

CLEAN ROOM

LED LIGHTING SOLUTIONS

High protection degree
Energy efficiency
Longevity
Comfort

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BUCK
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E
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SunLike inside
Powered by 

Tunable White

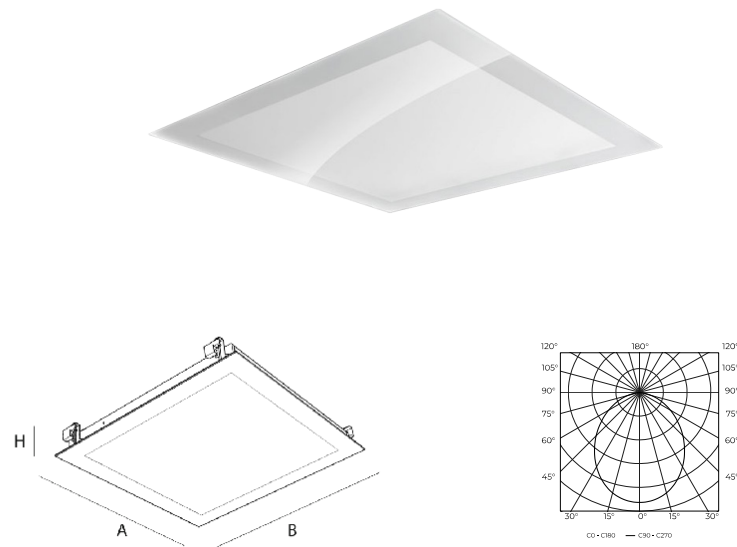
 **Fraunhofer**

ISO and GMP certified

CLEAN ROOM is a family of light fixtures used in clean spaces, certified by Fraunhofer institute for all ISO classes, up to ISO 1. High ingress protection IP65, as above so below, is an essential feature of this luminaire.

Hand-operated TIG welding, special multi-layer coating and lasting LED sources provide durability and little to no maintenance. Due to a vast choice of different optics, these luminaires are easily incorporated in every type of clean room spaces, whether it is microchip or pharmaceutical industry, laboratories or operation rooms.

CLEAN ROOM MG



Dimensions A/B/H, a/b/h	623x623x61mm 605x605x110mm
Finish	antibacterial white epoxy polyester powder
Weight	8.5kg
Luminaire luminous flux (t _a =25°)	5500lm
Total power	42W
Luminaire efficiency	130lm/W
Light colour temperature	4000K
CRI	>80
UGR	<22
LED service life	60.000h(L90B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI



OPTICS The tempered mat glass without a visible frame provides increased protection and a smooth surface for easy maintenance.

APPLICATION In monolith and panel suspended ceilings.

SUGGESTED AREAS Pharmaceutical industry.

CLEAN ROOM CLA / CLD

Clean Room CLA / CLD are highly efficient luminaires for direct illumination, intended for spaces where a high protection degree and an excellent lighting performance are required in accordance with DIN EN ISO 14644-1.

Smooth luminaire surface, resistant to cleaning agents, allows easy maintenance and meets high hygiene standards for medical institutions and clean production facilities.



CLEAN ROOM CLA / CLD

OPTICS Luminaires are supplied with the following optics:

CLA multilayer optics, with highly transparent tempered glass protector, diffuser of microprismatic structure and opal foil.

CLD opal diffuser providing diffused light. Latest generation LED modules and drivers.

Extended work-life LED sources, with not over 10% light intensity loss (L90), reduce maintenance costs to minimum. The choice of the appropriate control gear enables lighting management.

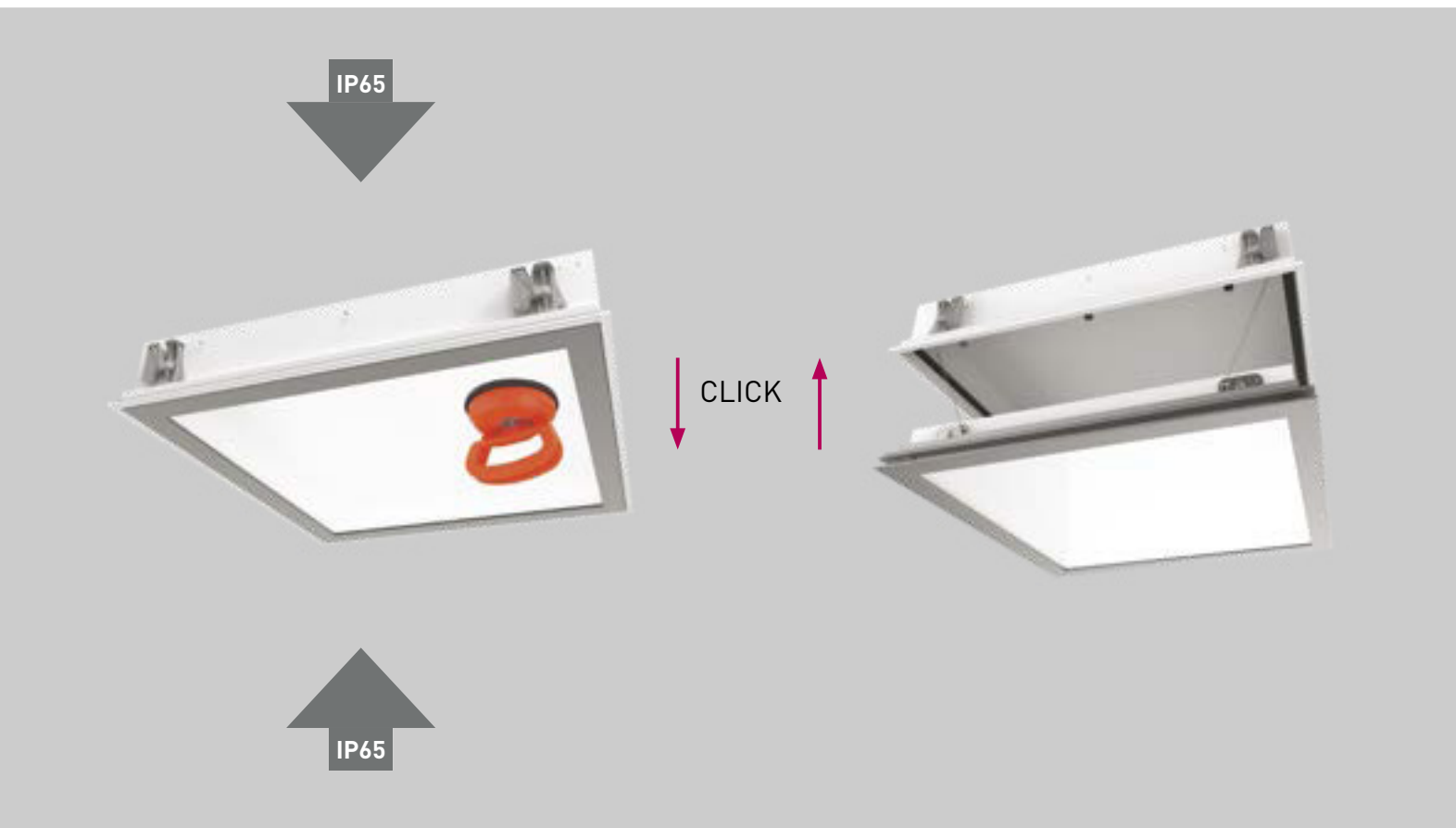
HOUSING is constructed of bent 0.8mm thick steel sheets. The parts are assembled by resistance spot welding and TIG welding. Final coating procedure includes degreasing, phosphatisation, washing and zinc primer coating, after which epoxy polyester powder RAL 9003 (white) is applied and then polymerized at 180°C. The powder is used for surface protection of luminaires for medical use, since it is resistant to aggressive cleaning agents and has an antibacterial character.

Luminaire housing consists of inner and outer casing for easy installation and serviceability.

DESIGN OVERVIEW



FEATURES



UPGRADE
POSSIBILITY

TOOL FREE
SERVICEABILITY

STANDARD EQUIPEMENT



Pressure equalization valve.



Connection coil for inner and outer housing for easy serviceability.

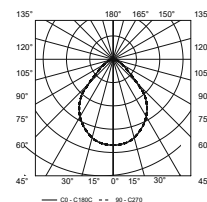
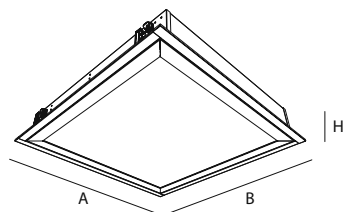


Mounting kit for monolith and panel suspended ceilings.

On request

- Standard mounting brackets for panel thickness >57 mm
- Brackets for larger thicknesses are available on request
- Mounting brackets for concealed grid clip-in, suspended ceilings
- Other light colour temperatures and CRI>90
- EM module 1h or 3h autonomy
- CBS (Central Battery System) integration

CLEAN ROOM CLA



Dimensions A/B/H	595x595x108/620x620x108mm/1195x295x108mm
Cut -out dimensions a/b/h	580x580x160/610x610x160mm/1180x280x160mm
Ingress protection rating	IP65/IP65
Impact resistance	IK09
Finish	antibacterial white epoxy polyester powder
Weight	12/14kg
Luminaire luminous flux (t _a =25°)	5400/5550lm
Total power	45W
Luminaire efficiency	120/123 lm/W
Light colour temperature	4000K
CRI	>80, >90
UGR	<19
LED service life	60.000h(L90B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

* A novelty in this group is the Clean Room CLA luminaire variant with a shallower housing, dimensions A/B/H= 623/623/75mm, a/b/h= 580/580/130mm.

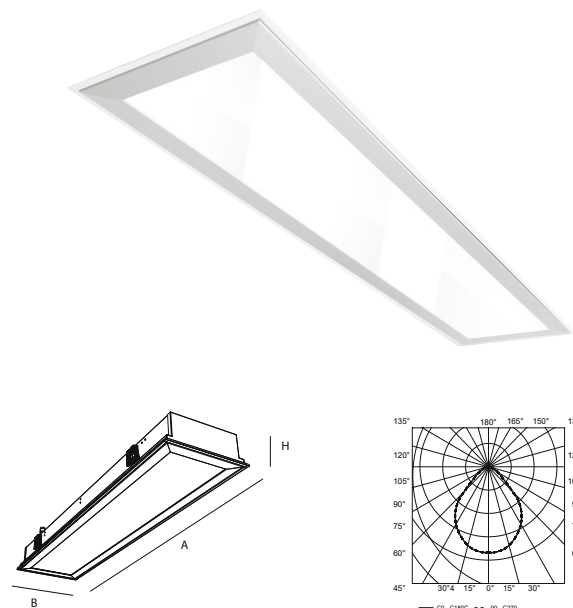


OPTICS Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

APPLICATION The luminaire is intended for use in modular layin ceilings with visible hangers M600, M625 and monolith and panel suspended ceilings 7– 57 mm thick.

SUGGESTED AREAS Hospitals: Examination and treatment rooms, intensive care units, laboratories; production facilities for electronics and micromechanics.

CLEAN ROOM CLA 0 T
Specially for operational theaters



Dimensions A/B/H	1195x295x108mm
Cut -out dimensions a/b/h	1180x280x160mm
Ingress protection rating	IP65
Impact resistance	IK09
Finish	antibacterial white epoxy polyester powder
Weight	14kg
Luminaire luminous flux (t _a =25°)	7900lm
Total power	73W
Luminaire efficiency	108lm/W
Light colour temperature	4000K
CRI	>90
UGR	<19
LED service life	60.000h(L80B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI



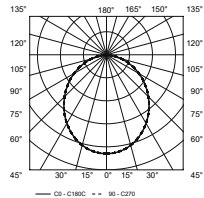
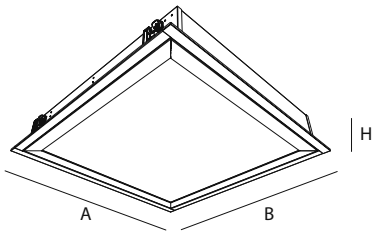
CRI >90
UGR <19

OPTICS Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

APPLICATION The luminaire is intended for use in monolith and panel suspended ceilings 7– 57 mm thick.

SUGGESTED AREAS Operational theaters, laboratories and other spaces with extreme hygiene and other standards.

CLEAN ROOM CLD



Dimensions A/B/H	595x595x108 / 620x620x108mm / 1195x295x108mm
Cut -out dimensions a/b/h	580x580x160 / 610x610x160mm / 1180x280x160mm
Ingress protection rating	IP65
Impact resistance	IK06
Finish	antibacterial white epoxy polyester powder
Weight	12/14kg
Luminaire luminous flux (t _a =25°)	4672/4789lm
Total power	34/36W
Luminaire efficiency	137/133 lm/W
Light colour temperature	4000K
CRI	>80, >90
UGR	<22
LED service life	60.000h(L90B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

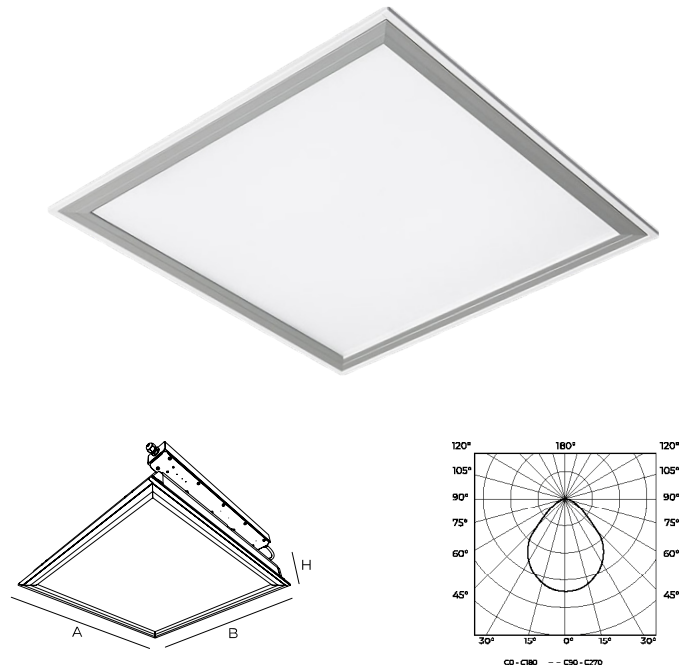


OPTICS Opal PMMA diffuser providing a uniform, diffused light.

APPLICATION The luminaire is intended for use in modular layin ceilings with visible hangers M600, and monolith and panel suspended ceilings 7– 57 mm thick.

SUGGESTED AREAS Healthcare facilities, sterile rooms, pharmaceutical, chemical and food production industry.

CLEAN ROOM SLIM UP



Dimensions A/B/H	595x595x60mm
Cut -out dimensions a/b/h	580x580x60mm
Ingress protection rating	IP50/IP65
Impact resistance	IK08
Finish	antibacterial white epoxy polyester powder
Weight	12kg
Luminaire luminous flux ($t_a=25^\circ$)	4600/10000lm
Total power	37/86W
Luminaire efficiency	124/116 lm/W
Light colour temperature	4000K
CRI	>80, >90
UGR	<19, <22
LED service life	60.000h(L90B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI



MAINTENANCE
FROM THE TOP

VERY THIN
HOUSING

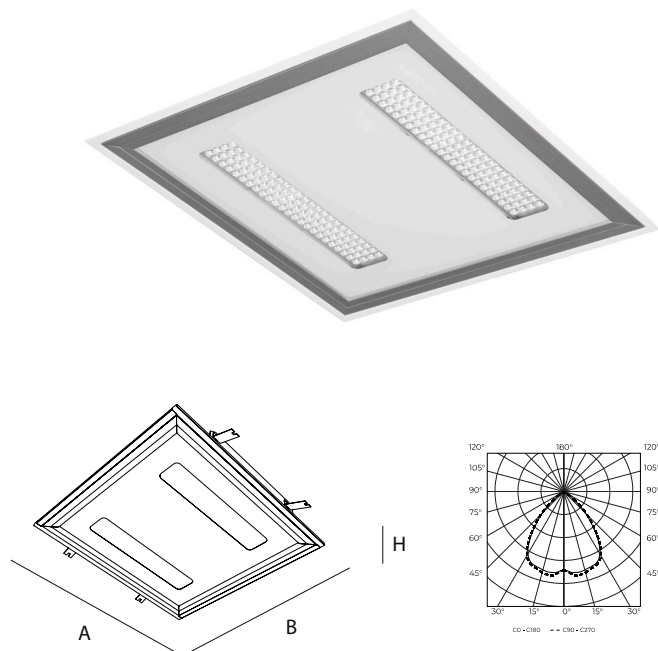
HOUSING It's made of a 0,8 mm thick steel sheet with a final coating of a special antibacterial white polyester powder, resistant to aggressive cleaning agents. Luminaire construction ensures complete sealing of the ceiling.

OPTICS Multi-layered optics. Highly transparent microprismatic diffuser protects against glare and provides pleasant, diffused light. Opal foil ensures a uniform light, without visible light sources. The tempered protection glass provides a smooth surface for easy maintenance.

APPLICATION The luminaire is intended for use in monolith and panel suspended ceilings, 30 – 60 mm thick. For lay-in mounting, the luminaire height is 60 mm only. Luminaire maintenance from the upper side ensures room cleanliness integrity.

SUGGESTED AREAS Healthcare, industry (luminaire maintenance from the upper side).

CLEAN ROOM HB



Dimensions A/B/H	500x500x60mm
Cut -out dimensions a/b/h	485x485x100mm
Ingress protection rating	IP65
Impact resistance	IK07
Finish	antibacterial white epoxy polyester powder
Weight	7kg
Luminaire luminous flux (t _a =25°)	10838/15873lm
Total power	74/115W
Luminaire efficiency	147/138lm/W
Light colour temperature	4000K
CRI	>80
UGR	<22
LED service life	60.000h(L80B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

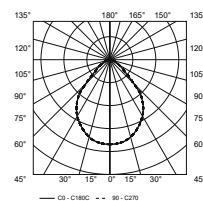
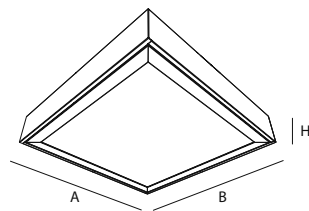


OPTICS Tempered glass with anti-scattering film, in double aluminium frame.

APPLICATION Recessed luminaire for direct illumination of industrial spaces. Designed for areas with a height requirement of over 6m.

SUGGESTED AREAS The luminaire is made especially for the industrial and warehouse facilities with applied HACCP standard.

CLEAN ROOM CLA /C



Dimensions A/B/H	600x600x109mm / 1200x300x109mm
Ingress protection rating	IP65
Impact resistance	IK09
Finish	antibacterial white epoxy polyester powder
Weight	12/14kg
Luminaire luminous flux (t _a =25°)	5400/5550lm
Total power	45W
Luminaire efficiency	120/123 lm/W
Light colour temperature	4000K
CRI	>80
UGR	<19
LED service life	60.000h(L90B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

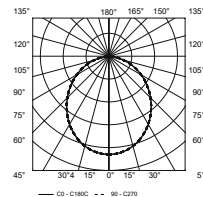
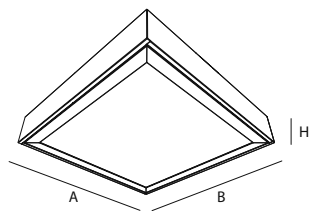


OPTICS Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

APPLICATION Surface mounted.

SUGGESTED AREAS Hospitals: Examination and treatment rooms, intensive care units, laboratories; production facilities for electronics and micromechanics.

CLEAN ROOM CLD /C



Dimensions A/B/H	600x600x109mm / 1200x300x109mm
Ingress protection rating	IP65
Impact resistance	IK06
Finish	antibacterial white epoxy polyester powder
Weight	12/14kg
Luminaire luminous flux (t _a =25°)	4672/4789lm
Total power	34W
Luminaire efficiency	137/141lm/W
Light colour temperature	4000K
CRI	>80
UGR	<22
LED service life	60.000h(L90B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

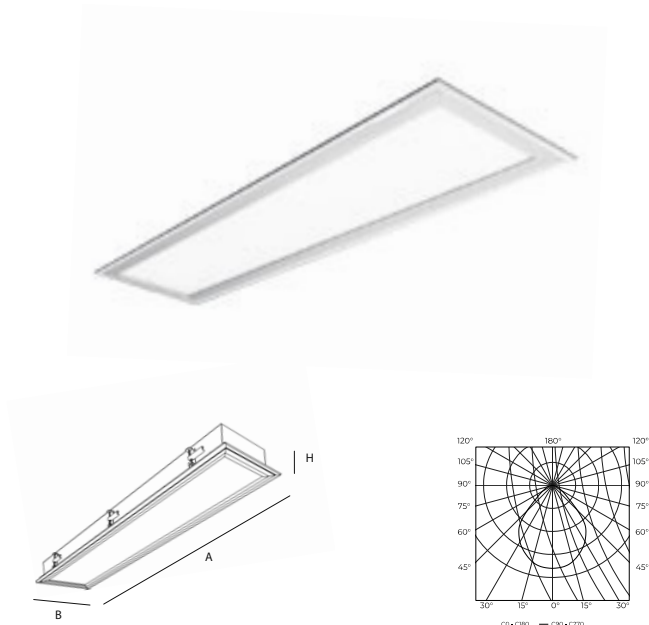


OPTICS Opal diffuser providing a uniform, diffused light.

APPLICATION Surface mounted luminaire.

SUGGESTED AREAS Healthcare facilities, sterile rooms, pharmaceutical, chemical and food production industry

CLEAN ROOM CDP EX



Dimensions A/B/H	1195x295x104mm
Cut -out dimensions a/b/h	1180x280mm
Ingress protection rating	IP64
Impact resistance	IK08
Finish	antibacterial white epoxy polyester powder
Weight	12kg
Luminaire luminous flux (t _a =25°)	5062lm
Total power	44W
Luminaire efficiency	115lm/W
Light colour temperature	4000K
CRI	>80
UGR	<20
LED service life	60.000h(L80B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI



OPTICS The highly transparent diffuser with a microprismatic structure limits glare and provides uniform, diffused light. Opal foil brings a uniformly illuminated surface without visible light sources. The tempered glass protector gives a smooth surface for easy maintenance.

APPLICATION The luminaire is intended for use in monolith and panel ceilings.

SUGGESTED AREAS Spaces with potentially explosive ambience, Pharmaceutical & Chemical industry

CLEAN ROOM CLA /C Ex
Explosio np roof luminai re



Dimensions A/B/H	600x600x109mm / 1200x300x109mm
Ingress protection rating	IP54
Impact resistance	IK09
Finish	antibacterial white epoxy polyester powder
Weight	12/16kg
Luminaire luminous flux (t _a =25°)	5400/5550lm
Total power	44/50W
Luminaire efficiency	123/111lm/W
Light colour temperature	4000K
CRI	>80
UGR	<19
LED service life	60.000h(L90B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI
Ex protection degree	II 3DEx tc IIIB T65°C Dc

*Explosion - proof equipment according to ATEX 2014/34/EU directives
Compliance with: EN IEC 60079-0:2018, EN 60079-31:2014



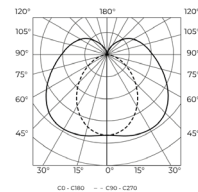
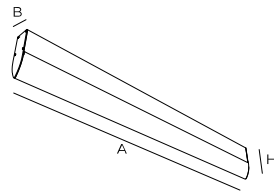
GENERAL Highly efficient surface mounted luminaire for direct illumination. Luminaire has Ex protection degree II 3D Ex tc IIIB T65°C Dc.

OPTICS Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

APPLICATION Surface mounted luminaire.

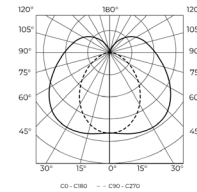
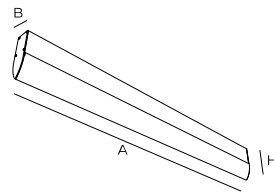
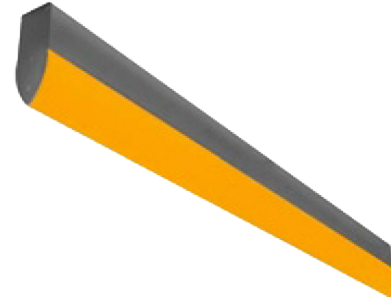
SUGGESTED AREAS The luminaire is applicable in spaces with potentially explosive ambience, such as the pharmaceutical industry, and places where powder chemicals and dangerous materials are handled.

STREAM TEARDROP



Dimensions A/B/H	1140x46x140mm
Ingress protection rating	IP54
Finish	anodization in natural aluminium colour
Weight	2.70kg
Luminaire luminous flux ($t_a=25^\circ$)	4030/7330lm
Total power	25/51W
Luminaire efficiency	161/144 lm/W
Light colour temperature	4000K
CRI	>80
LED service life	72.000h(L80B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

STREAM TEARDROP LSL 620nm



Dimensions A/B/H	1140x46x140mm
Ingress protection rating	IP54
Finish	anodization in natural aluminium colour
Weight	2.70kg
Luminaire luminous flux ($t_a=25^\circ$)	2600lm
Total power	30W
Luminaire efficiency	87lm/W
Light colour temperature	620nm
CRI	-
LED service life	50.000h(L80B10)
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI



OPTICS Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

APPLICATION Micro-electronics industry, automotive battery production

SUGGESTED AREAS Clean & dry areas with laminar airflow. Microelectronics industry, automotive battery production

