

TWINDOT

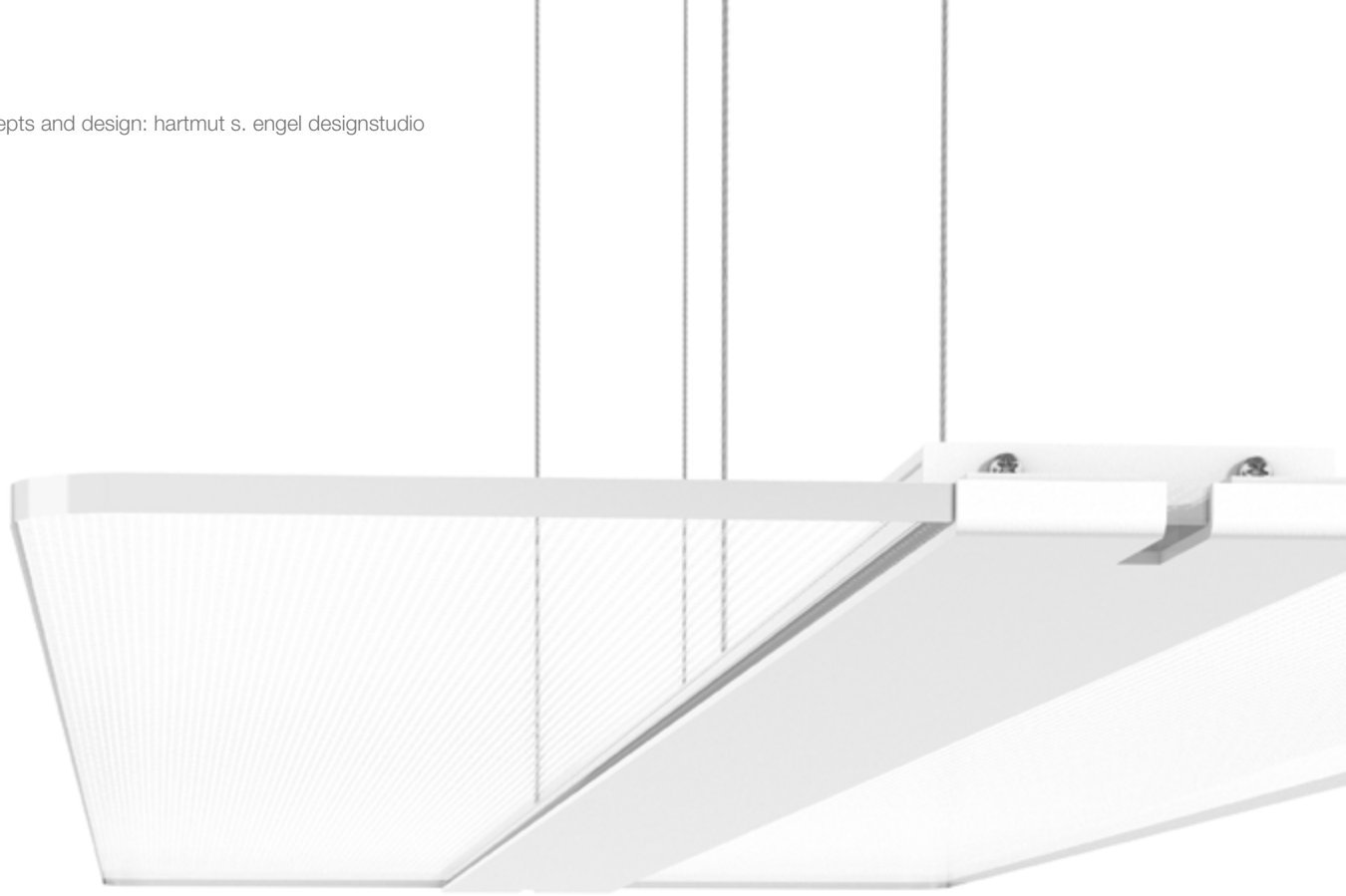
TRANSPARENT LED PENDANT LUMINAIRE SYSTEMS
FOR **GENTLE LIGHT**



The elegance of invisible light control

Over the years, whilst carrying out my design experiments on prototypes for innovative LED luminaires, I have been fascinated with the design potential of “invisible light control”. It’s always amazing to see how the spotlighting of LED light in transparent acrylic glass can produce fullness of light from this glass as if by magic. Microfine structures alone are responsible for the decoupling and emission of light in the room. The total reflection of the light waves in the PMMA leads to the magical transformation of transparency into light. The room is bathed in a glowing and gentle light with soft shadows. A real pleasure to see and work by. Gentle light poetry becomes a sensual experience.

hartmut s. engel, industrial designer



TWINDOT®

Pendant luminaire systems

GENTLE LIGHTING – POETRY FOR THE EYES

The ubiquity of mobile screens in smartphones, tablets and laptops in today's world means that glare-free lighting is a requirement that is not just confined to the office. In future, there will be a demand for a pleasant lighting atmosphere restricting direct glare for every environment. At RZB, our guiding principle is to focus on developing the kind of lighting systems that provide glare-free, gentle LED light in outstanding quality through transparent PMMA surfaces for universal use. The intention is also to achieve a magical lighting effect with the characteristics of "minimalist form" and "transparent light control", which make the luminaires suitable for open use in any architectural environment. These stimulating lighting systems are also ideal for supporting the biodynamic daylight rhythm (HCL). These tunable white versions are particularly good for users' emotional well-being.

RZB has created the TWINDOT range of LED suspended luminaires as the first product family to achieve a magical lighting effect. These lighting systems are based on the two designs for a new generation of light-decoupled microprismatic and authentic system design by the reputed designer Hartmut S. Engel, with whom RZB has worked successfully for a long time now.

The "TWINDOT light technology" ensures the success of the transformation: the innovative microprismatic transforms the total reflection of the light waves in the transparent acrylic glass into a magical light. The room is bathed in a glowing and gentle light with soft shadows and glare-free light to see and work by. Gentle light poetry becomes a sensual experience.

ADDITIONAL ADVANTAGES

- ✕ Made in Germany
 - ✕ Brand new, perfectly glare-free TWINDOT prismatic
 - ✕ Even and wide indirect and direct light distribution
 - ✕ Pleasantly gentle light with soft shadows
 - ✕ smart+free Bluetooth control and daylight and presence sensor optional
 - ✕ Tunable white version available
 - ✕ Double luminaires and continuous line luminaire can be configured
 - ✕ Ideal for office areas (UGR < 19) and environments with computer screens in accordance with EN 12464-1
 - ✕ Luminous efficiency up to 130 lm/W
 - ✕ Light output 6,500 lm for 1,200 format and 8,100 lm for 1,500 format - direct/indirect light emission 55/45
 - ✕ CRI 80
 - ✕ LED service life > 60,000 hours L100 controlled CLO
- For a constant light output throughout the entire lifetime of the LEDs





TWINDOT®

Transformation from transparency into light



Gentle light

The mystical transformation of a transparent surface into bright fullness of light in the room is sure to enchant every observer



TWINDOT®

LED light technology for perfect vision

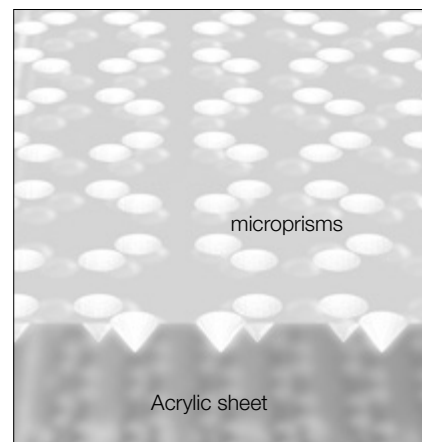
TWINDOT LIGHT TECHNOLOGY

With superior efficiency and very wide light emission for pleasantly gentle light with soft shadows

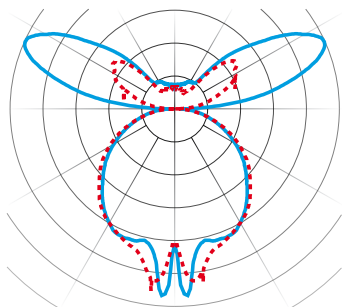
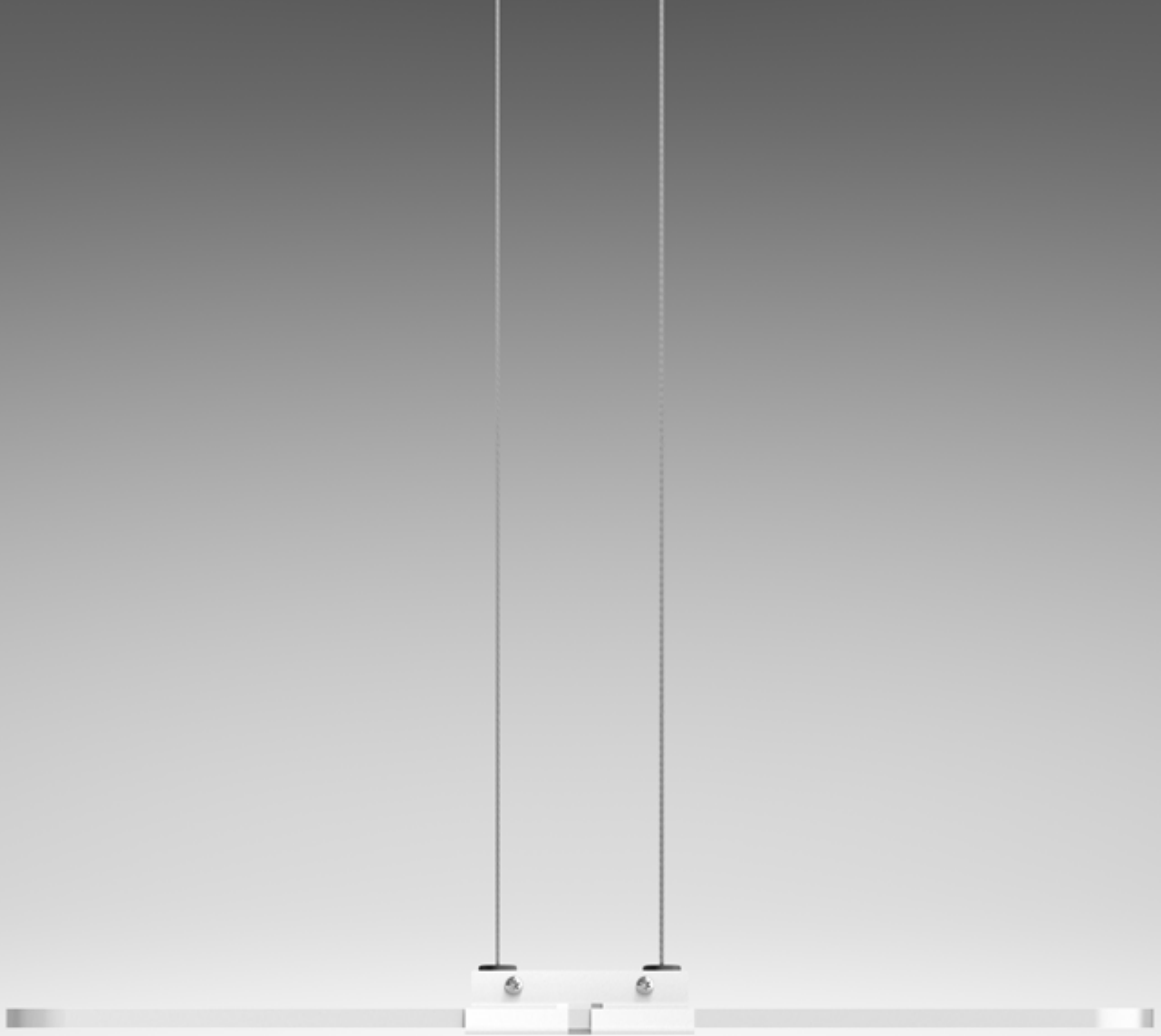
A transparent light guide measuring just 6 mm thin and made of UV-resistant acrylic glass (PMMA) is equipped with the TWINDOT microprism structure in a hot-embossing process. This structure consists of microfine twin prisms, which have been applied to the top surface of an acrylic sheet in a defined angle matrix.

This serves to decouple the light and bathe the room in gentle, glare-free lighting with soft shadows – perfect for evenly lit ceilings, walls and work surfaces, and ideal for a wide variety of screen-based tasks.

Direct/indirect light emission 55/45



Cut through the
TWINDOT microprism structure



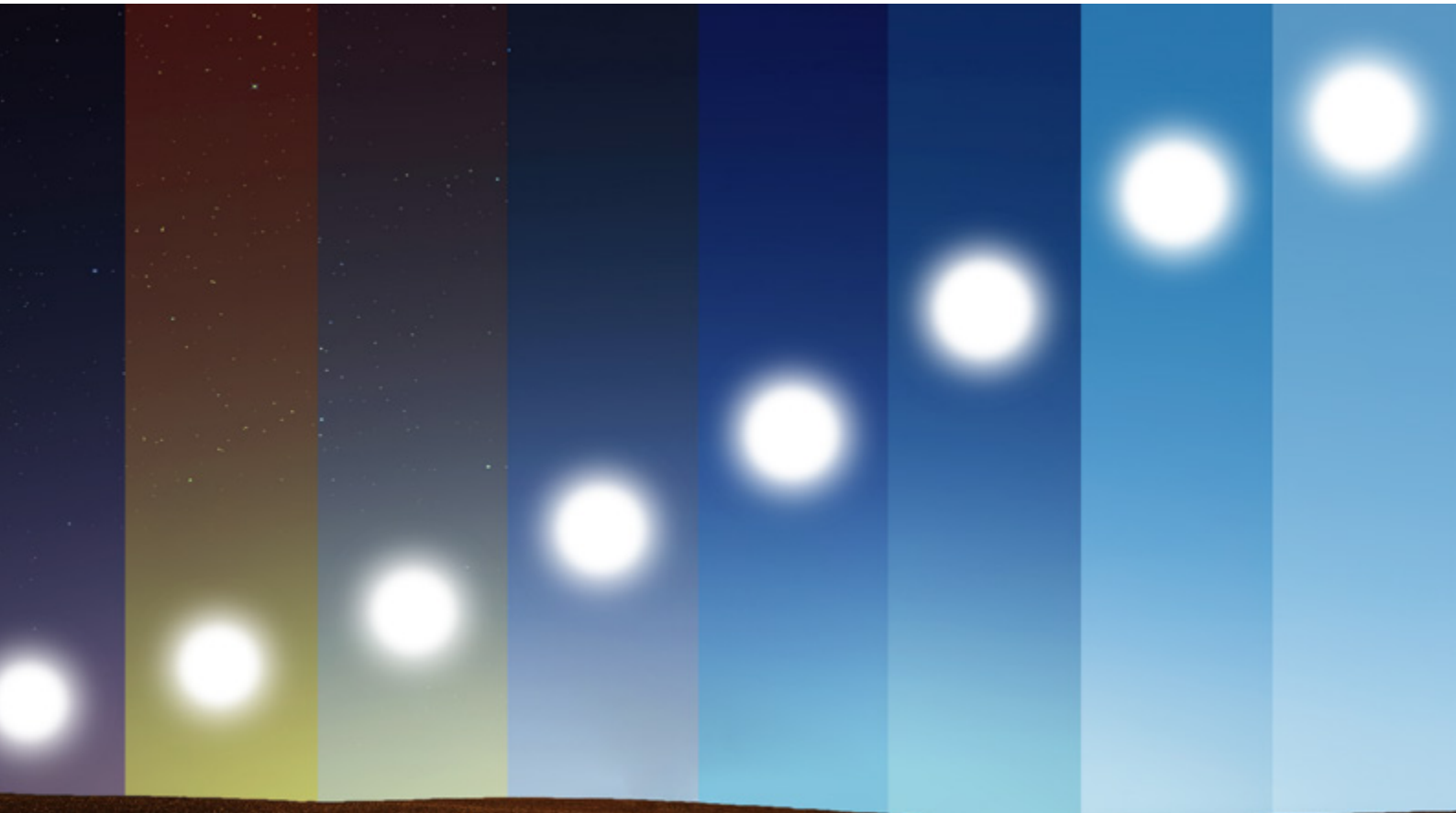
PHOTOMETRICS

- ✕ Luminous efficiency up to 130 lm/W
- ✕ Ideal for office areas (UGR < 19) and environments with computer screens in accordance with EN 12464-1
- ✕ LED light output up to 8,100 lm
- ✕ Colour temperature 3,000 K, 4,000 K or Tunable White
- ✕ CRI 80
- ✕ Pleasantly gentle light with soft shadows
- ✕ Direct/indirect light emission 55/45
- ✕ LED service life > 60,000 hours L100 controlled CLO
For a constant light output throughout the entire lifetime of the LEDs
- ✕ Other light outputs on request

TWINDOT®

Human Centric Lighting (HCL)

Premium-quality lighting equipment and intelligent controls for a comprehensive HCL concept



Moods

Changing light moods in the dynamic rhythm of daylight can have an extremely positive influence on wellbeing.

Light management systems such as RZB light control+³ with the appropriate sensor technology can automatically regulate these processes. Versions with the RZB smart+free Bluetooth component allow personal access to light scenarios controlled by an app.

The fields of application for Human Centric Lighting range from private households, offices, common rooms and conference rooms to rooms used in the healthcare sector.





HCL: Daylight simulation for a dynamic circadian rhythm

The human circadian rhythm is determined by the course of sunlight and influences the release or inhibition of the sleep hormone melatonin.

The blue part of natural daylight encourages alertness and concentration.

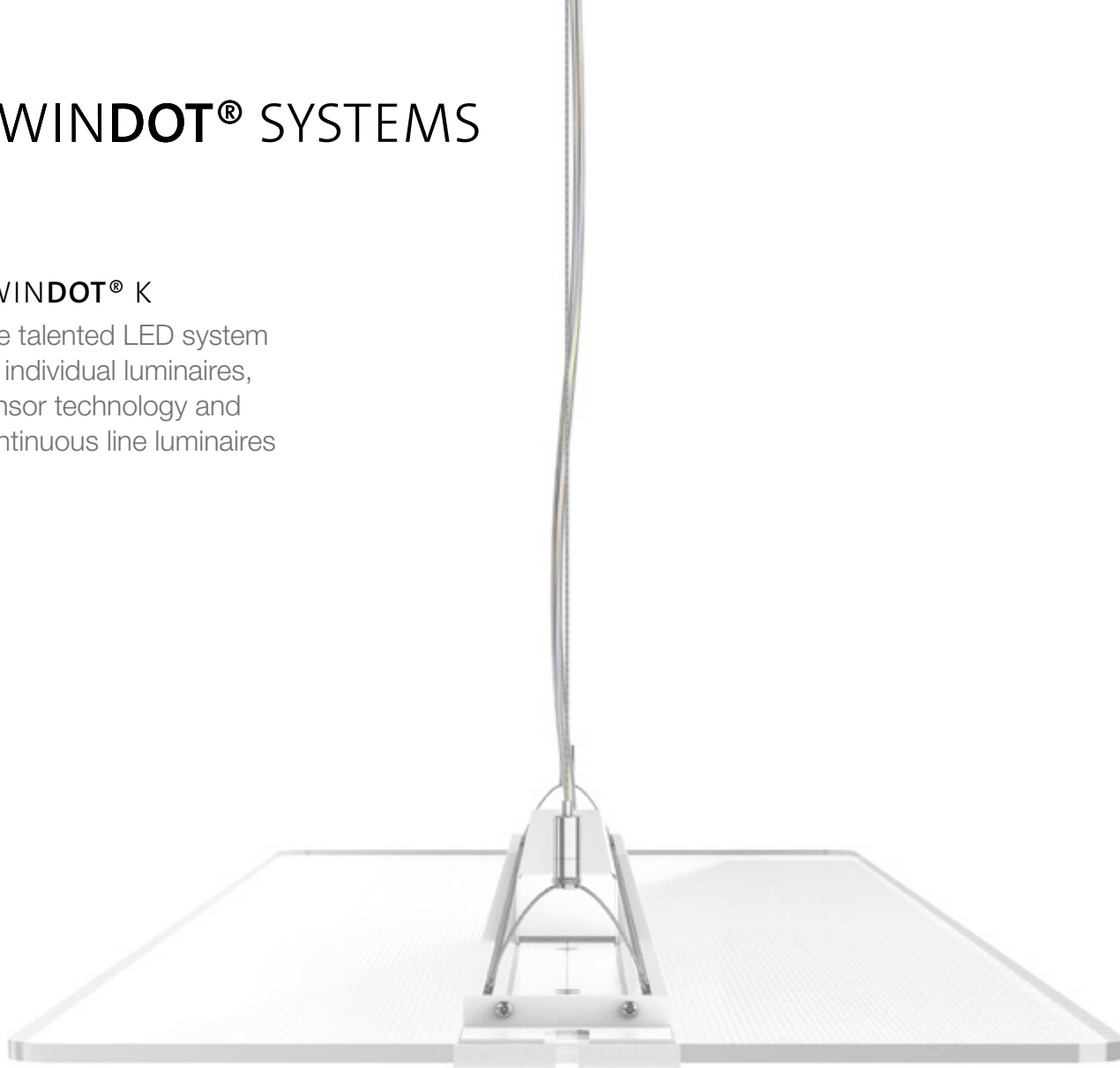
Biologically effective light in “tunable white” versions aims to support the hormone control process by simulating the light colour and intensity of the natural course of daylight.



TWINDOT® SYSTEMS

TWINDOT® K

The talented LED system
for individual luminaires,
sensor technology and
continuous line luminaires



- ✕ 2 point steel cable suspension with transparent power cable, height adjustable steplessly between 500 and 1,200 mm. The horizontal is as well steplessly adjustable.
- ✕ Available in two different lengths – dual luminaires and continuous line luminaires can be configured
- ✕ Compact, fitted drivers facilitate a wide range of control, sensor and continuous line options
- ✕ smart+free Bluetooth control or daylight and presence sensor optional
- ✕ Tunable White option available
- ✕ Featuring sophisticated TWINDOT Light Technology

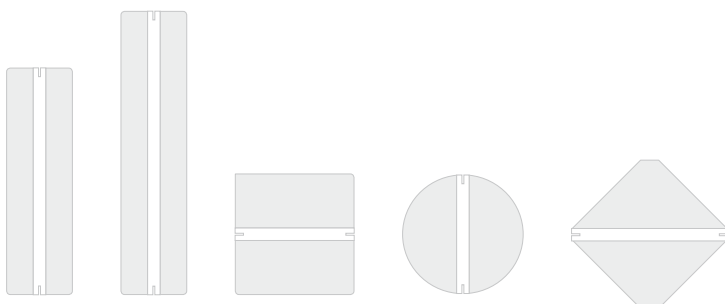


TWINDOT® S

Exceptional LED individual
luminaire formats:
Extra flat and exclusive



- ✕ 4 point steel cable suspension. Power supply through suspension cable, height adjustable steplessly between 500 and 1,200 mm.
- ✕ Choice of four impressive single luminaire formats
- ✕ Super-flat, minimalistic appearance without any unwelcome cables or drivers
- ✕ smart+free Bluetooth Control as an option
- ✕ Tunable White option available for TWINDOT S Square/Round/Diamond
- ✕ Featuring sophisticated TWINDOT Light Technology



TWINDOT® K

Details at a glance

The talented LED system for individual luminaires, sensor technology and continuous line luminaires

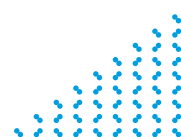
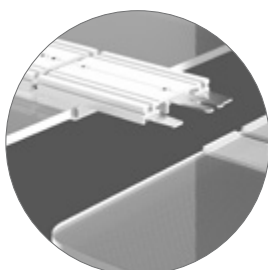


Premium-quality LEDs offer exceptional light quality in light colours 830 or 840, or from 827 to 865 in the Tunable White option, which can be controlled via DALI or Bluetooth (smart+free)

Light distribution is up to 55% direct and up to 45% indirect

A highly polished reflection trim finishes off the cover with TWINDOT prismatic

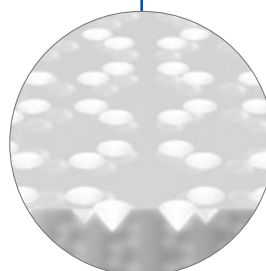
The TWINDOT K pendant luminaire systems feature a modular design, making them suitable for straightforward sandwich constructions for an extensive product family. This universal design concept offers options for mechanical and electrical connection to multiple luminaires and continuous line luminaires. The accessory set includes all the required components. This connection is entirely reversible in the event of changing requirements.



TWINDOT LIGHT TECHNOLOGY

Transparent light guide measuring just 6 mm thick and made of UV-resistant acrylic glass (PMMA) with TWINDOT microprism structure.

The TWINDOT structure consists of microfine twin prisms, which have been applied to the top surface of an acrylic cover by means of a hot-embossing process in a defined angle matrix.





State of the art drivers regulate the LEDs in the TWINDOT luminaire systems throughout their entire lifetime and therefore prevent the usual reduction in luminous flux.

This process known as CLO (Constant Light Output) allows the optimised control of efficiency right from the start.

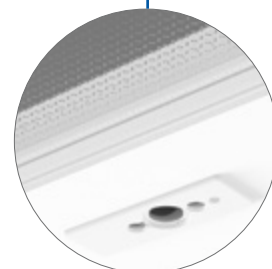
In addition to the basic on/off switch, the option is also available to incorporate controls based on DALI or Bluetooth (smart+free) technology or even to integrate daylight and presence sensors.

2 point steel cable suspension,
height adjustable steplessly.
Transparent power cable.



Middle bar made of
aluminium, powder-coated

Integrated sensor element for the auto-
matic adjustment of brightness depending
on the amount of daylight and presence



Available in a rectangular design in lengths of
1,200 mm and 1,500 mm



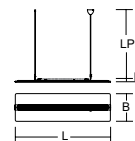
TWINDOT® K

Product overview



Pendant luminaires | Series: TWINDOT K

Type of Protection: IP 20
Protection Class: I
Impact Protection: IK03
Suspension Length LP: 500-1200 mm



Extremely flat and frameless appearance. Middle bar made of aluminium extrusion profile, powder-coated with integrated converter. Transparent light guide made of UV-resistant acrylic glass (PMMA). TWINDOT technology light control, light emission direct 55% / indirect 45%.
UGR ≤ 19 (screen-compliant according to EN-12464-1). 2 point steel cable suspension, height adjustable steplessly with transparent power cable.

Sensor technology and smart+free control available as options.
Expandable to continuous line luminaire with connection kit.

Available colour: 2 = white

- ✕ Luminous efficiency
up to 130 lm/W
- ✕ UGR < 19

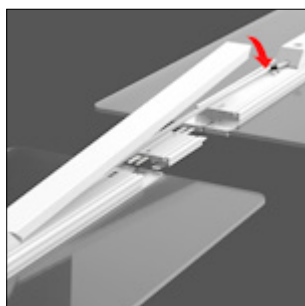
Reference number	Dimensions	Lamp	Light colour	Luminaire flux	System power	UGR	dimmi-able	EEC
Pendant luminaires								
Length L 1200 mm								
312262.002	L 1200, B 350, H 45	LED	830	6500 lm	57 W	16,5	on/off	A++
312262.002.19	L 1200, B 350, H 45	LED	830	6500 lm	57 W	16,5	Sensor	A++
312262.002.730	L 1200, B 350, H 45	LED	830	6500 lm	57 W	16,5	smart+free	A++
312262.002.76	L 1200, B 350, H 45	LED	830	6500 lm	57 W	16,5	DALI	A++
312262.002.1	L 1200, B 350, H 45	LED	840	6500 lm	54 W	16,7	on/off	A++
312262.002.1.19	L 1200, B 350, H 45	LED	840	6500 lm	54 W	16,7	Sensor	A++
312262.002.1.730	L 1200, B 350, H 45	LED	840	6500 lm	54 W	16,7	smart+free	A++
312262.002.1.76	L 1200, B 350, H 45	LED	840	6500 lm	54 W	16,7	DALI	A++
Tunable White - 2700 K to 6500 K coming soon...								
Length L 1500 mm								
312264.002	L 1500, B 350, H 45	LED	830	8100 lm	65 W	16,8	on/off	A++
312264.002.19	L 1500, B 350, H 45	LED	830	8100 lm	65 W	16,8	Sensor	A++
312264.002.730	L 1500, B 350, H 45	LED	830	8100 lm	65 W	16,8	smart+free	A++
312264.002.76	L 1500, B 350, H 45	LED	830	8100 lm	65 W	16,8	DALI	A++
312264.002.1	L 1500, B 350, H 45	LED	840	8100 lm	62 W	16,9	on/off	A++
312264.002.1.19	L 1500, B 350, H 45	LED	840	8100 lm	62 W	16,9	Sensor	A++
312264.002.1.730	L 1500, B 350, H 45	LED	840	8100 lm	62 W	16,9	smart+free	A++
312264.002.1.76	L 1500, B 350, H 45	LED	840	8100 lm	62 W	16,9	DALI	A++
Tunable White - 2700 K to 6500 K coming soon...								



Accessories | Connection kit for continuous line luminaire

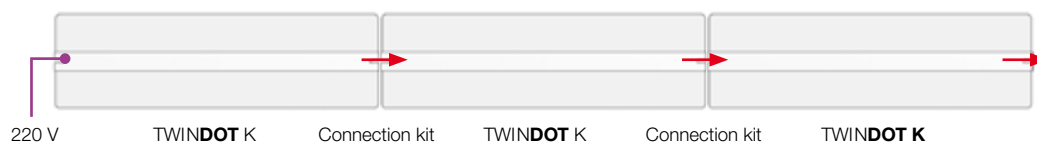
The connection kit contains all necessary components for the mechanical and electrical connection of two TWINDOT K luminaires. Not suitable for luminaires with sensor technology or smart+free controls.

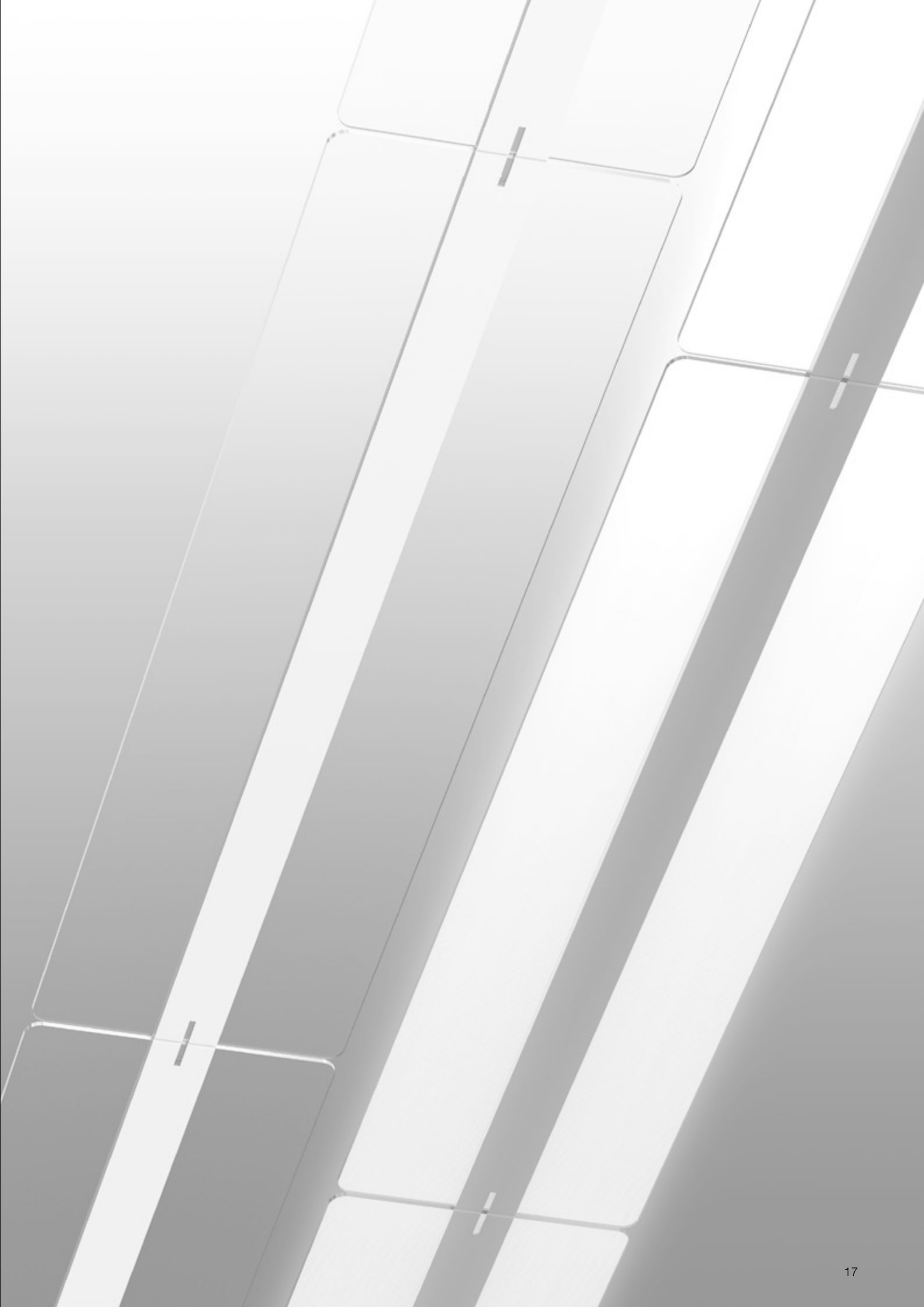
Connection kit for continuous line luminaire			Price Category 21
982449.002	L 567, B 66, H 24	Connection kit 3 pole L 1200 mm (on/off version)	
982449.012	L 567, B 66, H 24	Connection kit 5 pole L 1200 mm (DALI version)	
982450.002	L 847, B 66, H 24	Connection kit 3 pole L 1500 mm (on/off version)	
982450.012	L 847, B 66, H 24	Connection kit 5 pole L 1500 mm (DALI version)	



TWINDOT K continuous line comprising up to ten connected luminaires.

All TWINDOT K single luminaires are suitable for use as on/off or DALI models.
The connections are entirely reversible.





TWINDOT® S

Details at a glance

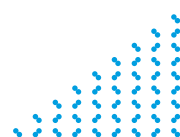
The light frame at just 6 mm determines the extra flat design
The luminaire appears to float almost immaterially in the room



Premium-quality LEDs offer exceptional light quality in light colours 830 or 840, or from 827 to 865 in the Tunable White option (for TWINDOT S Square, Round and Diamond only), which can be controlled via DALI or Bluetooth (smart+free)

Light distribution is up to 55% direct and up to 45% indirect

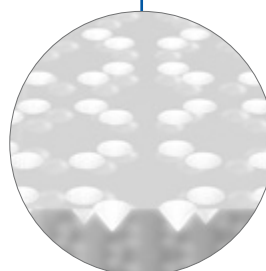
A highly polished reflection trim finishes off the cover with TWINDOT prismatic



TWINDOT LIGHT TECHNOLOGY

Transparent light guide measuring just 6 mm thick and made of UV-resistant acrylic glass (PMMA) with TWINDOT microprism structure.

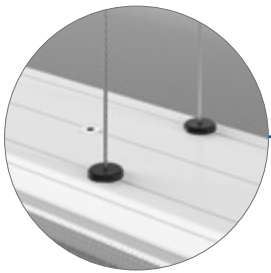
The TWINDOT structure consists of microfine twin prisms, which have been applied to the top surface of an acrylic cover by means of a hot-embossing process in a defined angle matrix.





State of the art drivers regulate the LEDs in the TWINDOT luminaire systems throughout their entire lifetime and therefore prevent the usual reduction in luminous flux.

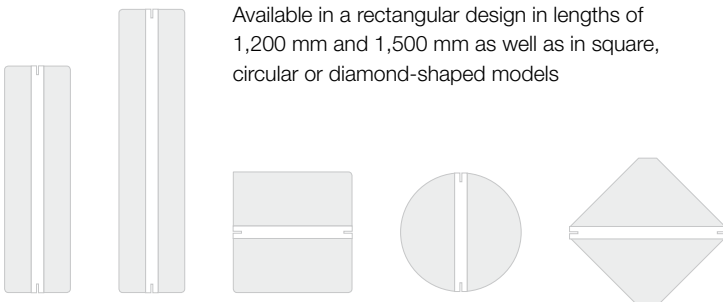
This process known as CLO (Constant Light Output) allows the optimised control of efficiency right from the start. A DALI controlled version and a Bluetooth controlled version (smart+free) are also available in addition to the On/Off version.



Power supply via the suspension cables



Middle bar made of aluminium, powder-coated



Available in a rectangular design in lengths of 1,200 mm and 1,500 mm as well as in square, circular or diamond-shaped models

TWINDOT® S

Expansion of the product family with concentric formats



Gentle light

Lively diversity with the same design
for the planning of emotional light experiences



TWINDOT® S

Product overview



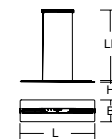
Pendant luminaires | Series: TWINDOT S

Type of Protection: IP 20
Protection Class: I
Impact Protection: IK03
Suspension Length LP: 500-1200 mm

Extremely flat and frameless appearance. Middle bar made of aluminium extrusion profile, powder-coated. Transparent light guide made of UV-resistant acrylic glass (PMMA). TWINDOT technology light control, light emission direct 55% / indirect 45%. UGR ≤ 19 (screen-compliant according to EN-12464-1). Converter integrated in the canopy (powder coated white). Power supply through suspension cable. 4-point steel cable suspension, height adjustable steplessly.

smart+free control available as an option.

Available colour: 2 = white



- ✖ Luminous efficiency
up to 130 lm/W
- ✖ UGR < 19

Reference number	Dimensions	Lamp	Light colour	Luminaire flux	System power	UGR	dimmi-able	EEC	Price Category 21
Pendant luminaires									
Length L 1200 mm									
312263.002	L 1200, B 350, H 20	LED	830	6500 lm	57 W	16,5	on/off	A++	
312263.002.730	L 1200, B 350, H 20	LED	830	6500 lm	57 W	16,5	smart+free	A++	
312263.002.76	L 1200, B 350, H 20	LED	830	6500 lm	57 W	16,5	DALI	A++	
312263.002.1	L 1200, B 350, H 20	LED	840	6500 lm	54 W	16,7	on/off	A++	
312263.002.1.730	L 1200, B 350, H 20	LED	840	6500 lm	54 W	16,7	smart+free	A++	
312263.002.1.76	L 1200, B 350, H 20	LED	840	6500 lm	54 W	16,7	DALI	A++	
Length L 1500 mm									
312265.002	L 1500, B 350, H 20	LED	830	8100 lm	65 W	16,8	on/off	A++	
312265.002.730	L 1500, B 350, H 20	LED	830	8100 lm	65 W	16,8	smart+free	A++	
312265.002.76	L 1500, B 350, H 20	LED	830	8100 lm	65 W	16,8	DALI	A++	
312265.002.1	L 1500, B 350, H 20	LED	840	8100 lm	62 W	16,9	on/off	A++	
312265.002.1.730	L 1500, B 350, H 20	LED	840	8100 lm	62 W	16,9	smart+free	A++	
312265.002.1.76	L 1500, B 350, H 20	LED	840	8100 lm	62 W	16,9	DALI	A++	



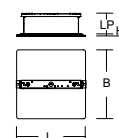
Pendant luminaires | Series: TWINDOT S Square

Type of Protection: IP 20
Protection Class: I
Impact Protection: IK03
Suspension Length LP: 500-1200 mm

Extremely flat and frameless appearance. Middle bar made of aluminium extrusion profile, powder-coated. Transparent light guide made of UV-resistant acrylic glass (PMMA). TWINDOT technology light control, light emission direct 55% / indirect 45%. UGR ≤ 19 (screen-compliant according to EN-12464-1). Converter integrated in the canopy (powder coated white). Power supply through suspension cable. 4 point steel cable suspension, height adjustable steplessly.

smart+free control available as an option.

Available colour: 2 = white



- ✖ Luminous efficiency
up to 117 lm/W
- ✖ UGR < 19

Reference number	Dimensions	Lamp	Light colour	Luminaire flux	System power	UGR	dimmi-able	EEC	Price Category 21
Pendant luminaires									
312352.002	L 645, B 637, H 20	LED	830	4800 lm	43 W	16,3	on/off	A++ A++	
312352.002.730	L 645, B 637, H 20	LED	830	4800 lm	43 W	16,3	smart+free	A++ A++	
312352.002.76	L 645, B 637, H 20	LED	830	4800 lm	43 W	16,3	DALI	A++ A++	
312352.002.1	L 645, B 637, H 20	LED	840	4800 lm	41 W	16,4	on/off	A++ A++	
312352.002.1.730	L 645, B 637, H 20	LED	840	4800 lm	41 W	16,4	smart+free	A++ A++	
312352.002.1.76	L 645, B 637, H 20	LED	840	4800 lm	41 W	16,4	DALI	A++ A++	
Tunable White - 2700 K to 6500 K									
coming soon...									

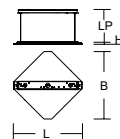
Pendant luminaires | Series: TWINDOT S Diamond

Type of Protection: IP 20
Protection Class: I
Impact Protection: IK03
Suspension Length LP: 500-1200 mm

Extremely flat and frameless appearance. Middle bar made of aluminium extrusion profile, powder-coated. Transparent light guide made of UV-resistant acrylic glass (PMMA). TWINDOT technology light control, light emission direct 55% / indirect 45%. UGR ≤ 19 (screen-compliant according to EN-12464-1). Converter integrated in the canopy (powder coated white). Power supply through suspension cable. 4 point steel cable suspension, height adjustable steplessly.

smart+free control available as an option.

Available colour: 2 = white



Reference number	Dimensions	Lamp	Light colour	Luminaire flux	System power	UGR	dimmi-able	EEC
Pendant luminaires								
Price Category 21								
312354.002	L 645, B 700, H 20	LED	830	3500 lm	39 W		on/off	A++ A++
312354.002.730	L 645, B 700, H 20	LED	830	3500 lm	39 W		smart+free	A++ A++
312354.002.76	L 645, B 700, H 20	LED	830	3500 lm	39 W		DALI	A++ A++
312354.002.1	L 645, B 700, H 20	LED	840	3500 lm	37 W		on/off	A++ A++
312354.002.1.730	L 645, B 700, H 20	LED	840	3500 lm	37 W		smart+free	A++ A++
312354.002.1.76	L 645, B 700, H 20	LED	840	3500 lm	37 W		DALI	A++ A++
Tunable White - 2700 K to 6500 K								
coming soon...								

- ✦ Luminous efficiency up to 95 lm/W
- ✦ UGR < 19

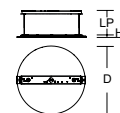
Pendant luminaires | Series: TWINDOT S Round

Type of Protection: IP 20
Protection Class: I
Impact Protection: IK03
Suspension Length LP: 500-1200 mm

Extremely flat and frameless appearance. Middle bar made of aluminium extrusion profile, powder-coated. Transparent light guide made of UV-resistant acrylic glass (PMMA). TWINDOT technology light control, light emission direct 55% / indirect 45%. UGR ≤ 19 (screen-compliant according to EN-12464-1). Converter integrated in the canopy (powder coated white). Power supply through suspension cable. 4 point steel cable suspension, height adjustable steplessly.

smart+free control available as an option.

Available colour: 2 = white



Reference number	Dimensions	Lamp	Light colour	Luminaire flux	System power	UGR	dimmi-able	EEC
Pendant luminaires								
Price Category 21								
312353.002	D 645, H 20	LED	830	4500 lm	41 W	16,5	on/off	A++ A++
312353.002.730	D 645, H 20	LED	830	4500 lm	41 W	16,5	smart+free	A++ A++
312353.002.76	D 645, H 20	LED	830	4500 lm	41 W	16,5	DALI	A++ A++
312353.002.1	D 645, H 20	LED	840	4500 lm	39 W	16,6	on/off	A++ A++
312353.002.1.730	D 645, H 20	LED	840	4500 lm	39 W	16,6	smart+free	A++ A++
312353.002.1.76	D 645, H 20	LED	840	4500 lm	39 W	16,6	DALI	A++ A++
Tunable White - 2700 K to 6500 K								
coming soon...								

- ✦ Luminous efficiency up to 115 lm/W
- ✦ UGR < 19





TWINDOT®

Integration into light-management systems



With smart+free it is possible to control your luminaire within a secure and wireless network.

- ⊕ 3-wire cable sufficient, without additional control wire
- ⊕ Wireless networking with Bluetooth Low Energy
- ⊕ Light and movement sensors can be integrated
- ⊕ Operation using standard pushbuttons, smartphones and tablet
- ⊕ Tunable white and RGB applications can be implemented



The DALI premium solution for up to 4 sensors and up to 32 luminaires

- ⊕ Plug & Play for quick and easy installation
- ⊕ Suitable for daylight-dependent control with presence function
- ⊕ Different operating modes
- ⊕ 4 sensors can be connected
- ⊕ Suitable for up to 32 luminaires (1 x EB DALI®)



A complete DALI control system that offers the flexibility to control lighting groups and light scenarios in any room

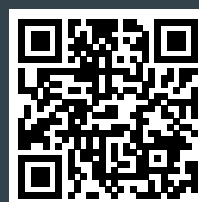
- ⊕ Plug & Play for quick and easy installation
- ⊕ Daylight-dependent and event-driven control with presence function of all groups
- ⊕ 4 DALI® circuits
- ⊕ Operation using standard pushbuttons, smartphones and tablets
- ⊕ Programmable via PC

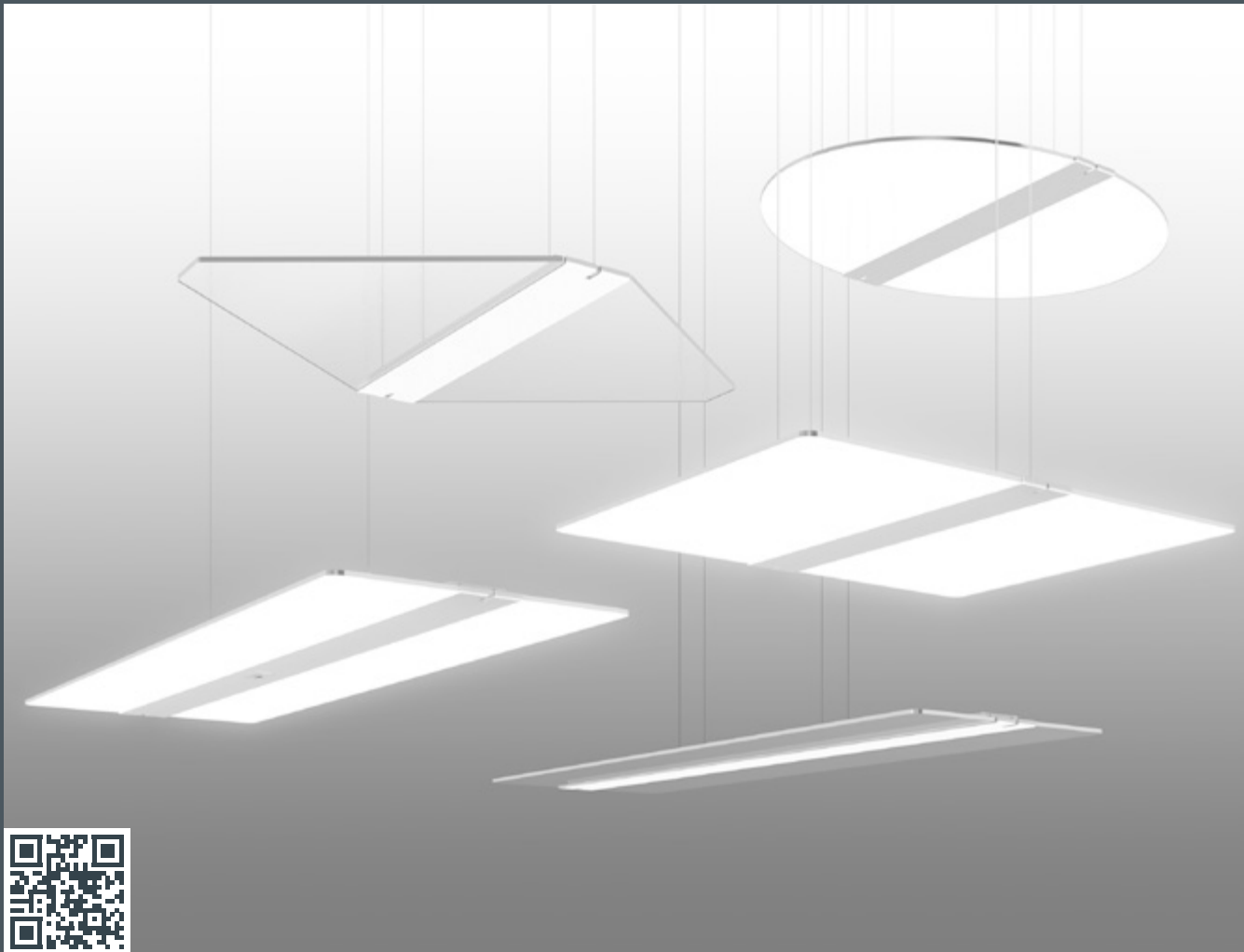


Light management system for controlling light colours and light scenarios and for even simulating daylight

- ⊕ Plug & Play for quick and easy installation
- ⊕ For dynamic lighting and circadian daylight simulations
- ⊕ Helps to support and stabilise biorhythmic processes
- ⊕ Individually adjustable light colours and light scenarios
- ⊕ Astro time switch clock
- ⊕ Suitable for up to 16 luminaires (per 2 x EB DALI)

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