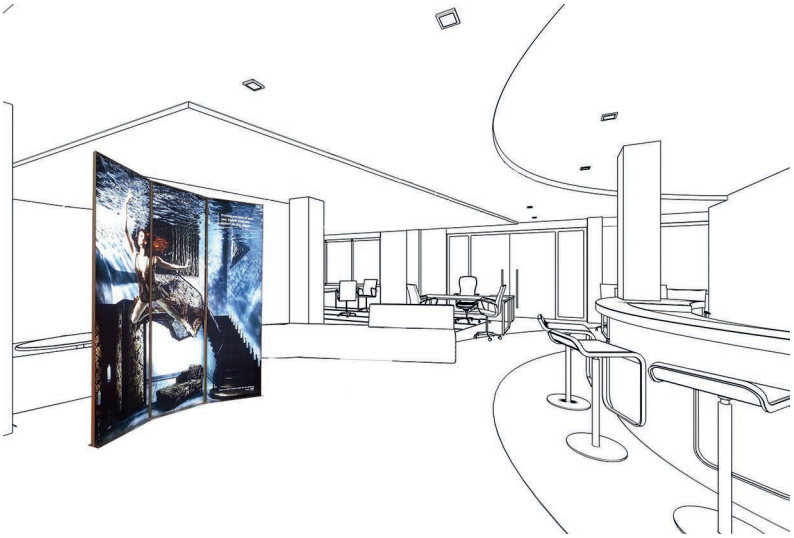
TALEX(panel P581 G1 EXCITE

TALEX(panel





Product description

- LED chain for backlighting of light boxes, letters, symbols and complex contours in signage applications
- Optimised for use in signage
- High colour consistency (MacAdam 4)
- Beam characteristic: 120°
- LED module with strain relief
- 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 50,000 h (at ta 60 °C)

Standards, page 4

Colour temperatures and tolerances, page 6, 7

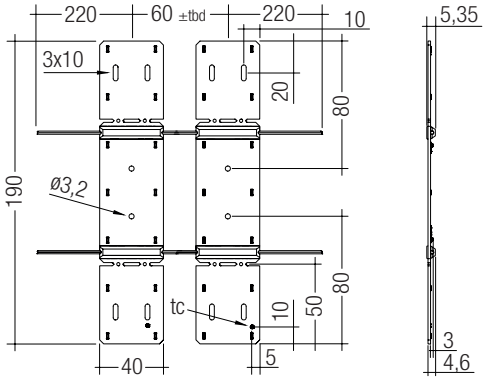
Class 2 RoHS

TALEX(panel P581 G1 EXCITE

TALEX(panel

Technical data

Ambient temperature ta	-40 ... +60 °C
Max. surface temperature on module tc①	70 °C
Storage temperature ts	-40 ... +60 °C
Type of protection	IP00
Risk group (EN 62471:2008)	0



Ordering data

Type	Article number	Colour	Wavelength range	Colour temperature⑤
14 light points per module				
LED P581-C DL 24 60 25 00 D G1	**28000614**	Daylight white	–	6,500 K
LED P581-C LW 24 60 25 00 D G1	**28000615**	Light white	–	5,000 K

Packaging: 1 piece/roll, 10 pieces/carton, 160 pieces/pallet

Specific technical data

Type	Photometric code②⑤	Wavelength range	Colour temperature④	Typ. luminous flux per module②	Colour rendering index CRI②	Supply voltage DC③	Typ. current per module②	Typ. power per module	Luminous efficacy	Energy classification per module
14 light points per module										
LED P581-C DL	765/4xx	–	6,500 K	100 lm	> 70	24 V	39 mA	0.94 W	106 lm/W	A++
LED P581-C LW	750/4xx	–	5,000 K	100 lm	> 70	24 V	39 mA	0.94 W	106 lm/W	A++

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 %.

③ 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: 24 V: +2 V / -0 V.

④ Colour temperature for information only. Valid colour see ‚Coordinates and tolerances according to CIE 1931'.

⑤ Photometric code in evaluation.

All values at ta = 25 °C.

Type code

Example: LED P581-C LW 24 60 25 00 D G1

LED P581-C	TALEX(panel P581
LW	Colour = Light white
24	Supply voltage = 24 V
60	Module distance D = 60 mm
25	Number of modules = 25
00	Type of protection = IP00
D	Beam charcteristic = 120°
G1	Generation = 1

For more information please call or email your Tridonic contact.

Photometric code

Key for photometric code, e. g. 861/449

1st digit		2nd + 3rd digit	4th digit	5th digit	6th digit	
Code	CRI	Colour temperature in Kelvin x 100	McAdams initial	McAdams after 25% of the life-time (max.6000h)	Lumen maintanance after 25% of the life-time (max.6000h)	
					Code	Remaining lumen
7	67 – 76				7	≥ 70 %
8	77 – 86				8	≥ 80 %
9	87 – ≥90				9	≥ 90 %

LED control gear matrix – TALEX(panel CRYSTAL CLASSIC

	IN-BUILT LCU①			REMOTE LCU②			
Type	LCU 060/24 D010	LCU 100/24 D010	LCU 150/24 D010	LCU 035/24 E020	LCU 060/24 E020	LCU 100/24 E020	LCU 150/24 E020
Article number	22185184	22185185	22185186	24166320	24166324	24166328	24166333

Type	Assignable LED control gear						Assignable LED control gear								Max. chaining
	Number of modules						Number of modules								
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
LED P581-C DL	7	55	14	92	28	138	5	32	7	55	14	92	28	138	100
LED P581-C LW	7	55	14	92	28	138	5	32	7	55	14	92	28	138	100

① Type of protection IP67.

② Type of protection IP20.

Standards

- EN 62031
- EN 62471

The product meets the “inbuilt LED module“ classification according to EN 62031.

Certificates

- ENEC
- UL file: E313318
- CSA file: 249699

Thermal behaviour

operation temperature (operation, no defects)	ta	- 40 → + 60 °C
storage temperature	ts	- 40 → + 60 °C
max. temperature tc point	tc	70 °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.

Mounting instruction

None of the components of the TALEX(panel CRYSTAL (substrate, LED, electronic components etc.) may be exposed to tensile or compressive stresses.

Max. torque for fixing: 0.5 Nm.

The LED modules are mounted with min. 2 screws per module. In order not to damage the modules only rounded head screws and an additional plastic flat washer should be used.

Chemical substance may harm the LED module. Chemical reactions could lead to colour shift, reduced luminous flux or a total failure of the module caused by corrosion of electrical connections.

Materials which are used in LED applications (e.g. sealings, adhesives) must not produce dissolver gas. They must not be condensation curing based, acetate curing based or contain sulfur, chlorine or phthalate. Avoid corrosive atmosphere during usage and storage.

EOS/ESD safety guidelines

The device / module contains components that are sensitive to electrostatic discharge and may only be installed in the factory and on site if appropriate EOS/ESD protection measures have been taken. No special measures need be taken for devices/modules with enclosed casings (contact with the pc board not possible), just normal installation practice. Please note the requirements set out in the document EOS / ESD guidelines (Guideline_EOS_ESD.pdf) at:
http://www.tridonic.com/com/en/technical-data.asp

Lumen maintenance

Lumen depreciation	ta temperature 60 °C
L70B10	50,000 h
L70B50	50,000 h
L80B10	50,000 h
L80B50	50,000 h
L90B10	34,000 h
L90B50	50,000 h

Remarks:
- Lumen depreciation – the decrease in lumen output that occurs as a lamp is operated.
- L70 or L_{70} – 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.

Selection of the LED control gear

TALEX(panel CRYSTAL shall be operated with SELV LED control gears.

TALEX(panel CRYSTAL are basic isolated against ground and can be mounted directly on earthed metal parts of the luminaire. In this case the light emitting side of the module has to be protected against direct touch (test finger). This is typically achieved by means of a non removable light distributor over the module.

Electrical supply/choice of LED control gear

If a LED control gear other than Tridonic TALEX(converter is used, it must provide the following protection:
- Short-circuit protection
- Overload protection
- Overtemperature protection

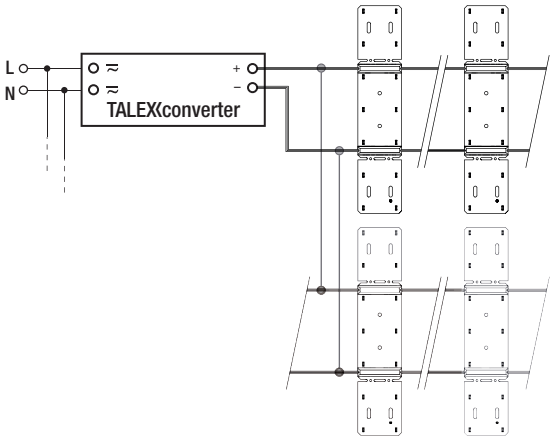
TALEX(panel CRYSTAL must be supplied by a constant voltage LED control gear.
Operation with a constant current LED control gear can lead to an irreversible damage of the module.

Wiring

Cable: AWG 18

Colour	red-white	white
Function	+	–

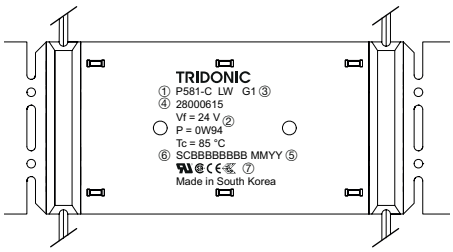
Wiring example



Empirical values for decrease of luminous flux over the chain

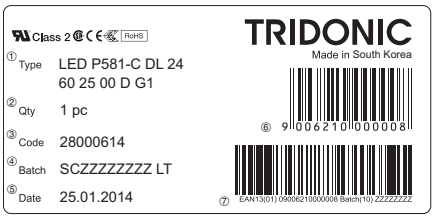
Type	Colour	Module distance 60 mm	Number of modules
LED P581-C DL	Daylight white	0 %	25
LED P581-C LW	Light white	0 %	25

Label product (sample)



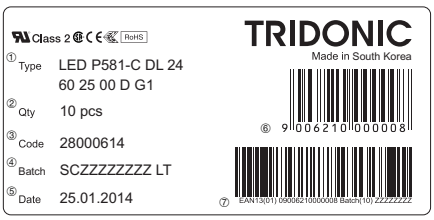
① Type
② Electr. specification
③ Generation
④ Article code
⑤ Production date
⑥ Production batch
⑦ Normative symbols

Label product packaging (sample)



① Type
② Packaging quantity
③ Article code
④ Production batch
⑤ Production date
⑥ Barcode EAN13 for packaging unit
⑦ Barcode EAN128 (includes EAN13 and batch number)

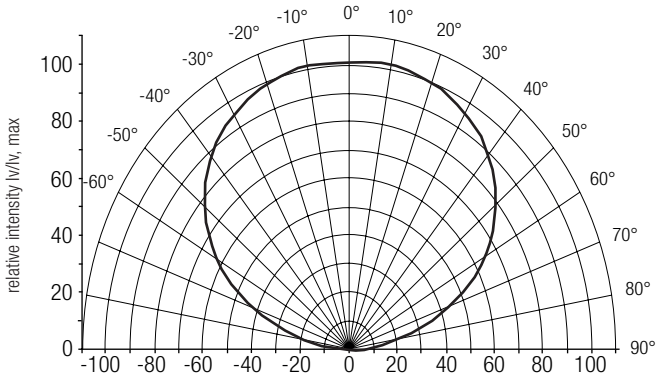
Label carton (sample)



① Type
② Packaging quantity
③ Article code
④ Production batch
⑤ Production date
⑥ Barcode EAN13 for packaging unit
⑦ Barcode EAN128 (includes EAN13 and batch number)

Beam characteristics 120°

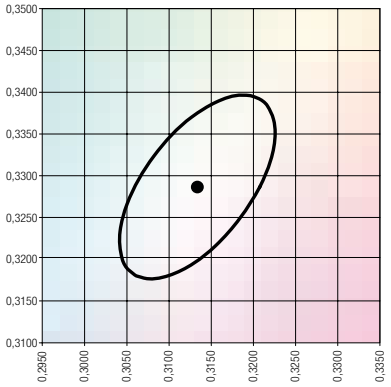
Light distribution Iv/Ivmax.



Coordinates and tolerances according to CIE 1931

Daylight white (DL)

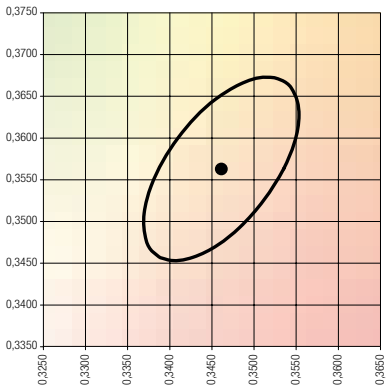
	x0	y0
Centre	0.3135	0.3284



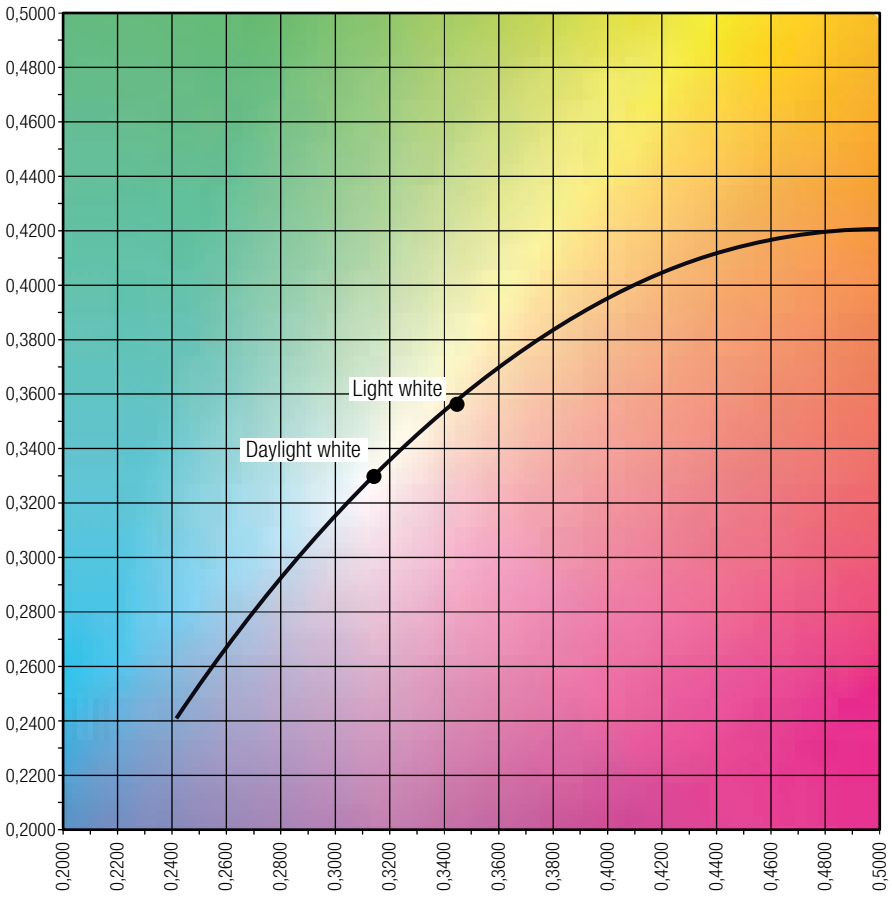
MacAdam ellipse: 4SDCM

Light white (LW)

	x0	y0
Centre	0.3451	0.3552



MacAdam ellipse: 4SDCM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0,4600
0,4400
0,4200
0,4000
0,3800
0,3600
0,3400
0,3200
0,3000
0,2800
0,2600
0,2400
0,2200
0,2000
Light white
Daylight white
0,2000
0,2200
0,2400
0,2600
0,2800
0,3000
0,3200
0,3400
0,3600
0,3800
0,4000
0,4200
0,4400
0,4600
0,4800
0,5000