



# FLUORESCENT LAMPS BANNED FROM 2023



# WHEN IT'S TIME TO SAY GOOD BYE...

Light sources that consume too much electricity or contain mercury are to disappear from the market. The first were the incandescent lamps. Halogen lamps, compact fluorescent lamps and fluorescent lamps will be next.

The legal basis for the ban on lamps and luminaires that do not meet the minimum efficiency threshold requirements is the Ecodesign Regulation (EU) 2019/2020, published in December 2019 - also referred to as the Single Lighting Regulation (SLR).

The EU is aiming to save a total of 260 TWh of energy by 2030. Lighting alone would account for about 16 % of this. The refurbishment of lighting technology is therefore making an important contribution to the climate targets set by the EU – by replacing power-guzzling lamps by LED technology as a cost-saving alternative. Sustainable LED luminaires are a success primarily because of their significantly lower power consumption and longer rated life, which saves energy, resources and costs in the long run.

**On the following pages you will find a selection of alternatives to luminaires with:**



**TC and T5-ring lamps**  
Pages 4 - 25



**T5 and T8 lamps**  
Pages 26 - 53

RZB supports you with everything you need to know about the Ecodesign Directive.

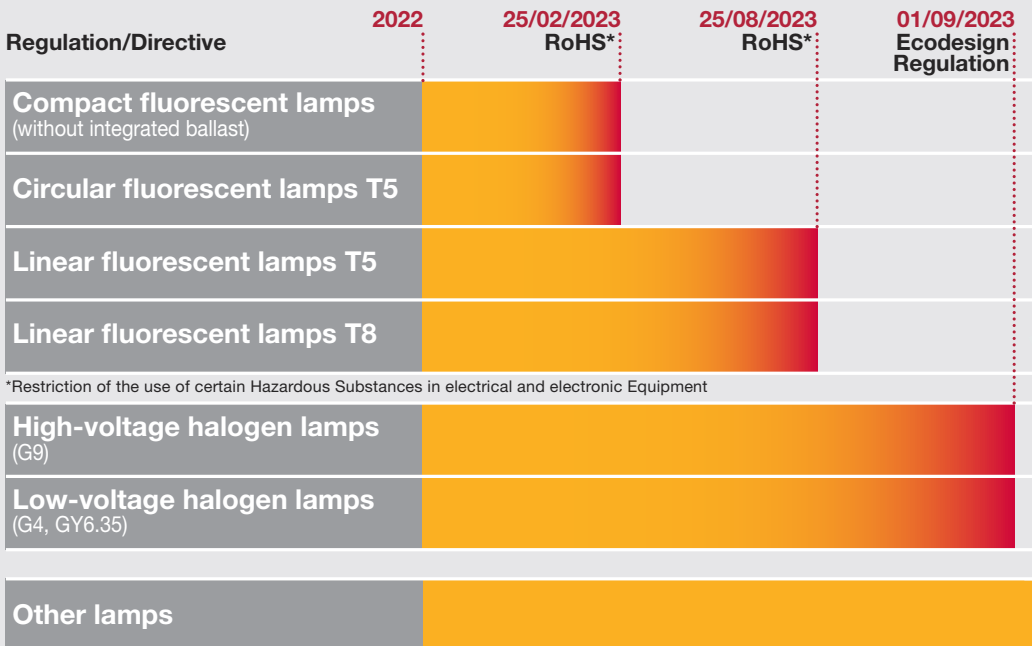






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## Present Phasing out of conventional Light Sources



\*Restriction of the use of certain Hazardous Substances in electrical and electronic Equipment



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# FLAT POLYMERO KREIS

## Ceiling and wall luminaires

Type of protection: **IP 40**

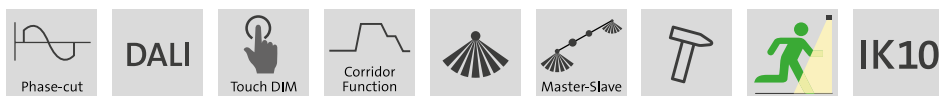
Protection class: I

Impact resistance: IK03 (PMMA), IK10 (Polycarbonate)

Base: metal, powder-coated. Diffuser: plastic (PMMA), opal, or plastic (polycarbonate), opal and shockproof. Diffuser fastening: patented push system.

Available colour: white

- ⊕ Comprehensive range consisting of: pendant luminaires, ceiling luminaires and wall luminaires
- ⊕ Depending on the version, high-quality polycarbonate or PMMA are available as diffusers
- ⊕ Luminous efficacy up to 127 lm/W
- ⊕ Individual design possible with foil print (film guaranteed for 10 years; UV and weather resistant in some models)







Outdated installation with ceiling and wall luminaires

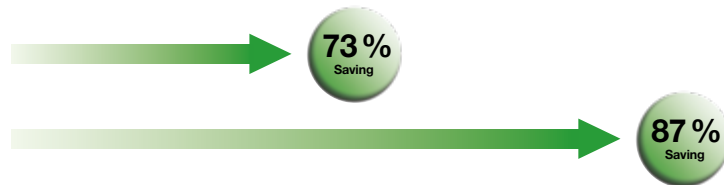


New installation with Flat Polymero® Kreis

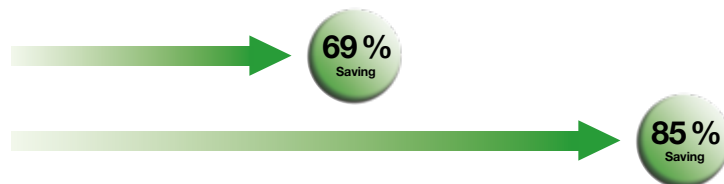


New installation with Flat Polymero® Kreis and light management

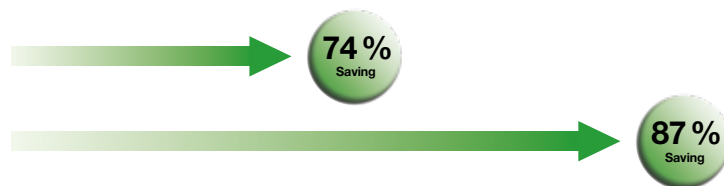
Fitted with	2 x TC-D 18 W	LED 14 W	Saving	LED 14 W	Saving
System power W	52	14		14	
Number of luminaires	15	15		15	
Power consumption kWh *	2.145,00	577,50	1.567,50	289,04	1.855,96
Electricity costs €/a **	879,45	236,78	642,68	118,51	760,94



Fitted with	2 x TC-D 26 W	LED 21 W	Saving	LED 21 W	Saving
System power W	68	21		21	
Number of luminaires	15	15		15	
Power consumption kWh *	2.805,00	866,25	1.938,75	433,56	2.371,44
Electricity costs €/a **	1.150,05	355,16	794,89	177,76 €	972,29



Fitted with	3 x TC-D 26 W	LED 27 W	Saving	LED 27 W	Saving
System power W	102	27		27	
Number of luminaires	15	15		15	
Power consumption kWh *	4.207,50	1.113,75	3.093,75	557,43	3.650,07
Electricity costs €/a **	1.725,08	456,64	1.268,44	228,55	1.496,53



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



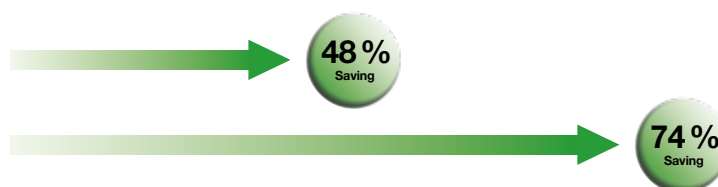
Outdated installation with ceiling and wall luminaires

New installation with Flat Polymero® Kreis

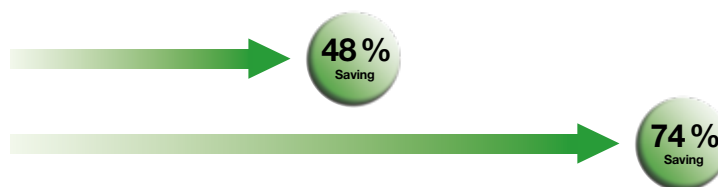


New installation with Flat Polymero® Kreis and light management

Fitted with	1 x T16R 22 W	LED 13 W	Saving	LED 13 W	Saving
System power W	25	13		13	
Number of luminaires	15	15		15	
Power consumption kWh *	1.031,25	536,25	495,00	268,39	762,86
Electricity costs €/a **	422,81	219,86	202,95	110,04	312,77



Fitted with	1 x T16R 55 W	LED 31 W	Saving	LED 31 W	Saving
System power W	60	31		31	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	1.278,75	1.196,25	640,01	1.834,99
Electricity costs €/a **	1.014,75	524,29	490,46	262,41	752,34



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%.

Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh







# FLAT SLIM+

## Ceiling and wall luminaires

Type of protection: **IP 65** wall mounting, **IP 40** ceiling mounting

Protection class: I

Impact resistance: IK07

Base: pressure die-cast aluminium, powder-coated. Diffuser: matt or high-polish crystal glass, painted inside, with fixing device. Diffuser with frame made of pressure die-cast aluminium, powder coated, bonded. Diffuser attached with clip system. Base fixing slots outside of gasketed area, drill hole deviations can be compensated. With membrane valve as a standard to avoid condensed water. LED module can be connected without use of tools. The large connection compartment on the back for convenient connections is also ideal for through wiring.

**MultiLumen:** 2 steps adjustable luminous flux.

**MultiColour:** Colour temperature adjustable via jumper.

Available colours: white, anthracite metallic, silver metallic

Versions with Casambi smart+free Bluetooth® control for wireless network and operation using Android / iOS devices, free app available for download.

- ⊕ Big terminal block; ideal for through-wiring
- ⊕ Diffuser mounting without use of tools, with clip system
- ⊕ Very easy installation thanks to plug & play connection
- ⊕ LED module can be replaced without use of tools
- ⊕ Standard Gore™ Protective Vents diaphragm valve to avoid condensation



MultiLumen



MultiColour

DALI

Casambi  
smart+  
free



Touch DIM



Corridor  
Function



Bluetooth®  
Mesh



Plug & Play

IP65

IK07







Outdated installation with ceiling and wall luminaires

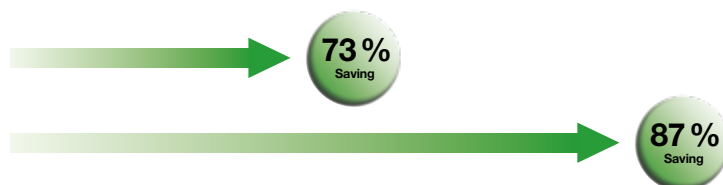


New installation with Flat Slim+

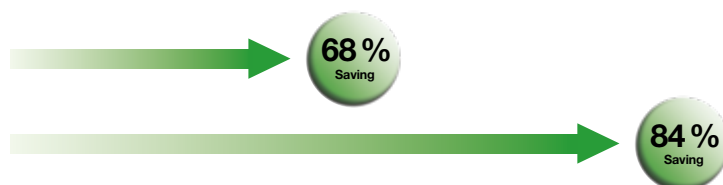


New installation with Flat Slim+ and light management

Fitted with	2 x TC-D 18 W	LED 14 W	Saving	LED 14 W	Saving
System power W	52	14		14	
Number of luminaires	15	15		15	
Power consumption kWh *	2.145,00	577,50	1.567,50	289,04	1.855,96
Electricity costs €/a **	879,45	236,78	<b>642,68</b>	118,51	<b>760,94</b>



Fitted with	2 x TC-D 26 W	LED 22 W	Saving	LED 22 W	Saving
System power W	68	22		22	
Number of luminaires	15	15		15	
Power consumption kWh *	2.805,00	907,50	1.897,50	454,20	2.350,80
Electricity costs €/a **	1.150,05	372,08	<b>777,98</b>	186,22	<b>963,83</b>



Fitted with	3 x TC-D 26 W	LED 28 W	Saving	LED 28 W	Saving
System power W	94	28		28	
Number of luminaires	15	15		15	
Power consumption kWh *	3.877,50	1.155,00	2.722,50	578,08	3.299,42
Electricity costs €/a **	1.589,78	473,55	<b>1.116,23</b>	237,01	<b>1.352,76</b>



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%.  
Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



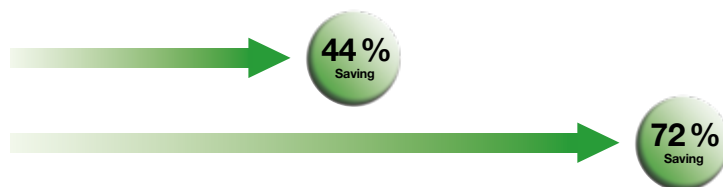
**Outdated installation with ceiling and wall luminaires**

**New installation with Flat Slim+**

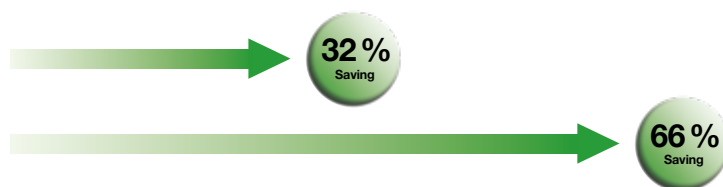


**New installation with Flat Slim+ and light management**

Fitted with	1 x T16R 22 W	LED 14 W	Saving	LED 14 W	Saving
System power W	25	14		14	
Number of luminaires	15	15		15	
Power consumption kWh *	1.031,25	577,50	453,75	289,04	742,21
Electricity costs €/a **	422,81	236,78	<b>186,04</b>	118,51	<b>304,31</b>



Fitted with	1 x T16R 55 W	LED 41 W	Saving	LED 41 W	Saving
System power W	60	41		41	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	1.691,25	783,75	846,47	1.628,53
Electricity costs €/a **	1.014,75	693,41	<b>321,34</b>	347,05	<b>667,70</b>



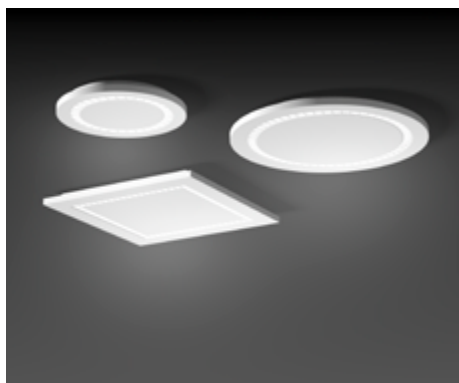
\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%.

Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh







# HEMIS

## Ceiling luminaires

Type of protection: **IP 40**

Protection class: I

Impact resistance: IK06

Base: metal, powder-coated, with bayonet fixing. Housing: plastic (polycarbonate).  
Diffuser with optic lenses. Housing and diffuser are screwed together.

Available colour: white

- ⊕ Glare-free LED ceiling luminaire with optical lens system
- ⊕ Compact slim design, total height less than 33 mm
- ⊕ Easy installation with Plug & Play plug connection
- ⊕ Big terminal block; ideal for through-wiring
- ⊕ Sealing strip on the back of the luminaire connects seamlessly with the ceiling
- ⊕ Thanks to UGR < 22 ideal for corridors, stairways, shops, schools, meeting rooms, rest areas
- ⊕ Efficacy up to 133 lm/W



IP40

IK06





Outdated installation  
with ceiling luminaires

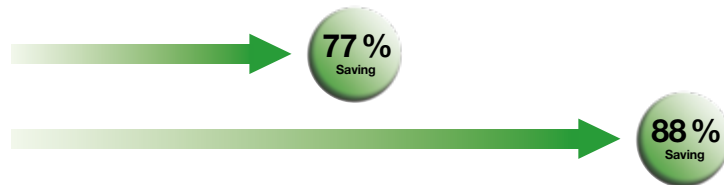


New installation with  
Hemis®

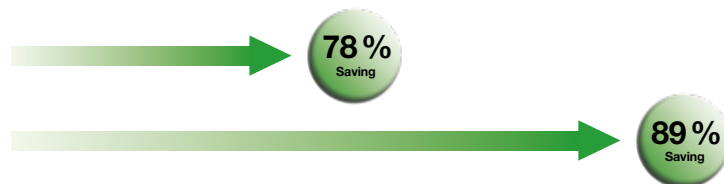


New installation with  
Hemis® and  
light management

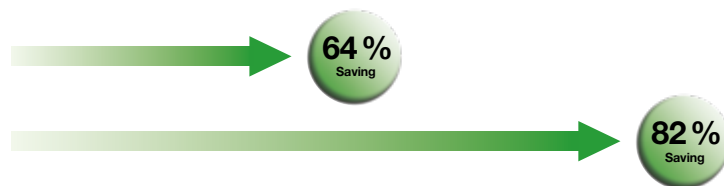
Fitted with	2 x TC-D 18 W	LED 12 W	Saving	LED 12 W	Saving
System power W	52	12		12	
Number of luminaires	15	15		15	
Power consumption kWh *	2.145,00	495,00	1.650,00	247,75	1.897,25
Electricity costs €/a **	879,45	202,95	676,50	101,58	777,87



Fitted with	2 x TC-D 26 W	LED 15 W	Saving	LED 15 W	Saving
System power W	68	15		15	
Number of luminaires	15	15		15	
Power consumption kWh *	2.805,00	618,75	2.186,25	309,68	2.495,32
Electricity costs €/a **	1.150,05	253,69	896,36	126,97	1.023,08



Fitted with	2 x TC-TEL 32 W	LED 25 W	Saving	LED 25 W	Saving
System power W	69	25		25	
Number of luminaires	15	15		15	
Power consumption kWh *	2.846,25	1.031,25	1.815,00	516,14	2.330,11
Electricity costs €/a **	1.166,96	422,81	744,15	211,62	955,34



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



Outdated installation with ceiling luminaires

New installation with Hemis®



New installation with Hemis® and light management

Fitted with	1 x T16R 22 W	LED 12 W	Saving	LED 12 W	Saving
System power W	25	12		12	
Number of luminaires	15	15		15	
Power consumption kWh *	1.031,25	495,00	536,25	247,75	783,50
Electricity costs €/a **	422,81	202,95	<b>219,86</b>	101,58	<b>321,24</b>



Fitted with	1 x T16R 55 W	LED 25 W	Saving	LED 25 W	Saving
System power W	60	25		25	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	1.031,25	1.443,75	516,14	1.958,86
Electricity costs €/a **	1.014,75	422,81	<b>591,94</b>	211,62	<b>803,13</b>



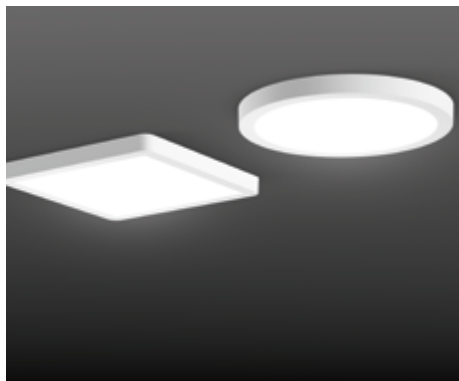
\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%.

Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh







# TRIXY

## Surface mounted and recessed downlights

Type of protection: IP 20 | Protection class: II

Ceiling thickness: 5-25 mm

Impact resistance: IK03

Housing: Plastic (polycarbonate), UV-resistant. Perfect heat management with an aluminium heat sink. Diffuser: Plastic, transparent, with opal reflector foil. Lateral light emission (RZB SIDELITE® technology) for homogeneous light distribution. Suitable for recessed mounting in ceilings and surface mounting on ceilings and walls. Integral driver. Suitable for through-wiring.

Available colour: white

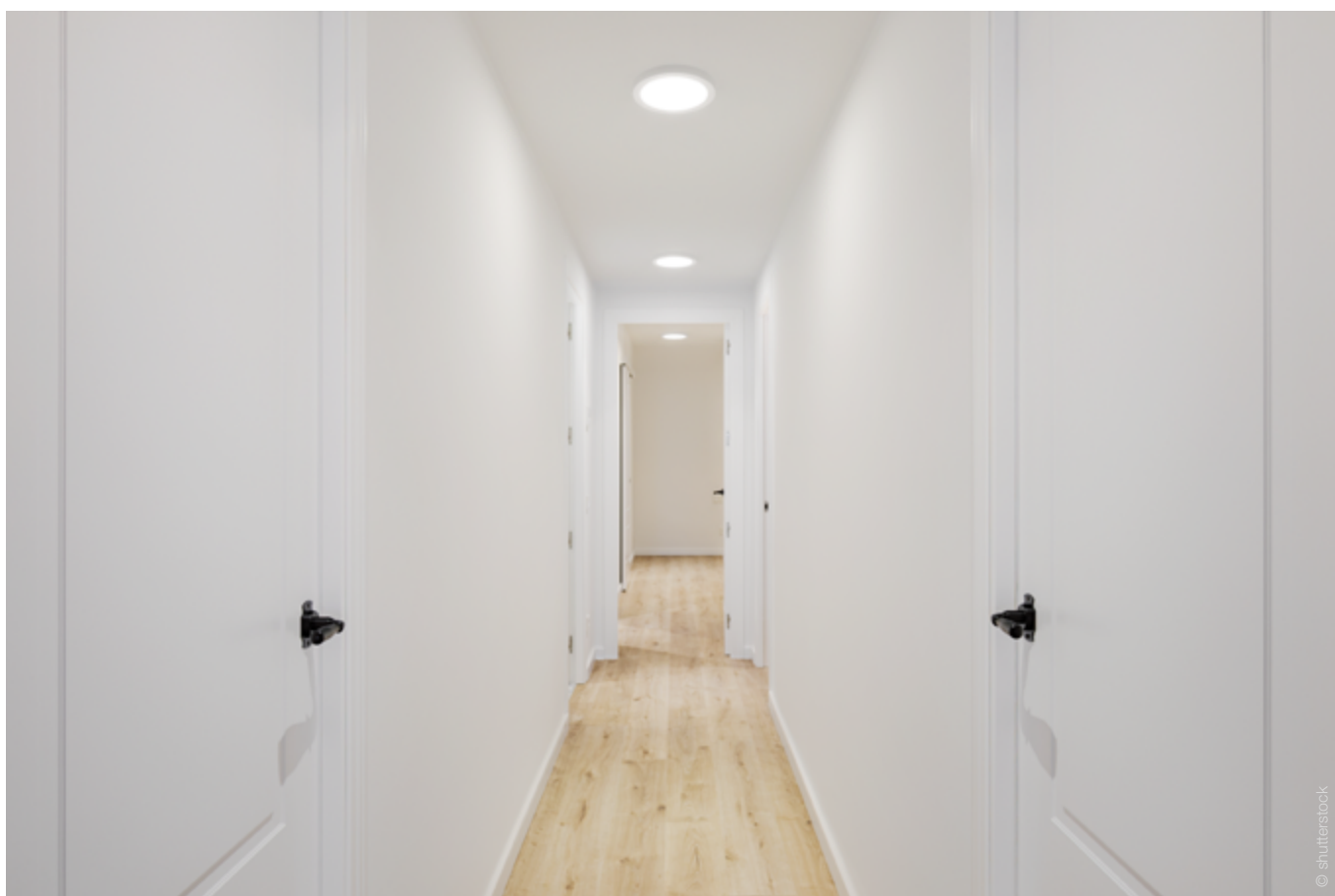
**MultiColour:** Colour temperature adjustable via switching element.

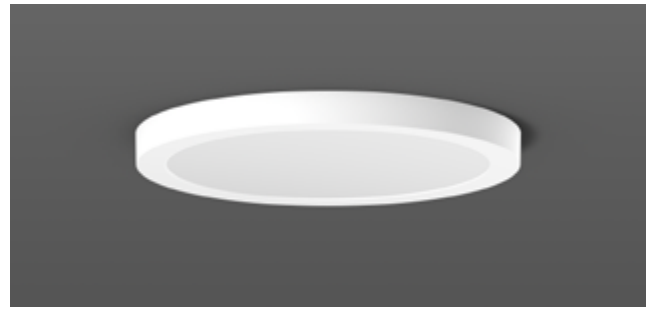
Factory setting is 4000 K

**MultiLumen:** 3 steps adjustable luminous flux. Factory setting is the highest luminous flux

**MultiCutOut:** With adjustable spring clamps, different ceiling cut-outs can be individually adhered to

- ⊕ Flat downlight for recessed or surface installation in 2 forms and 2 sizes
- ⊕ 3-fold multi-function: MultiColour, MultiLumen, MultiCutOut
- ⊕ **MultiColour:** With rear switching element, variable colour temperature 3000 K or 4000 K
- ⊕ **MultiLumen:** Luminous flux adjustable in 3 steps
- ⊕ **MultiCutOut:** With adjustable spring clamps, different **round and square** ceiling cut-outs can be individually adhered to.
- ⊕ Suitable for through-wiring
- ⊕ Luminous efficacy up to 125 lm/W





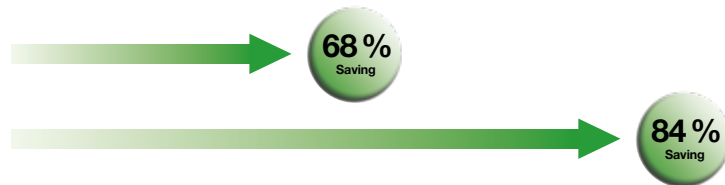
Outdated installation with surface mounted and recessed downlights

New installation with Trixy

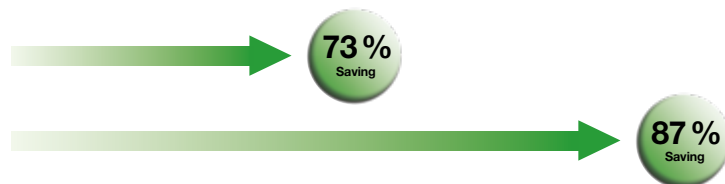


New installation with Trixy and light management

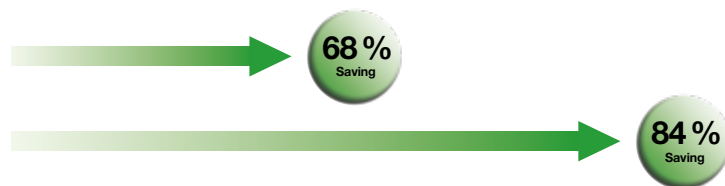
Fitted with	2 x TC-D 13 W	LED 12 W	Saving	LED 12 W	Saving
System power W	38	12		12	
Number of luminaires	15	15		15	
Power consumption kWh *	1.567,50	495,00	1.072,50	247,75	1.319,75
Electricity costs €/a **	642,68	202,95	439,73	101,58	541,10



Fitted with	2 x TC-D 18 W	LED 14 W	Saving	LED 14 W	Saving
System power W	52	14		14	
Number of luminaires	15	15		15	
Power consumption kWh *	2.145,00	577,50	1.567,50	289,04	1.855,96
Electricity costs €/a **	879,45	236,78	642,68	118,51	760,94

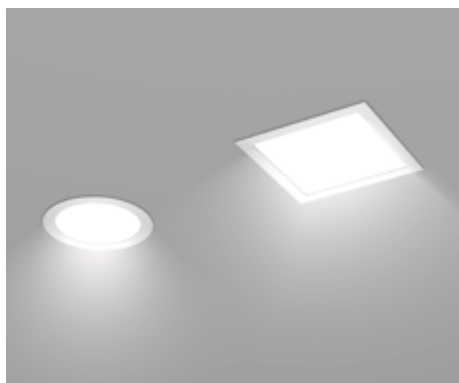


Fitted with	2 x TC-D 26 W	LED 22 W	Saving	LED 22 W	Saving
System power W	68	22		22	
Number of luminaires	15	15		15	
Power consumption kWh *	2.805,00	907,50	1.897,50	454,20	2.350,80
Electricity costs €/a **	1.150,05	372,08	777,98	186,22	963,83



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



Adapter rings available for various ceiling cut-outs!

# TOLEDO FLAT

## Recessed downlights

Type of protection: IP 20, **IP 54** on room side

Protection class: II

Ceiling thickness: 1-20 mm

Impact resistance: IK06

Housing: die-cast aluminium. Lightguide and diffuser made of non-yellowing plastic (PMMA). Ceiling installation with spring system. Mounting depth depends on ceiling strength. Incl. separate LED converter with connecting cable 250 mm.

Available colour: white

Versions with Casambi smart+free Bluetooth® control for wireless network and operation using Android / iOS devices, free app available for download.

- ⊕ Ultra thin recessed LED downlight
- ⊕ Lightguide and plastic diffuser made of non-yellowing PMMA
- ⊕ High protection type IP 54 on the room side
- ⊕ Tunable white versions, dynamically adjustable from 2700 K to 6500 K
- ⊕ Versions with connected HF motion detector can be configured through app via Bluetooth® or buttons
- ⊕ Surface mounted housing as accessory for all sizes
- ⊕ Retrofittable decorative cylinders made of chintz fabric as accessory, optional with satin finish plastic diffuser



DALI



IP 54

IK06

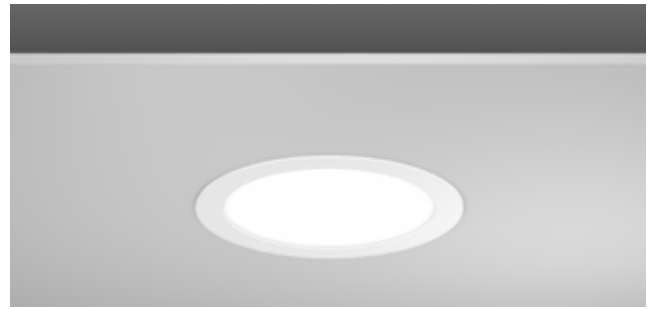


© RZB





Outdated installation with recessed downlights

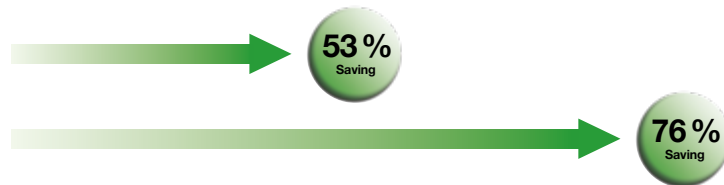


New installation with Toledo Flat

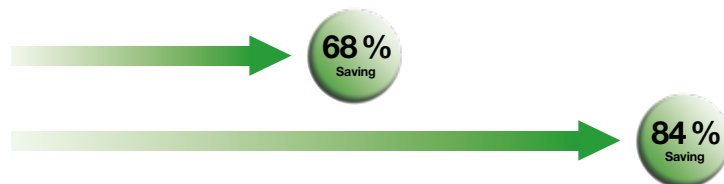


New installation with Toledo Flat and light management

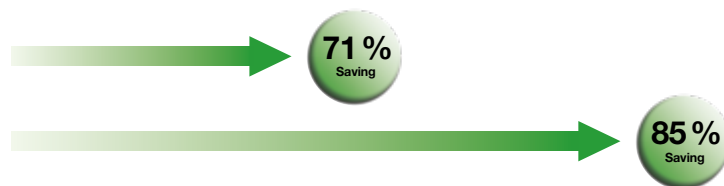
Fitted with	1 x TC-TEL 32 W	LED 17 W	Saving	LED 17 W	Saving
System power W	36	17		17	
Number of luminaires	15	15		15	
Power consumption kWh *	1.485,00	701,25	783,75	350,98	1.134,02
Electricity costs €/a **	608,85	287,51	<b>321,34</b>	143,90	<b>464,95</b>



Fitted with	2 x TC-D 26 W	LED 22 W	Saving	LED 22 W	Saving
System power W	68	22		22	
Number of luminaires	15	15		15	
Power consumption kWh *	2.805,00	907,50	1.897,50	454,20	2.350,80
Electricity costs €/a **	1.150,05	372,08	<b>777,98</b>	186,22	<b>963,83</b>



Fitted with	3 x TC-D 26 W	LED 30 W	Saving	LED 30 W	Saving
System power W	102	30		30	
Number of luminaires	15	15		15	
Power consumption kWh *	4.207,50	1.237,50	2.970,00	619,37	3.588,13
Electricity costs €/a **	1.725,08	507,38	<b>1.217,70</b>	253,94	<b>1.471,13</b>



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



Adapter rings  
available for various  
ceiling cut-outs!

I equalise.

# ARELO

## Recessed downlights

Type of protection: IP 20, **IP 44** on room side

Protection class: II

Ceiling thickness: 1-25 mm

Impact resistance: IK05

Bezel ring: die-cast aluminium, powder coated. Housing: plastic (polycarbonate), UV-resistant. Aluminium faceted reflector, highly polished anodised finish. LED diffuser, satin finish (UV-resistant polycarbonate, shockproof). Spring fastening system. On/off version with integrated converter. DALI version with separate converter.

Available colour: white

**MultiColour:** Colour temperature adjustable via switching element.

Factory setting is 4000 K.

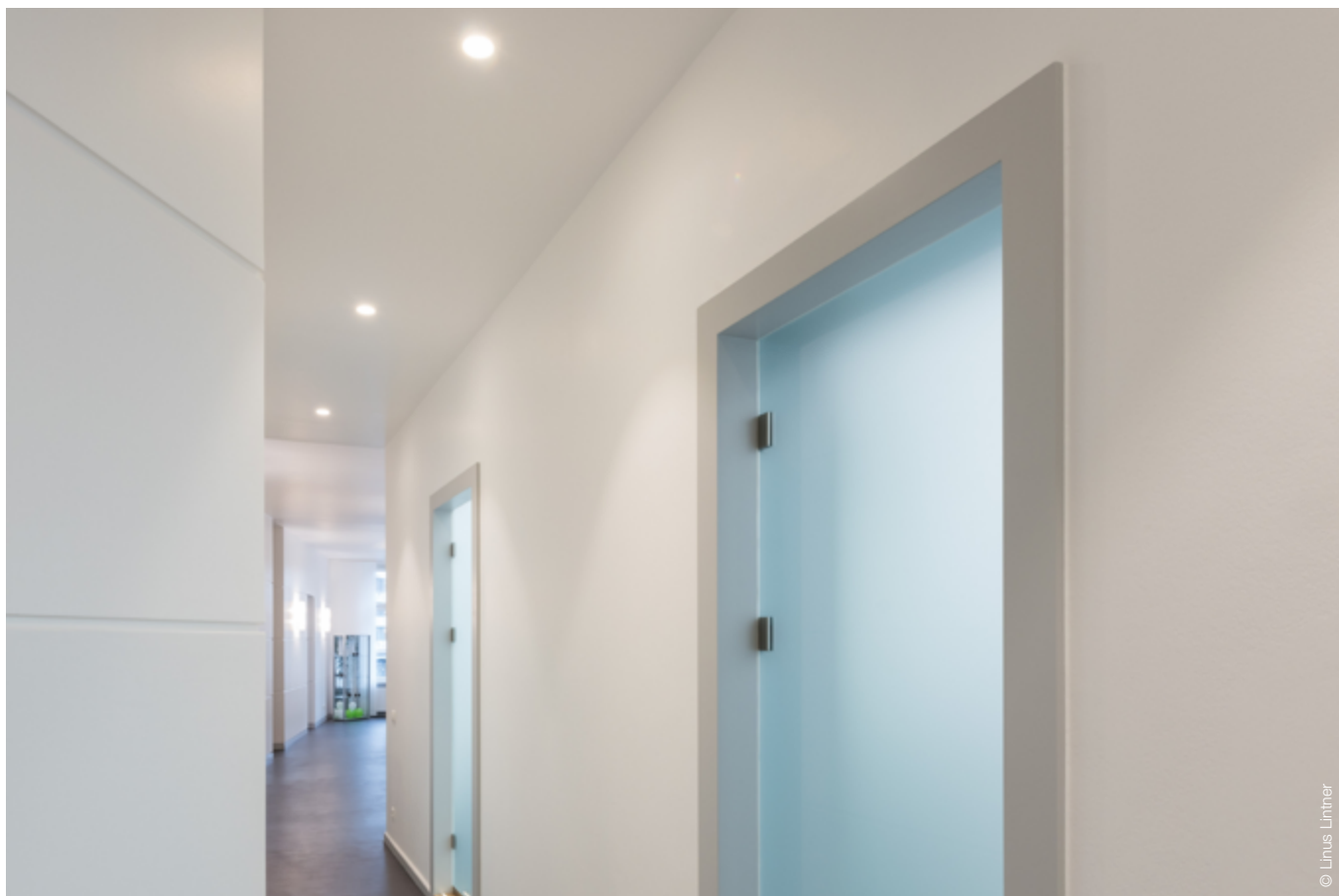
- ⊕ Housing made of shockproof, UV-resistant plastic (polycarbonate)
- ⊕ Aluminium faceted reflector, highly polished anodised finish for brilliant illumination
- ⊕ Satin finish LED diffuser to reduce direct glare
- ⊕ **MultiColour:** with rear switching element, variable colour temperature 3000 K or 4000 K
- ⊕ Protection type IP 44
- ⊕ Suitable for through-wiring
- ⊕ Easy to install thanks to tool-free spring fastening system



DALI

IP44

IK05





Outdated installation with recessed downlights

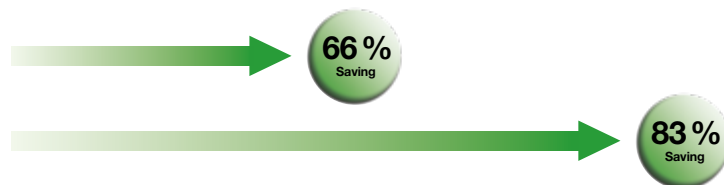


New installation with Arelo®

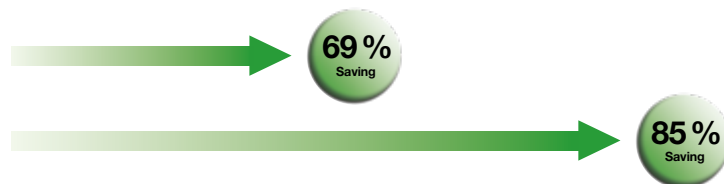


New installation with Arelo® and light management

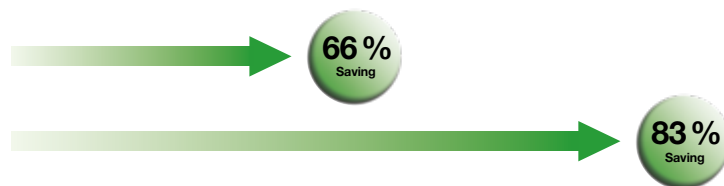
Fitted with	1 x TC-D 13 W	LED 6,5 W	Saving	LED 6,5 W	Saving
System power W	19	6,5		6,5	
Number of luminaires	15	15		15	
Power consumption kWh *	783,75	268,13	515,63	134,20	649,55
Electricity costs €/a **	321,34	109,93	<b>211,41</b>	55,02	<b>266,32</b>



Fitted with	2 x TC-D 18 W	LED 16 W	Saving	LED 16 W	Saving
System power W	52	16		16	
Number of luminaires	15	15		15	
Power consumption kWh *	2.145,00	660,00	1.485,00	330,33	1.814,67
Electricity costs €/a **	879,45	270,60	<b>608,85</b>	135,44	<b>744,01</b>

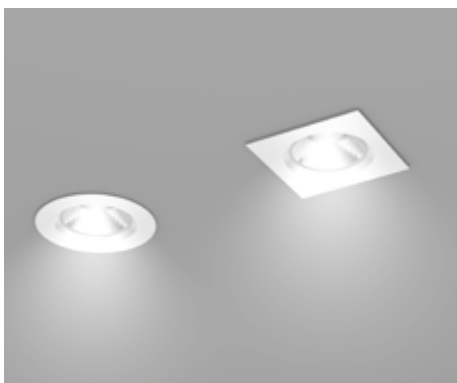


Fitted with	2 x TC-D 26 W	LED 23 W	Saving	LED 23 W	Saving
System power W	68	23		23	
Number of luminaires	15	15		15	
Power consumption kWh *	2.805,00	948,75	1.856,25	474,85	2.330,15
Electricity costs €/a **	1.150,05	388,99	<b>761,06</b>	194,69	<b>955,36</b>



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%.  
Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# LEDONA

## Recessed downlights

Type of protection: **IP 65**, Converter IP 20 | Protection class: II  
Ceiling thickness: 1-20 mm | Impact resistance: IK07

Housing: die-cast aluminium constructed as heat sink. Bezel ring: die-cast aluminium, powder coated. Closed version. Standard Gore™ Protective Vents diaphragm valve to avoid condensation. LED diffuser made of safety glass. Faceted aluminium reflector satin-matt, with high gloss light mixing chamber. Spring fastening system. Connected converter included in separate gearbox. With connecting cable (L 250 mm). Ball impact proof in accordance with DIN 18032-03.

Available colour: white

Versions with Casambi smart+free Bluetooth® control for wireless network and operation using Android / iOS devices, free app available for download.

- ⊕ Single-layer safety glass diffuser (IP 65 LED version).
- ⊕ IP 65 versions with ball impact protection in accordance with DIN 18032-03
- ⊕ IP 65 versions with Gore™ Protective Vents diaphragm valve to avoid condensation
- ⊕ IP 65 versions suitable for use in the food and drink industry
- ⊕ Unique light mixing chamber provides harmonized lighting and advanced anti-glare properties, as well as high LORs
- ⊕ Tunable white versions, dynamically adjustable from 2700 K to 6500 K



DALI



IP65

IK07







Outdated installation with recessed downlights

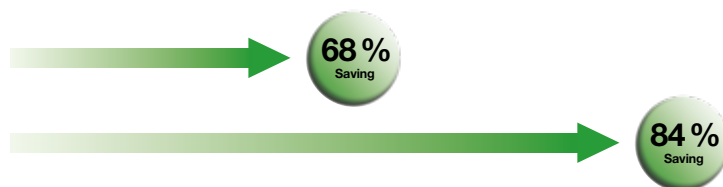


New installation with Ledona®

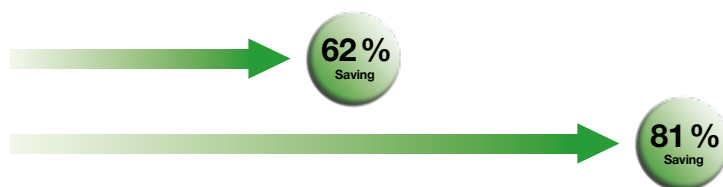


New installation with Ledona® and light management

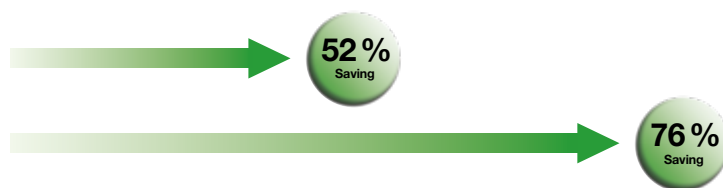
Fitted with	1 x TC-D 26 W	LED 11 W	Saving	LED 11 W	Saving
System power W	34	11		11	
Number of luminaires	15	15		15	
Power consumption kWh *	1.402,50	453,75	948,75	227,10	1.175,40
Electricity costs €/a **	575,03	186,04	<b>388,99</b>	93,11	<b>481,91</b>



Fitted with	1 x TC-TEL 42 W	LED 18 W	Saving	LED 18 W	Saving
System power W	47	18		18	
Number of luminaires	15	15		15	
Power consumption kWh *	1.938,75	742,50	1.196,25	371,62	1.567,13
Electricity costs €/a **	794,89	304,43	<b>490,46</b>	152,36	<b>642,52</b>

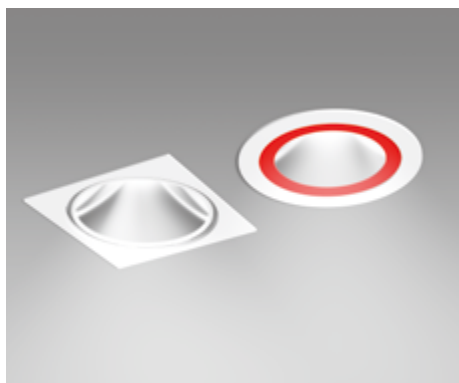


Fitted with	2 x TC-TEL 32 W	LED 33 W	Saving	LED 33 W	Saving
System power W	69	33		33	
Number of luminaires	15	15		15	
Power consumption kWh *	2.846,25	1.361,25	1.485,00	681,31	2.164,94
Electricity costs €/a **	1.166,96	558,11	<b>608,85</b>	279,34	<b>887,63</b>



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



Adapter rings  
available for various  
ceiling cut-outs!

I equalise.

# PASCALA EVO

## Recessed downlights

Type of protection: IP 20, **IP 54** with corresponding accessories

Protection class: II

Ceiling thickness: 6-35 mm

Impact resistance: IK03

Mounting bracket: galvanised sheet steel. Inner and closure ring: die-cast aluminium.

Reflector material: MIRO-SILVER® with 98 percent total light reflection.

Spring fastening system. Connected converter included in separate gearbox.

With connecting cable (L 400 mm).

Available colours: white, silver metallic

- ⊕ Highly efficient recessed downlight with patented reflector made of MIRO-SILVER® in round design with total light reflection 98%
- ⊕ **MultiLumen:** 16 different luminous fluxes can be set on site in approx. 200 lm steps using DIP switches on the separate converter
- ⊕ Tunable white versions, dynamically adjustable from 2700 K to 6500 K
- ⊕ Suitable for through-wiring with separately available accessories
- ⊕ Luminous efficacy up to 150 lm/W



MultiLumen



Tunable White



UGR ≤ 19

DALI

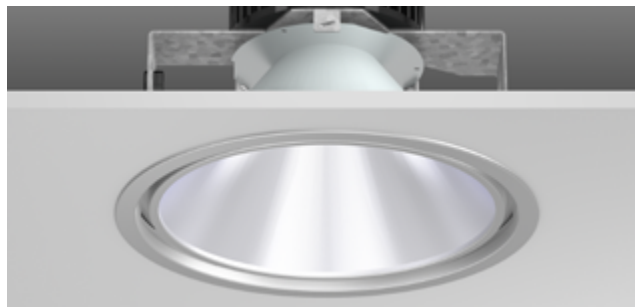


IP 54





Outdated installation with recessed downlights

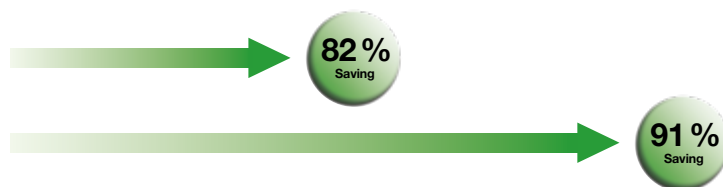


New installation with Pascala® EVO

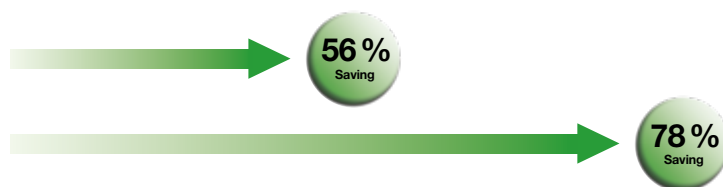


New installation with Pascala® EVO and light management

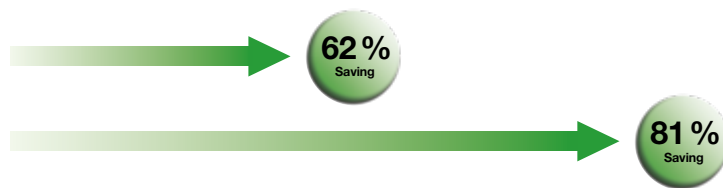
Fitted with	1 x TC-D 26 W	LED 11 W	Saving	LED 11 W	Saving
System power W	60	11		11	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	453,75	2.021,25	227,10	2.247,90
Electricity costs €/a **	1.014,75	186,04	<b>828,71</b>	93,11	<b>921,64</b>



Fitted with	2 x TC-D 26 W	LED 30 W	Saving	LED 30 W	Saving
System power W	68	30		30	
Number of luminaires	15	15		15	
Power consumption kWh *	2.805,00	1.237,50	1.567,50	619,37	2.185,63
Electricity costs €/a **	1.150,05	507,38	<b>642,68</b>	253,94	<b>896,11</b>



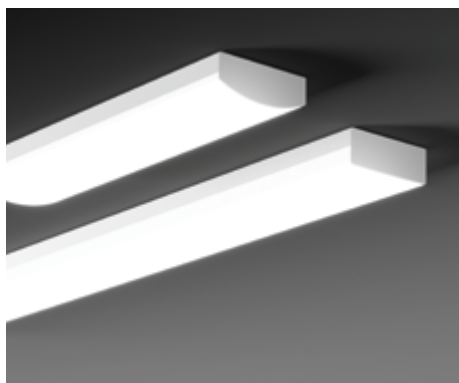
Fitted with	3 x TC-D 26 W	LED 39 W	Saving	LED 39 W	Saving
System power W	102	39		39	
Number of luminaires	15	15		15	
Power consumption kWh *	4.207,50	1.608,75	2.598,75	805,18	3.402,32
Electricity costs €/a **	1.725,08	659,59	<b>1.065,49</b>	330,12	<b>1.394,95</b>



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh





# PLANADO

## Ceiling and wall luminaires

Type of protection: **IP 54** ceiling mounting, **IP 50** wall mounting

Protection class: I

Impact resistance: IK05

Housing and end caps made of sheet steel, powder coated. Diffuser made of non-yellowing plastic (PMMA), opal. Specially matched 2-component optical system for homogeneous and soft illumination of the entire light-emitting surface. End caps with hidden screws, with permanently dimensionally stable silicone foam seal. Integrated converter. Removable and replaceable LED unit. Suitable for through-wiring. With sensors or as a safety luminaire on request.

Available colour: white

- ⊕ Diffuser made of non-yellowing plastic (PMMA) opal
- ⊕ Not a disposable luminaire. Environmentally friendly and uses fewer resources thanks to replaceable components.
- ⊕ Luminous efficacy up to 137 lm/W
- ⊕ 2-component optical system for homogenous and soft illumination of the entire light-emitting surface
- ⊕ LED rated life 50000 h (L80/B10)



DALI



HACCP



IP54

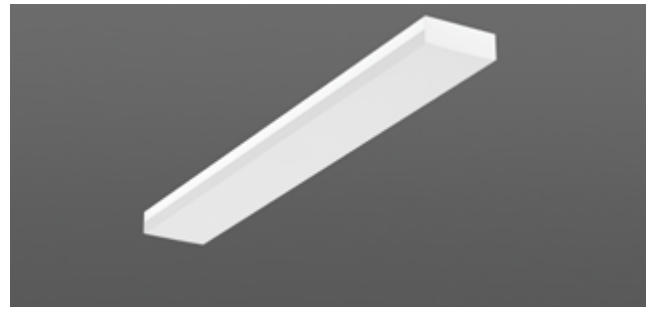
IP50

IK05





Outdated installation with diffuser luminaire

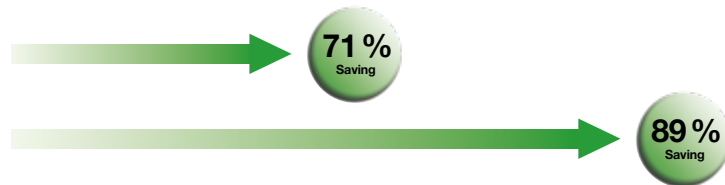


New installation with Planado

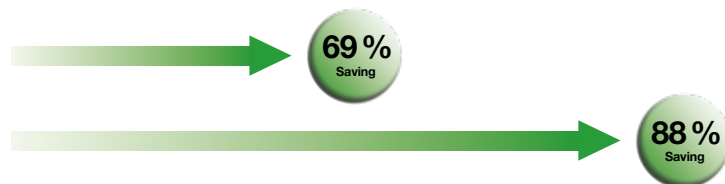


New installation with Planado and light management

Fitted with	2 x T8 36 W (CB)	LED 25 W	Saving	LED 25 W	Saving
System power W	86	25		25	
Number of luminaires	6	6		6	
Power consumption kWh *	1.419,00	412,50	1.006,50	151,59	1.267,41
Electricity costs €/a **	454,08	132,00	322,08	48,51	405,57



Fitted with	2 x T8 58 W (CB)	LED 42 W	Saving	LED 42 W	Saving
System power W	134	42		42	
Number of luminaires	6	6		6	
Power consumption kWh *	2.211,00	693,00	1.518,00	254,68	1.956,32
Electricity costs €/a **	707,52	221,76	485,76	81,50	626,02



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# LIGHT CASE

## Ceiling and wall luminaires

Type of protection: **IP 65**

Protection class: I

Impact resistance: IK05

Housing: die cast aluminium and sheet steel, powder coated. LED modules can be swivelled  $\pm 30^\circ$  for optimum illumination. Cover: plastic (polycarbonate, impact resistant) with integrated four-row lens system. Lens optics for different light distribution versions. With 5-pin connection terminal (1.5 m). CLO control for constant light output over the entire service life.

Ball impact resistant according to DIN 18032-03 (except for steel cable suspension). With integrated movement sensor and light sensor for daylight detection on request.

**Suitable for chain or steel cable suspension (provided by the client).**

Available colours: white, silver metallic

- ⊕ 1:1 replacement for HME / HIE and HSE lamps
- ⊕ Operating range:  $-30^\circ\text{C}$  to  $+55^\circ\text{C}$
- ⊕ Highly efficient up to 159 lm/W
- ⊕ LED module can be swivelled  $\pm 30^\circ$
- ⊕ LED module can be rotated through  $180^\circ$  for indirect light
- ⊕ LED rated life 50000 h (LCLO), CLO control for constant light output over the entire service life

DALI



**CLO**  
Constant  
Light Output



IP65

IK05





Outdated installation with highbay luminaires



New installation with Light Case

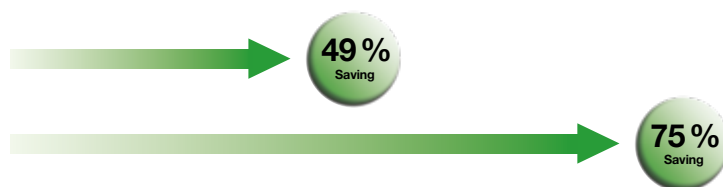


New installation with Light Case and light management

Fitted with	4 x T8 58 W (CB)	LED 117 W	Saving	LED 117 W	Saving
System power W	268	117		117	
Number of luminaires	45	45		45	
Power consumption kWh *	45.225,00	19.743,75	25.481,25	9.881,75	35.343,25
Electricity costs €/a **	14.472,00	6.318,00	8.154,00	3.162,16	11.309,84



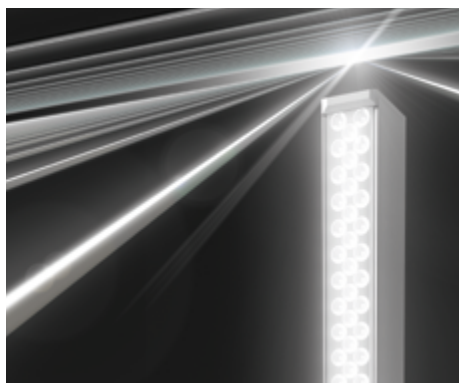
Fitted with	4 x T5 54 W (EB)	LED 117 W	Saving	LED 117 W	Saving
System power W	230	117		117	
Number of luminaires	45	45		45	
Power consumption kWh *	38.812,50	19.743,75	19.068,75	9.881,75	28.930,75
Electricity costs €/a **	12.420,00	6.318,00	6.102,00	3.162,16	9.257,84



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh





# LINEDO

Technically a continuous line luminaire. Actually a revolution!

Type of protection: **IP 54**

Protection class: I

Impact resistance: IK03

Rapid-installation complete module for universal use as a light strip. System profile made of anodised extruded aluminium profile. High-efficiency LED units with optimum light control thanks to clear plastic (PC) lens optics or opal diffuser made of non-yellowing PMMA. Simple, tool-free installation of system profiles using separate accessories for cable, chain or ceiling suspension. Tool-free connection and mechanical connectors to secure. Easy selection of phase settings from outside thanks to patented system.

The RZB Premium Service is your support partner before, during and after system installation.



- ⊕ Ultra-rapid installation thanks to Plug & Play modules
- ⊕ 5, 7 or 14 pin through-wiring as standard
- ⊕ 7 light distribution options and 5 performance levels cover just about any lighting requirement in industry, shops, offices and public buildings
- ⊕ Luminous efficacy up to 180 lm/W
- ⊕ Up to 10-year warranty
- ⊕ LED rated life 80,000 h ( $L_{50}$ ) DALI/CLO controlled - High planning reliability thanks to constant light output throughout the entire service life



DALI

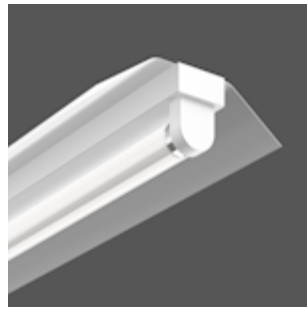


CLO  
Constant  
Light Output



IP54





Outdated installation with striplights

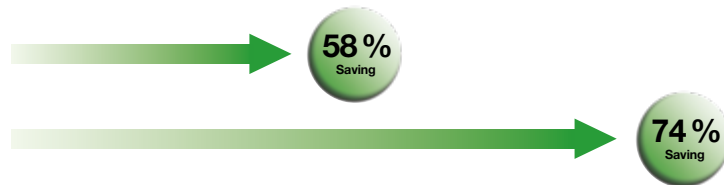


New installation with Linedo

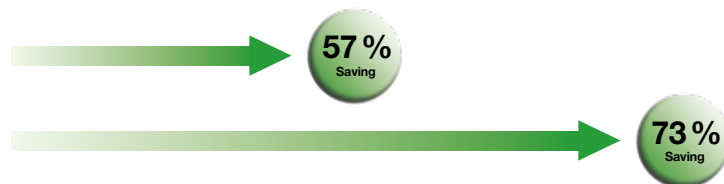


New installation with Linedo and light management

Fitted with	1 x T8 58 W (CB)	LED 10,7 W	Saving	LED 10,7 W	Saving
Number of striplights	3 x 15 m	3 x 15 m		3 x 15 m	
System power per strip	670	278,2		278,2	
Power consumption kWh *	4.160,70	1.727,62	2.433,08	1.094,45	3.066,25
Electricity costs €/a **	1.331,42	552,84	<b>778,58</b>	350,22	<b>981,20</b>



Fitted with	2 x T8 58 W (CB)	LED 22 W	Saving	LED 22 W	Saving
Number of striplights	3 x 15 m	3 x 15 m		3 x 15 m	
System power per strip	1.340	572		572	
Power consumption kWh *	8.321,40	3.552,12	4.769,28	2.250,27	6.071,13
Electricity costs €/a **	2.662,85	1.136,68	<b>1.526,17</b>	720,09	<b>1.942,76</b>

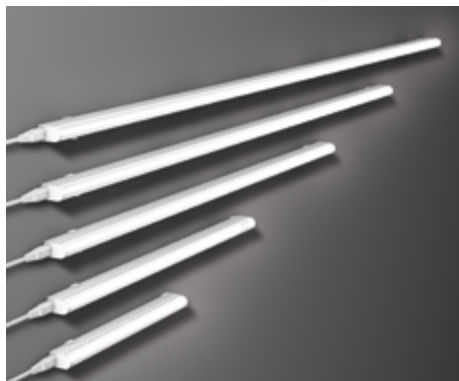


Fitted with	2 x T5 54 W (EB)	LED 22 W	Saving	LED 22 W	Saving
Number of striplights	3 x 15 m	3 x 15 m		3 x 15 m	
System power per strip	1.150	572		572	
Power consumption kWh *	7.141,50	3.552,12	3.589,38	2.250,27	4.891,23
Electricity costs €/a **	2.285,28	1.136,68	<b>1.148,60</b>	720,09	<b>1.565,19</b>



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# STRIP-LIGHT

## Ceiling and wall luminaires

Type of protection: IP 20

Protection class: II

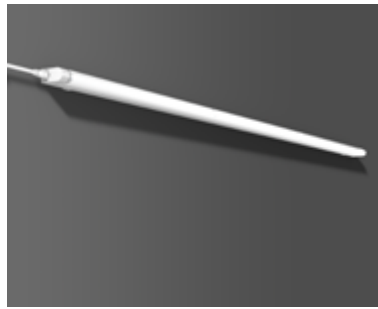
Impact resistance: IK02

Base: plastic. Diffuser: transparent plastic, prismatic. Through wiring possible without tools using connecting cables. With rocker switch. Suitable for mounting in or on furniture ▽▽. Included in delivery: 1.80 m power supply cable, 150 mm connecting cable, straight rigid coupling and 2 brackets each for wall and ceiling mounting. Max. 12 luminaires can be mounted as a light strip.

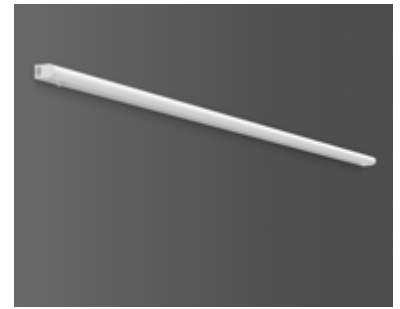
Available colour: white

- ⊕ For universal use in shops, cove lighting, kitchens and bathrooms
- ⊕ Excellent light distribution thanks to prismatic diffuser
- ⊕ Easy to mount with clips
- ⊕ Suitable for seamless light channels (12 luminaires)
- ⊕ Suitable for mounting in or on furniture
- ⊕ Included in delivery: 1.80 m power cable, 150 mm connecting cable, straight rigid coupling and 2 brackets each for wall and ceiling mounting





Outdated installation with T8 Strip-Light



New installation with Strip-Light LED

Fitted with	1 x T8 18 W (CB)	LED 8 W	Saving
System power W	26	8	
Number of luminaires	12	12	
Power consumption kWh *	858,00	264,00	594,00
Electricity costs €/a **	274,56	84,48	190,08



Fitted with	1 x T8 36 W (CB)	LED 22 W	Saving
System power W	43	22	
Number of luminaires	12	12	
Power consumption kWh *	1.419,00	726,00	693,00
Electricity costs €/a **	454,08	232,32	221,76



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh





# BALEVA

## Ceiling and wall luminaires

Type of protection: **IP 40** ceiling mounting, **IP 44** wall mounting

Protection class: II

Impact resistance: IK07

Body and end caps made of white plastic. Diffuser: plastic, opal.

Converter integrated and encapsulated.

Available colour: white

- ⊕ **MultiColour:** colour temperature variable via switching element
- ⊕ Soft and homogenous illumination thanks to opal diffuser made of shockproof PC
- ⊕ High protection rating IP 44 (wall mounting) for use in wet areas
- ⊕ 2 central cable inlets for looping the cable
- ⊕ LED rated life 50000 h (L80/B10)



MultiColour

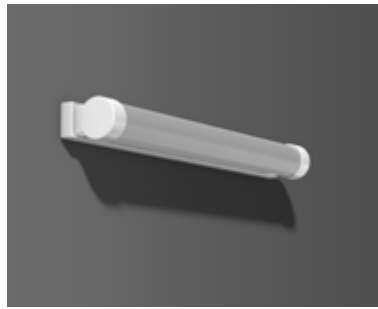


IP40

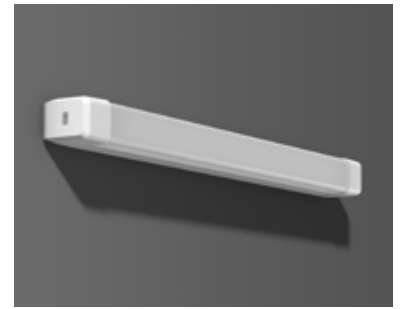
IP44

IK07





Outdated installation with mirror luminaire



New installation with Baleva

Fitted with	1 x T8 18 W (CB)	LED 10 W	Saving
System power W	26	10	
Number of luminaires	2	2	
Power consumption kWh *	143,00	55,00	88,00
Electricity costs €/a **	45,76	17,60	28,16



Fitted with	1 x T8 36 W (CB)	LED 19 W	Saving
System power W	43	19	
Number of luminaires	2	2	
Power consumption kWh *	236,50	104,50	132,00
Electricity costs €/a **	75,68	33,44	42,24



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%.  
Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# KALEEA

## Lay-in luminaires

Type of protection: IP 20, **IP 40** on the room side

Protection class: II

Impact resistance: IK02

Housing: sheet steel, powder coated. Luminaire frame: aluminium, powder-coated. LED backlight technology for homogenous illumination of the entire light-emitting surface. Microprismatic diffuser made of non-yellowing plastic (PMMA). Suitable for use-in environments with computer screens in accordance with EN 12464-1. External converter.

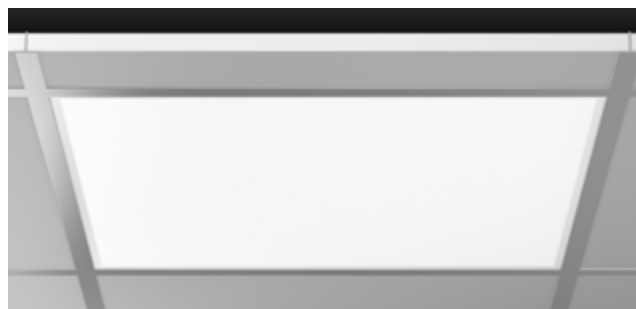
Available colour: white

- ⊕ Designs with  $R_a \geq 90$  for the most realistic possible perception of surroundings, objects and people
- ⊕ Ideal for office areas ( $UGR \leq 19$ ) and display screen equipment (DSE) workstations in accordance with EN 12464-1
- ⊕ Diffuser made of non-yellowing PMMA, microprismatic
- ⊕ Luminous efficacy up to 137 lm/W
- ⊕ LED-rated life 50000 h (L80)
- ⊕ **MultiLumen**: 4-step adjustable luminous flux





Outdated installation with mirror louvre luminaire

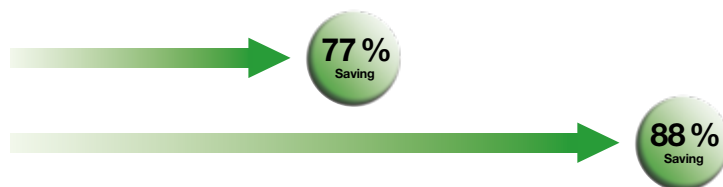


New installation with Kaleea

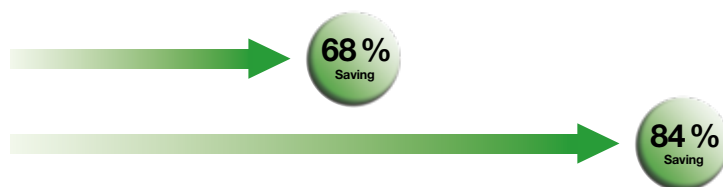


New installation with Kaleea and light management

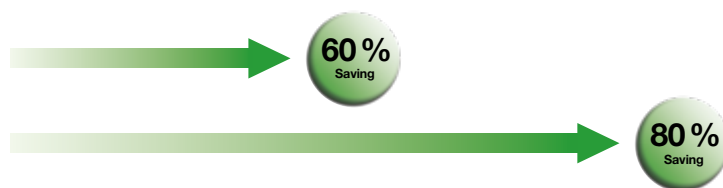
Fitted with	4 x T8 18 W (CB)	LED 24 W	Saving	LED 24 W	Saving
System power W	104	24		24	
Number of luminaires	15	15		15	
Power consumption kWh *	4.290,00	990,00	3.300,00	495,50	3.794,51
Electricity costs €/a **	1.372,80	316,80	1.056,00	158,56	1.214,24



Fitted with	4 x T8 18 W (EB)	LED 24 W	Saving	LED 24 W	Saving
System power W	76	24		24	
Number of luminaires	15	15		15	
Power consumption kWh *	3.135,00	990,00	2.145,00	495,50	2.639,51
Electricity costs €/a **	1.003,20	316,80	686,40	158,56	844,64



Fitted with	4 x T5 14 W (EB)	LED 24 W	Saving	LED 24 W	Saving
System power W	60	24		24	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	990,00	1.485,00	495,50	1.979,51
Electricity costs €/a **	792,00	316,80	475,20	158,56	633,44



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh





## SIDELITE ECO

Lay-in ceiling luminaires, recessed ceiling luminaires

Type of protection: IP 20, **IP 40** on room side

Protection class: II

Impact resistance: IK03

Frame: aluminium, powder-coated. Diffuser either opal plastic or microprismatic (suitable for use in environments with computer screens in accordance with EN 12464-1). Lightguide and diffuser made of non-yellowing plastic (PMMA). Lateral light emission thanks to LED. Longer connecting cable (1.90 m). External converter. DALI versions suitable for through-wiring as standard.

Available colour: white

- ⊕ Microprismatic plastic (PMMA) diffuser: ideal for office areas ( $UGR \leq 19$ ) and display screen equipment (DSE) workstations in accordance with EN 12464-1
- ⊕ Lightguide and diffuser made of non-yellowing PMMA, fine microprismatic
- ⊕ **MultiLumen**: 4-step adjustable luminous flux
- ⊕ Luminous efficacy up to 128 lm/W
- ⊕ LED-rated life 50000 h (L80)
- ⊕ Very simple converter installation by turn and plug system and longer connecting cable up to 1.90 m



Tunable White



UGR  $\leq 19$



MultiLumen

DALI



Casambi  
smart+  
free



HACCP



Plug & Play

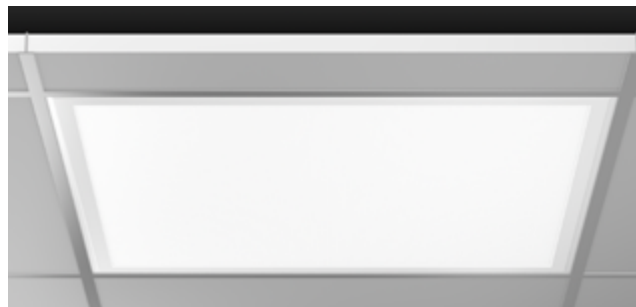


IP40





Outdated installation with mirror louvre luminaire

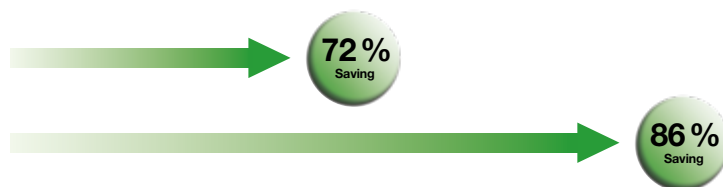


New installation with Sidelite® ECO

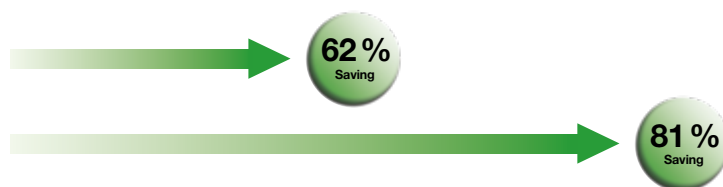


New installation with Sidelite® ECO and light management

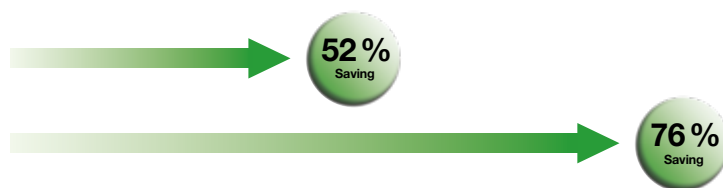
Fitted with	4 x T8 18 W (CB)	LED 29 W	Saving	LED 29 W	Saving
System power W	104	29		29	
Number of luminaires	15	15		15	
Power consumption kWh *	4.290,00	1.196,25	3.093,75	598,72	3.691,28
Electricity costs €/a **	1.372,80	382,80	990,00	191,59	1.181,21



Fitted with	4 x T8 18 W (EB)	LED 29 W	Saving	LED 29 W	Saving
System power W	76	29		29	
Number of luminaires	15	15		15	
Power consumption kWh *	3.135,00	1.196,25	1.938,75	598,72	2.536,28
Electricity costs €/a **	1.003,20	382,80	620,40	191,59	811,61



Fitted with	4 x T5 14 W (EB)	LED 29 W	Saving	LED 29 W	Saving
System power W	60	29		29	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	1.196,25	1.278,75	598,72	1.876,28
Electricity costs €/a **	792,00	382,80	409,20	191,59	600,41



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# PARLEDO

## Lay-in luminaires

Type of protection: **IP 65** | Protection class: I | Impact resistance: IK06

Housing: sheet steel, powder coated. Luminaire frame: aluminium, powder-coated.

LED backlight technology for homogeneous illumination of the entire light-emitting surface.

Diffuser: either smooth, opal plastic (PC) or microprismatic (suitable for use in environments with computer screens in accordance with EN 12464-1). External converter. Longer power cable (2.0 m). Suitable for through-wiring as standard. DALI variants IoT-ready.

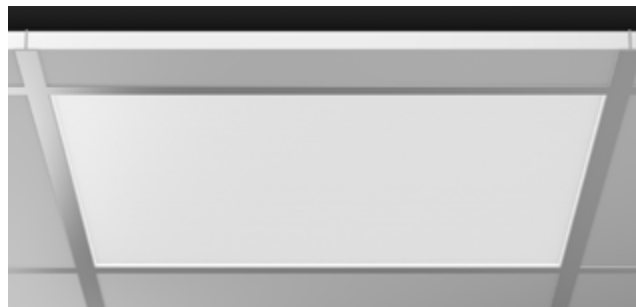
Available colour: white

- ⊕ For high hygienic requirements. Particularly suitable for applications in healthcare and industry
- ⊕ Versions with 940 light colour: excellent light quality for clinical detection of cyanosis thanks to correct colour spectrum, CRI  $\geq 90$  and a Cyanosis Observation Index (COI) of  $<3.3$
- ⊕ Diffuser with smooth surface on the room side for low sensitivity to dirt and easy cleaning. Diffuser made of resistant polycarbonate (PC).
- ⊕ IP 65 protection rating for luminaire and converter on room and ceiling sides.
- ⊕ Frameless appearance in modular ceilings due to extra-narrow luminaire frame
- ⊕ Microprismatic diffuser: ideal for office areas (UGR  $\leq 19$ ) and display screen equipment (DSE) workstations in accordance with EN 12464-1
- ⊕ Luminous efficacy up to 147 lm/W. LED rated life 60000 h (L80)





Outdated installation with mirror louvre luminaire



New installation with Parledo®

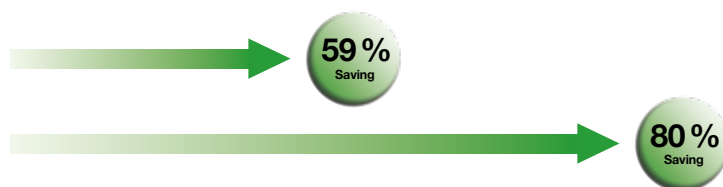


New installation with Parledo® and light management

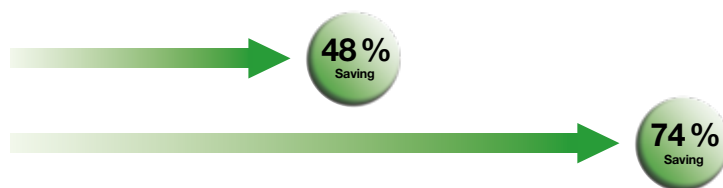
Fitted with	4 x T8 18 W (CB)	LED 31 W	Saving	LED 31 W	Saving
System power W	104	31		31	
Number of luminaires	15	15		15	
Power consumption kWh *	4.290,00	1.278,75	3.011,25	640,01	3.649,99
Electricity costs €/a **	1.372,80	409,20	963,60	204,80	1.168,00



Fitted with	4 x T8 18 W (EB)	LED 31 W	Saving	LED 31 W	Saving
System power W	76	31		31	
Number of luminaires	15	15		15	
Power consumption kWh *	3.135,00	1.278,75	1.856,25	640,01	2.494,99
Electricity costs €/a **	1.003,20	409,20	594,00	204,80	798,40



Fitted with	4 x T5 14 W (EB)	LED 31 W	Saving	LED 31 W	Saving
System power W	60	31		31	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	1.278,75	1.196,25	640,01	1.834,99
Electricity costs €/a **	792,00	409,20	382,80	204,80	587,20



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh





# SONIS EVO

Lay-in ceiling luminaires, recessed ceiling luminaires

Type of protection: IP 20

Protection class: I

Impact resistance: IK03

Housing: powder-coated metal **Alea optical system:** reflector structure (ABS, aluminium-coated, highly polished) with integrated opal diffuser made of non-yellowing plastic (PMMA) for glare-free light at the workstation (suitable for use in environments with computer screens in accordance with EN 12464-1). Converter integrated, DALI converter external (height 32 mm). Suitable for through-wiring.

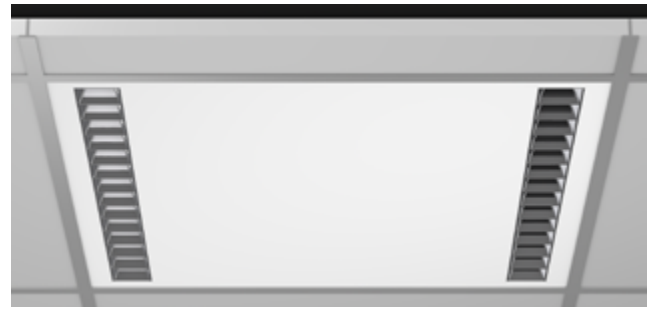
Available colour: white

- ⊕ Alea optical system for glare-free light at the workstation (UGR  $\leq$  19)
- ⊕ Darklight reflector
- ⊕ Narrow beam, brilliant luminous effect
- ⊕ LED rated life 50000 h (L80/B10)
- ⊕ Luminous efficacy up to 133 lm/W





Outdated installation with mirror louvre luminaire

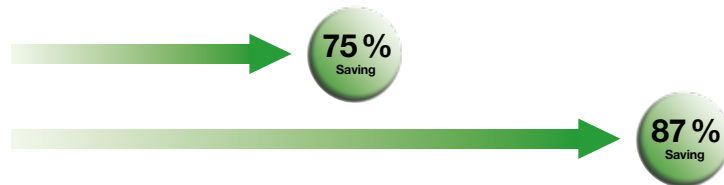


New installation with Sonis EVO

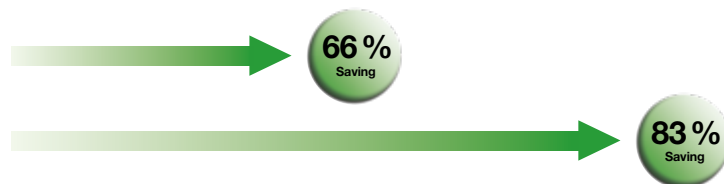


New installation with Sonis EVO and light management

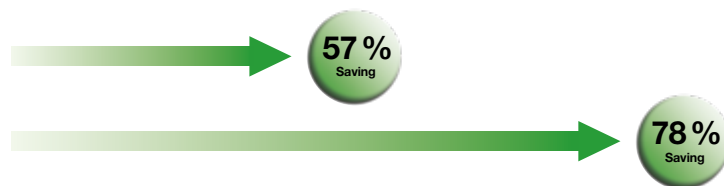
Fitted with	4 x T8 18 W (CB)	LED 26 W	Saving	LED 26 W	Saving
System power W	104	26		26	
Number of luminaires	15	15		15	
Power consumption kWh *	4.290,00	1.072,50	3.217,50	536,79	3.753,21
Electricity costs €/a **	1.372,80	343,20	1.029,60	171,77	1.201,03



Fitted with	4 x T8 18 W (EB)	LED 26 W	Saving	LED 26 W	Saving
System power W	76	26		26	
Number of luminaires	15	15		15	
Power consumption kWh *	3.135,00	1.072,50	2.062,50	536,79	2.598,21
Electricity costs €/a **	1.003,20	343,20	660,00	171,77	831,43

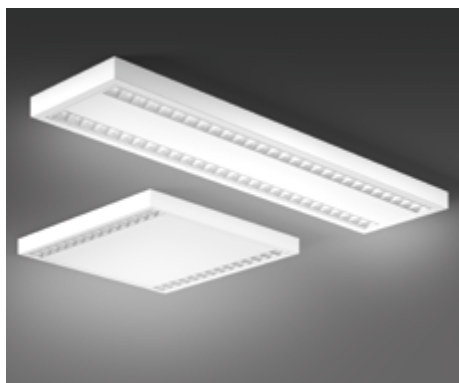


Fitted with	4 x T5 14 W (EB)	LED 26 W	Saving	LED 26 W	Saving
System power W	60	26		26	
Number of luminaires	15	15		15	
Power consumption kWh *	2.475,00	1.072,50	1.402,50	536,79	1.938,21
Electricity costs €/a **	792,00	343,20	448,80	171,77	620,23



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# SONIS EVO

## Ceiling luminaires

Type of protection: IP 20

Protection class: I

Impact resistance: IK03

Housing: powder-coated metal. **Alea optical system:** reflector structure (ABS, aluminium-coated, highly polished) with integrated opal diffuser made of non yellowing plastic (PMMA) for glare-free light at the workstation (suitable for use in environments with computer screens in accordance with EN 12464-1). Integrated converter.

Available colour: white

- ⊕ Highly efficient LED luminaire
- ⊕ Alea optical system: ideal for office areas ( $UGR \leq 19$ ) and display screen equipment (DES) workstations in accordance with EN 12464-1
- ⊕ Narrow beam, brilliant luminous effect
- ⊕ LED rated life 50000 h (L80/B10)
- ⊕ Luminous efficacy up to 133 lm/W
- ⊕ Linear luminaires with high luminous flux up to 6500 lm



DALI





Outdated installation with mirror louvre luminaire

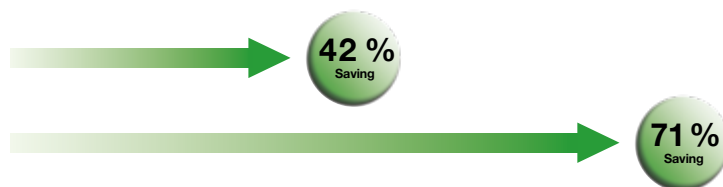


New installation with Sonis EVO

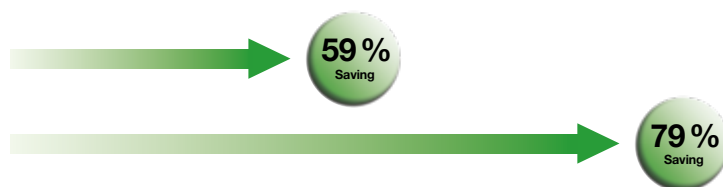


New installation with Sonis EVO and light management

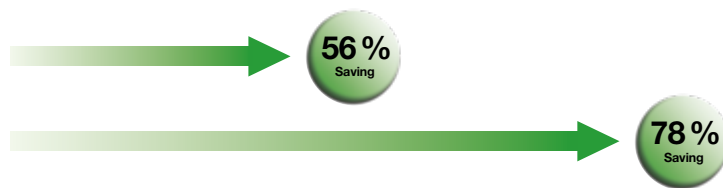
Fitted with	2 x T8 36 W (CB)	LED 50 W	Saving	LED 50 W	Saving
System power W	86	50		50	
Number of luminaires	15	15		15	
Power consumption kWh *	3.547,50	2.062,50	1.485,00	1.032,28	2.515,22
Electricity costs €/a **	1.135,20	660,00	475,20	330,33	804,87



Fitted with	2 x T8 58 W (CB)	LED 50 W	Saving	LED 50 W	Saving
System power W	121	50		50	
Number of luminaires	15	15		15	
Power consumption kWh *	4.991,25	2.062,50	2.928,75	1.032,28	3.958,97
Electricity costs €/a **	1.597,20	660,00	937,20	330,33	1.266,87



Fitted with	2 x T5 54 W (EB)	LED 50 W	Saving	LED 50 W	Saving
System power W	113	50		50	
Number of luminaires	15	15		15	
Power consumption kWh *	4.661,25	2.062,50	2.598,75	1.032,28	3.628,97
Electricity costs €/a **	1.491,60	660,00	831,60	330,33	1.161,27



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh





# TWINDOT

## Pendant luminaires

Type of protection: IP 20 | Protection class: I

Impact resistance: IK03

Pendant length LP: 500-1200 mm

Extremely flat and frameless appearance. Middle bar made of extruded aluminium 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  $\leq$  19 (suitable for use in environments with computer screens in accordance with EN 12464-1). 2 point steel cable suspension, infinitely height adjustable with transparent power cable.

Expandable to continuous line luminaire with connection kit (on/off or DALI models).

Available colour: white

- ⊕ Extremely uniform illumination of the ceiling thanks to above-average wide distribution of indirect light
- ⊕ Pleasantly gentle light with soft shadows
- ⊕ Continuous lines can be created easily with standard luminaires. No first, central or end luminaires required.
- ⊕ Luminous efficacy up to 130 lm/W
- ⊕ LED rated life 60,000 h ( $L_{c,0}$ ), CLO control for constant light output over the entire service life



Tunable White



UGR  $\leq$  19

DALI



Casambi  
smart+  
free

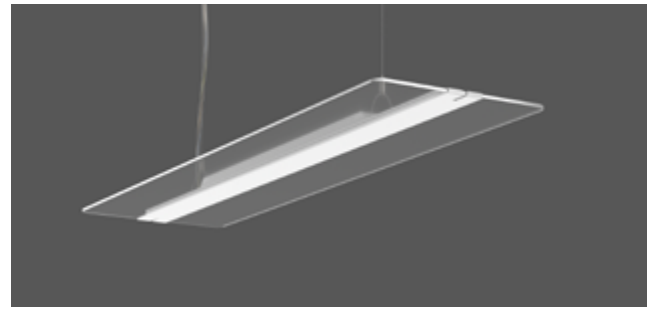
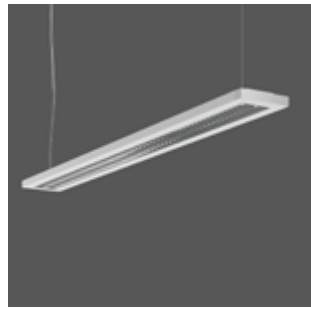


CLO

Constant  
Light Output







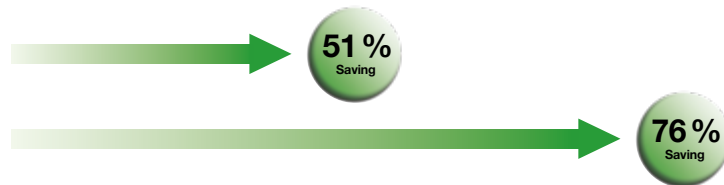
Outdated installation with pendant luminaire

New installation with TWINDOT®

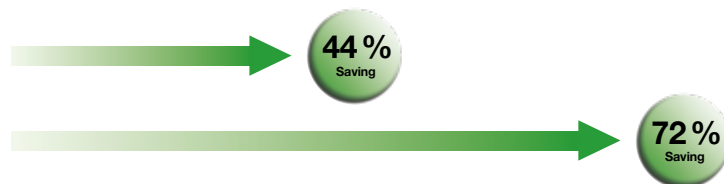


New installation with TWINDOT® and light management

Fitted with	2 x T8 58 W (CB)	LED 65 W	Saving	LED 65 W	Saving
System power W	134	65		65	
Number of luminaires	15	15		15	
Power consumption kWh *	5.527,50	2.681,25	2.846,25	1.341,97	4.185,53
Electricity costs €/a **	1.768,80	858,00	910,80	429,43	1.339,37



Fitted with	2 x T8 58 W (EB)	LED 65 W	Saving	LED 65 W	Saving
System power W	116	65		65	
Number of luminaires	15	15		15	
Power consumption kWh *	4.785,00	2.681,25	2.103,75	1.341,97	3.443,03
Electricity costs €/a **	1.531,20	858,00	673,20	429,43	1.101,77



Fitted with	2 x T5 49 W (EB)	LED 65 W	Saving	LED 65 W	Saving
System power W	102	65		65	
Number of luminaires	15	15		15	
Power consumption kWh *	4.207,50	2.681,25	1.526,25	1.341,97	2.865,53
Electricity costs €/a **	1.346,40	858,00	488,40	429,43	916,97



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# PLANOX

## Ceiling and wall luminaires

Type of protection: **IP 66**

Protection class: I

Impact resistance: IK03 (PMMA), IK08 (polycarbonate)

Housing made of shockproof, UV-resistant plastic (polycarbonate). Injected silicone-based seal with increased resistance even under extreme conditions. Diffuser made of UV-resistant opal plastic (PMMA) or shockproof opal plastic (polycarbonate) with excellent light transmission of up to 90%. Flexible and easy installation thanks to sliding quick-fix brackets made of stainless steel and diffuser with integrated gear tray as well as variable cable entry (front or rear). Through-wiring (2.5 mm<sup>2</sup>) as standard. Ceiling mounting stainless steel brackets and triangular brackets for pendant mounting included in the scope of delivery.

Available colour: grey

- ⊕ **MultiLumen:** 2 steps adjustable luminous flux
- ⊕ LED rated life up to 100000 h (L80)
- ⊕ High luminous flux up to 9200 lm
- ⊕ Luminous efficacy up to 164 lm/W
- ⊕ No disposable luminaire. Replaceable components.
- ⊕ Through-wiring (standard)
- ⊕ Variable cable entry (front or rear)
- ⊕ Also available as an emergency luminaire in accordance with EN 60598-2-22



DALI



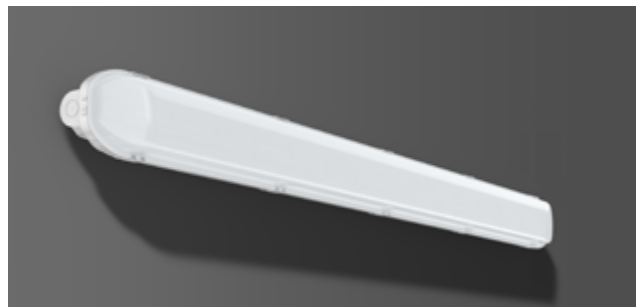
IP66

IK08





Outdated installation with moisture-proof luminaire

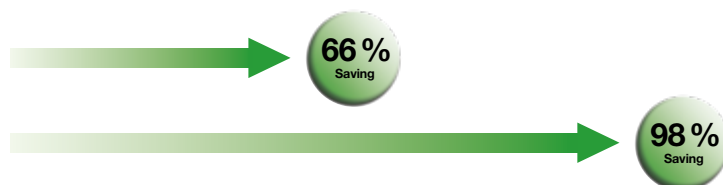


New installation with Planox

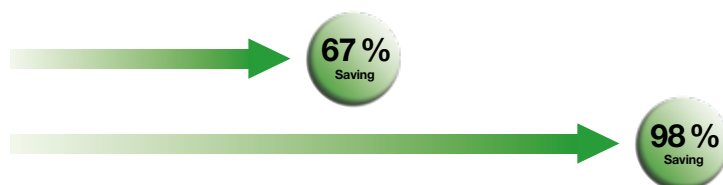


New installation with Planox and light management

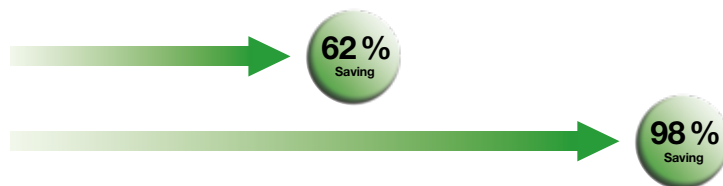
Fitted with	2 x T8 36 W (CB)	LED 29 W	Saving	LED 29 W	Saving
System power W	86	29		29	
Number of luminaires	12	12		12	
Power consumption kWh *	2.838,00	957,00	1.881,00	46,22	2.791,78
Electricity costs €/a **	908,16	306,24	601,92	14,79	893,37



Fitted with	2 x T8 58 W (CB)	LED 44 W	Saving	LED 44 W	Saving
System power W	134	44		44	
Number of luminaires	12	12		12	
Power consumption kWh *	4.422,00	1.452,00	2.970,00	70,13	4.351,87
Electricity costs €/a **	1.415,04	464,64	950,40	22,44	1.392,60

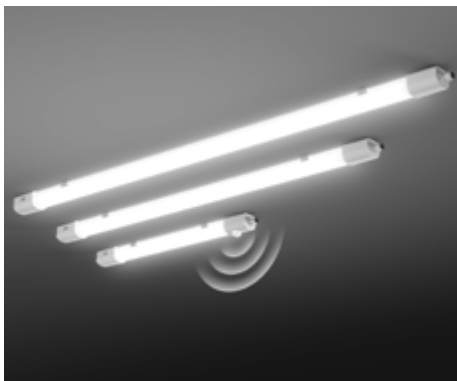


Fitted with	2 x T5 54 W (EB)	LED 44 W	Saving	LED 44 W	Saving
System power W	115	44		44	
Number of luminaires	12	12		12	
Power consumption kWh *	3.795,00	1.452,00	2.343,00	70,13	3.724,87
Electricity costs €/a **	1.214,40	464,64	749,76	22,44	1.191,96



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%.  
Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh



# PLANOX ECO

## Ceiling and wall luminaires

Type of protection: **IP 66**

Protection class: II

Impact resistance: IK08

Side panels: grey plastic (polycarbonate), shockproof. Diffuser: non-yellowing plastic (polycarbonate), opal, impact resistant. Converter encapsulated, integrated and permanently connected to the diffuser and side panel. Cable screw fittings for convenient wiring. Turn lock fastener on both sides for easy installation. Luminaire with integrated through-wiring for lining up further luminaires. Ceiling mounting stainless steel brackets and triangular brackets for pendant mount included.

Available colour: grey

- ⊕ **MultiLumen:** Several steps adjustable luminous flux (2-in-1 principle = replacement for 1 and 2-lamp luminaires)
- ⊕ LED rated life 50000 h (L80/B10)
- ⊕ Luminous efficacy up to 157 lm/W
- ⊕ Indirect light to illuminate the ceiling
- ⊕ Luminaire with limited surface temperature in accordance with EN 60598-2-24
- ⊕ Flexible installation through sliding mounting brackets. Ideal for luminaire replacement
- ⊕ Versions with integrated movement sensor. Master/slave circuit possible.
- ⊕ Through-wiring as standard for further luminaires



DALI



Master-Slave



HACCP

IP66

IK08





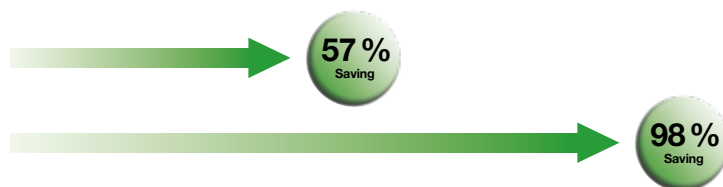
Outdated installation with moisture-proof luminaire

New installation with Planox ECO



New installation with Planox ECO and light management

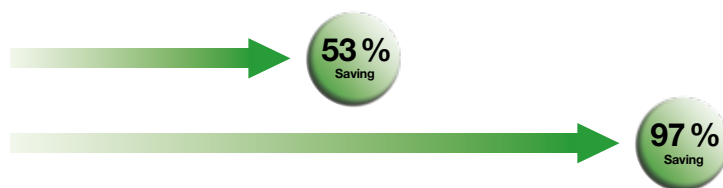
Fitted with	2 x T8 36 W (CB)	LED 37 W	Saving	LED 37 W	Saving
System power W	86	37		37	
Number of luminaires	12	12		12	
Power consumption kWh *	2.838,00	1.221,00	1.617,00	58,97	2.779,03
Electricity costs €/a **	908,16	390,72	517,44	18,87	889,29



Fitted with	2 x T8 58 W (CB)	LED 54 W	Saving	LED 54 W	Saving
System power W	134	54		54	
Number of luminaires	12	12		12	
Power consumption kWh *	4.422,00	1.782,00	2.640,00	86,07	4.335,93
Electricity costs €/a **	1.415,04	570,24	844,80	27,54	1.387,50



Fitted with	2 x T5 54 W (EB)	LED 54 W	Saving	LED 54 W	Saving
System power W	115	54		54	
Number of luminaires	12	12		12	
Power consumption kWh *	3.795,00	1.782,00	2.013,00	86,07	3.708,93
Electricity costs €/a **	1.214,40	570,24	644,16	27,54	1.186,86



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh





# PLANOX PRO

## Ceiling and wall luminaires

Type of protection: **IP 66**

Protection class: II

Impact resistance: IK08

Side panels: white plastic (polycarbonate), shockproof. Diffuser: opal plastic (polycarbonate), shockproof. Converter encapsulated, integrated and permanently connected to the diffuser and side panel. Cable screw fittings for convenient wiring. Turn lock fastener on both sides for easy installation. Luminaire with integrated through-wiring for lining up further luminaires. Ceiling mounting stainless steel brackets and triangular brackets for pendant mounting included.

Available colour: grey

- ⊕ **MultiLumen:** Several steps adjustable luminous flux (2-in-1 principle = replacement for 1 and 2-lamp luminaires)
- ⊕ LED rated life 50000 h (L80/B10)
- ⊕ Luminous efficacy up to 153 lm/W
- ⊕ Indirect light to illuminate the ceiling
- ⊕ Flexible installation thanks to sliding mounting brackets. Ideal for luminaire replacement
- ⊕ Through-wiring as standard for further luminaires (on/off: 5 x 1.5 mm<sup>2</sup>; DALI: 7 x 1.5 mm<sup>2</sup>)
- ⊕ Luminaire with limited surface temperature in accordance with EN 60598-2-24



DALI



HACCP



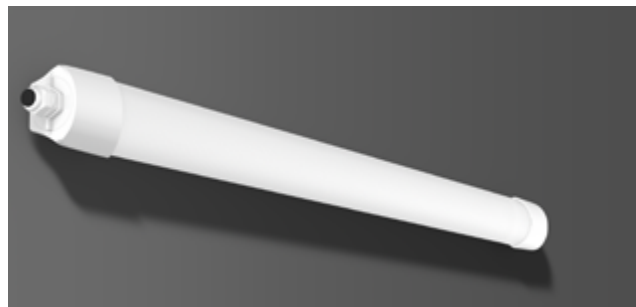
IP66

IK08





Outdated installation with moisture-proof luminaire

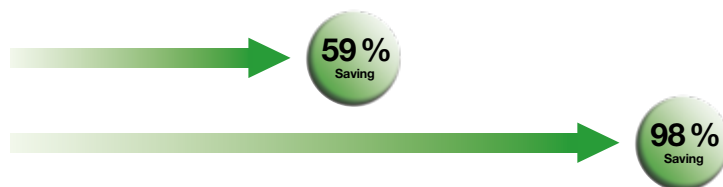


New installation with Planox PRO

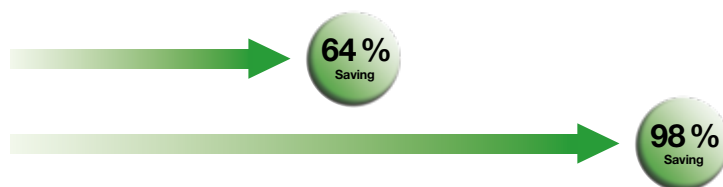


New installation with Planox PRO and light management

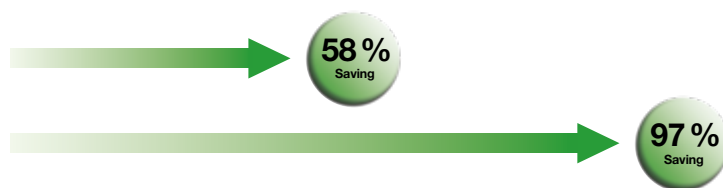
Fitted with	2 x T8 36 W (CB)	LED 35 W	Saving	LED 35 W	Saving
System power W	86	35		35	
Number of luminaires	12	12		12	
Power consumption kWh *	2.838,00	1.155,00	1.683,00	55,79	2.782,21
Electricity costs €/a **	908,16	369,60	538,56	17,85	890,31



Fitted with	2 x T8 58 W (CB)	LED 48 W	Saving	LED 48 W	Saving
System power W	134	48		48	
Number of luminaires	12	12		12	
Power consumption kWh *	4.422,00	1.584,00	2.838,00	76,51	4.345,49
Electricity costs €/a **	1.415,04	506,88	908,16	24,48	1.390,56



Fitted with	2 x T5 54 W (EB)	LED 48 W	Saving	LED 48 W	Saving
System power W	115	48		48	
Number of luminaires	12	12		12	
Power consumption kWh *	3.795,00	1.584,00	2.211,00	76,51	3.718,49
Electricity costs €/a **	1.214,40	506,88	707,52	24,48	1.189,92



\* Operating hours (2,750 h/a); relative absence for light management application according to corresponding user edge profile of DIN V 18599, assumed daylight share 30%. Lighting according to DIN EN 12464-1

\*\* Electricity costs of €0.41 /kWh

# LIGHT MANAGEMENT SYSTEMS

## Overview



### light control +<sup>3</sup> Economy Multi DALI

The unbeatable price/performance winner for smaller installations. The system combines simple commissioning via smartphone, low wiring effort and flexible configuration and is therefore ideal for **group offices, conference rooms and classrooms**. Programmable buttons and sensors can also be integrated via DALI connections in order to achieve even greater energy savings. The system has an integrated timer and can therefore be used to set up HCL.



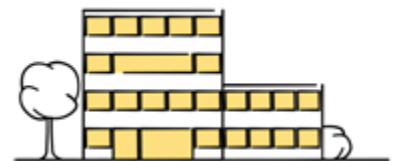
### Casambi smart+free

The wireless Bluetooth® light management system for maximum functions and configuration options. **Casambi smart+free solutions are particularly suitable for applications where wireless networking is required.** The modules are also suitable for retrofitting in existing luminaires, as only a power supply is required. The module is already integrated into luminaires with the article number ending .730. With accessories from the extensive Casambi ecosystem, the system can be configured according to individual needs. The integration here is very intuitive and can be completed by users without prior knowledge in just a few minutes.



### light control +<sup>3</sup> Professional IoT

The future of automated light control: RZB's IoT system. Daylight-dependent control and dynamic light control up to circadian daylight simulation in Human Centric Lighting (HCL) are easy to implement. In addition, the control system can be easily networked to make luminaire data available to other systems. Automatic switch-off functions save energy and money. All this can be configured across several rooms and floors.








### You still haven't found the right system for you?

Along with the systems shown here, we would also be happy to create a customised control system for your project.

Please contact your designated on-site sales employee or contact our Planning department via e-mail at [ims@rzb-leuchten.de](mailto:ims@rzb-leuchten.de) or by phone at +49 951/79 09-396.

# LIGHT MANAGEMENT SYSTEMS

Overview

	<b>light control +<sup>3</sup> Economy Multi DALI</b>  	<b>Casambi smart+free</b>  	<b>light control +<sup>3</sup> Professional IoT</b>  
Application	Single room	Wireless networking	Building control
Can be combined with			
Communication	wired	wireless	wired
Infrastructure requirements	L, N, PE, DA, DA (5 wires cable)	L, N, PE (3 wires cable)	L, N, PE, DA, DA (5 wires cable)
Commissioning	by electrician	by electrician	RZB service technician
Configuration	App, Plug & Play	App, Remote access	PC-Tool, Remote access
Operation	Switches, Buttons, App	Switches, Buttons, App	Switches, Buttons, App, Web access
Number of luminaires (1 EB) <small>(Number of luminaires depends on on the number of EB in the luminaire)</small>	32	up to 64 depending on module	128
Number of sensors <small>(presence, motion)</small>	4	1 per module	126
Dimmable	✓	✓	✓
Motion/presence detection	✓	✓	✓
Daylight-dependent control	✓	✓	✓
Scenes/Groups	✓	✓	✓
Timer/Calendar functions	✓	✓	✓
HCL / Tunable White	✓	✓	✓
RGB		✓	✓
Network integration		✓	✓
Remote access: programming, operation, maintenance		✓	✓
IoT ready		✓	✓
Predictive maintenance, monitoring, read out luminaire data			✓
Beacon for indoor navigation, tracking, asset management		✓	
Order number with extension	.76 (DALI)	.730 (smart+free)	.76 (DALI)



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