

# CLEAN ROOM

## MEDICAL LUMINAIRE

High protection degree  
Energy efficiency  
Longevity  
Comfort

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**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 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.

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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 20% light intensity loss (L80), reduce maintenance costs to minimum.

The choice of the appropriate control gear enables lighting management.

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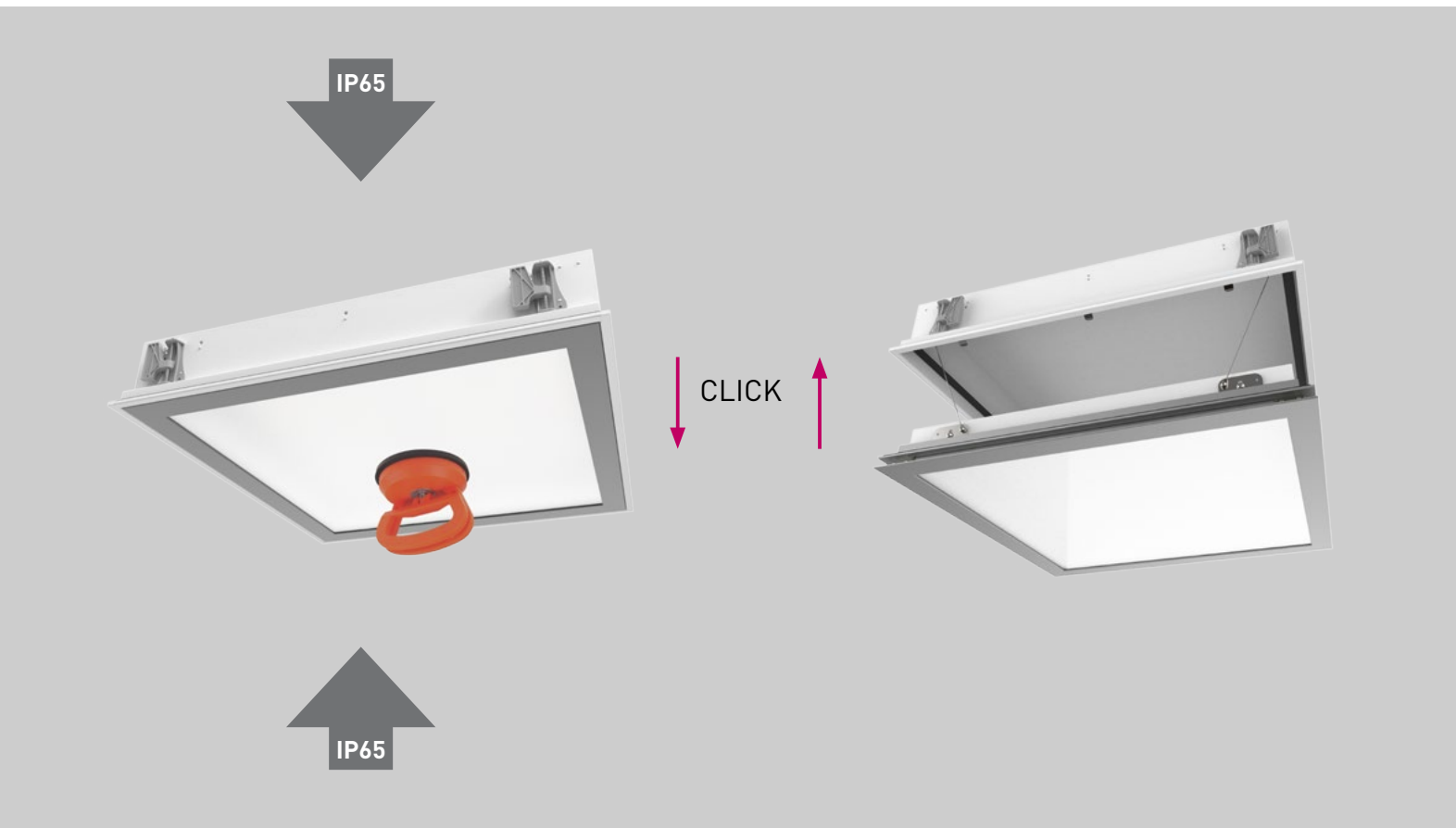
**HOUSING** is constructed of bended 0.8mm thick steel sheets. The parts are assembled by resistance spot welding and TIG welding. Final coating procedure includes degreasing, phosphatisation, washing and zinc primer coating, after which epoxy polyester powder RAL 9003 (white) is applied and then polymerized 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 bactericide 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.



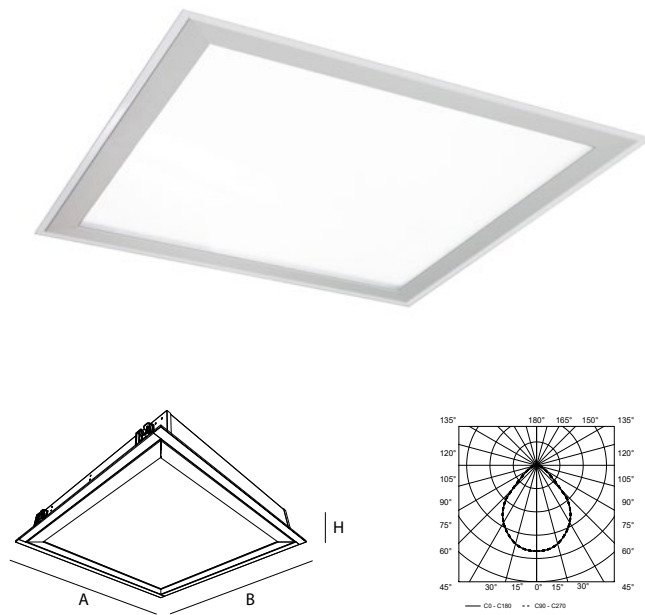
Mounting kit for monolith and panel suspended ceilings.

## On request

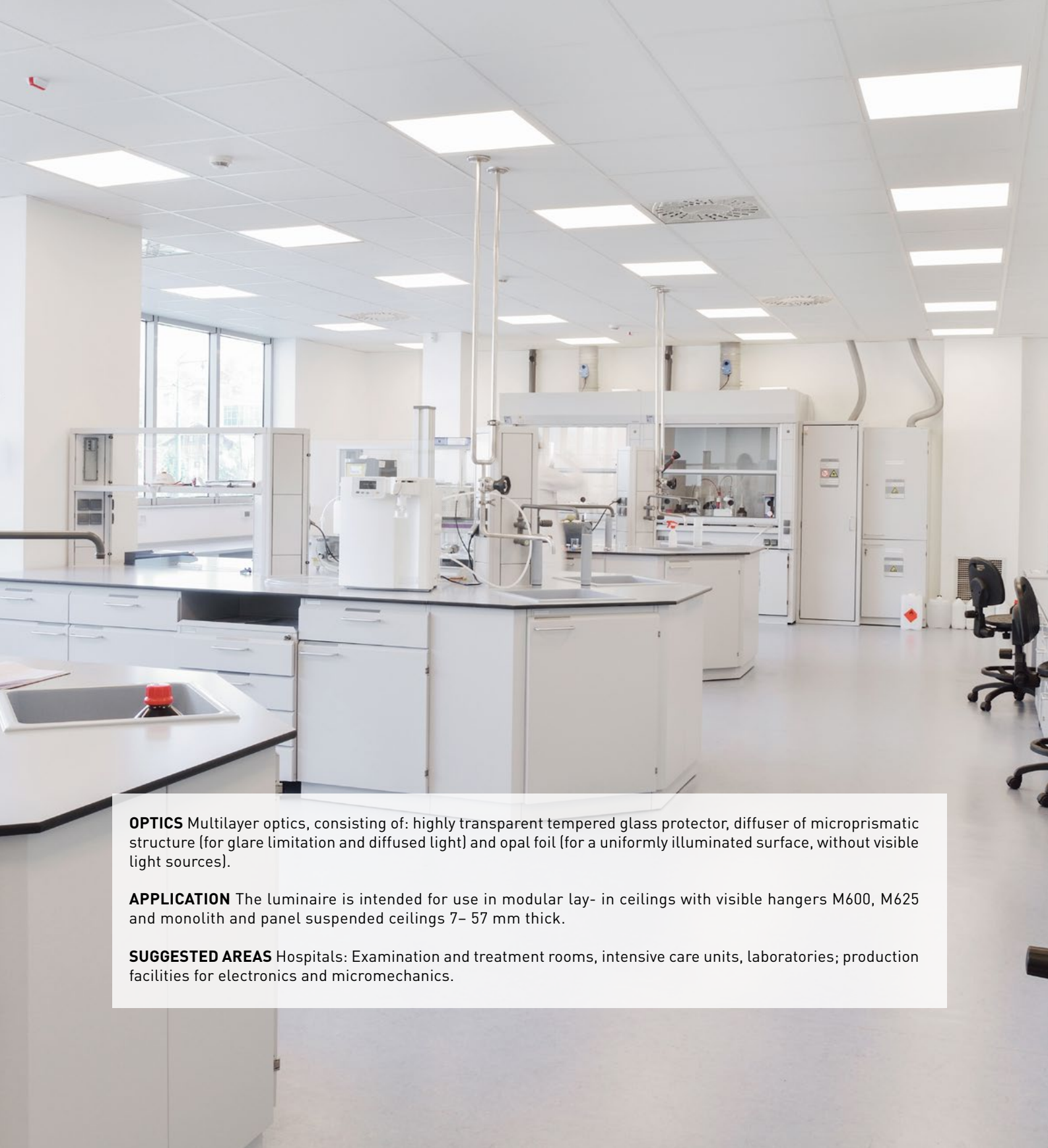
- Mounting brackets for panel thickness >57 mm
- Mounting brackets for concealed grid clip-in, suspended ceilings
- Other light colour temperatures and CRI>90
- EM module 1h or 3h autonomy
- CBS (Central Battery System) integration



CLEAN ROOM CLA



Dimensions A/B/H	595x595x108/620x620x108mm/1195x295x108mm
Cut -out dimensions a/b/h	580x580x160/610x610x160mm/1180x280x160mm
Ingress protection rating	IP65
Impact resistance	IK10
Finish	antibacterial white epoxy polyester powder
Weight	12/14kg
Luminaire luminous flux (t <sub>a</sub> =25°)	5500lm
Total power	50/44W
Luminaire efficiency	110/125 lm/W
Light colour temperature	4000K
CRI	80
UGR	<19
LED service life	60.000h(L80B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

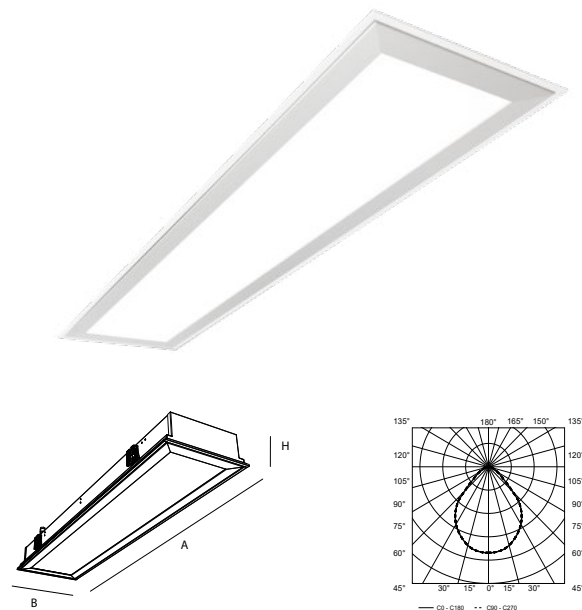


**OPTICS** Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

**APPLICATION** The luminaire is intended for use in modular lay- in 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 OT**  
Specially for operational theaters



Dimensions A/B/H	1195x295x108mm
Cut -out dimensions a/b/h	1180x280x160mm
Ingress protection rating	IP65
Impact resistance	IK10
Finish	antibacterial white epoxy polyester powder
Weight	14kg
Luminaire luminous flux (t <sub>a</sub> =25°)	7350/8700lm
Total power	74/73W
Luminaire efficiency	100/119 lm/W
Light colour temperature	4000K
CRI	>90/ >80
UGR	<19/<22
LED service life	60.000h(L80B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

CRI >90  
UGR <19

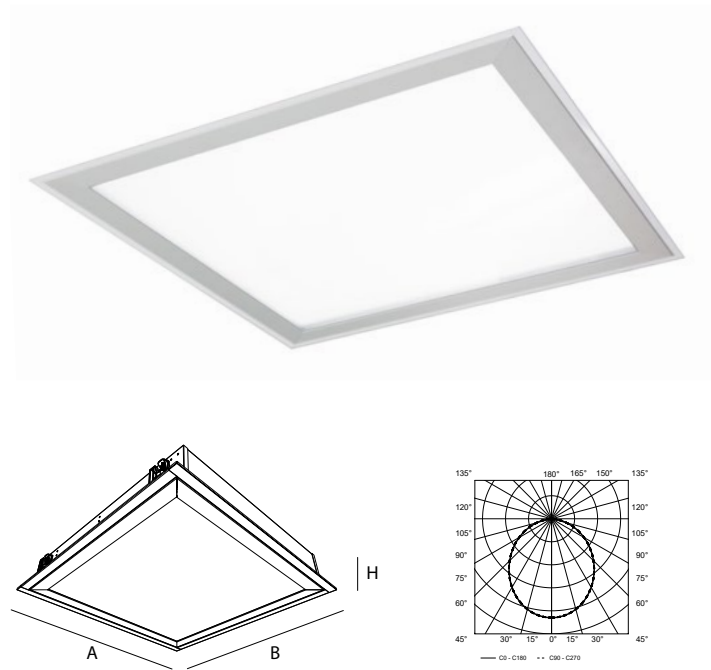
**OPTICS** Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

**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 <sub>a</sub> =25°)	4920/4430lm
Total power	39/32W
Luminaire efficiency	126/138 lm/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



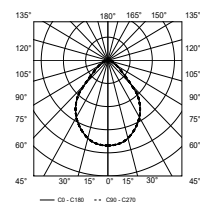
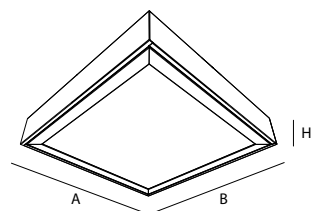
**OPTICS** Opal diffuser providing a uniform, diffused light.

**APPLICATION** The luminaire is intended for use in modular lay- in 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 CLA /C



Dimensions A/B/H	600x600x108mm / 1200x300x108mm
Ingress protection rating	IP65
Impact resistance	IK10
Finish	antibacterial white epoxy polyester powder
Weight	12/14kg
Luminaire luminous flux (t <sub>a</sub> =25°)	5500lm
Total power	50/44W
Luminaire efficiency	110/125 lm/W
Light colour temperature	4000K
CRI	80
UGR	<19
LED service life	60.000h(L80B10) SDCM 3
Power supply	220-240V, 50-60Hz
Control gear	ECG, DALI

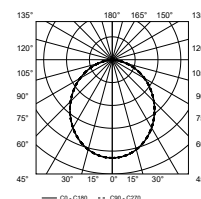
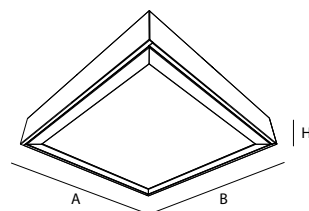


**OPTICS** Multilayer optics, consisting of: highly transparent tempered glass protector, diffuser of microprismatic structure (for glare limitation and diffused light) and opal foil (for a uniformly illuminated surface, without visible light sources).

**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**

**Ingress protection rating**

**Impact resistance**

**Finish**

**Weight**

**Luminaire luminous flux ( $t_a=25^\circ$ )**

**Total power**

**Luminaire efficiency**

**Light colour temperature**

**CRI**

**UGR**

**LED service life**

**Power supply**

**Control gear**

600x600x108mm / 1200x300x108mm

IP65

IK06

antibacterial white epoxy polyester powder

12/14kg

4920/4430lm

39/32W

126/138 lm/W

4000K

80

<22

60.000h(L80B10) SDCM 3

220-240V, 50-60Hz

ECG, DALI



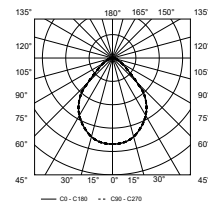
**OPTICS** Opal diffuser providing a uniform, diffused light.

**APPLICATION** Surface mounted luminaire.

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



**CLEAN ROOM CLA /C Ex**  
Explosion proof luminaire



<b>Dimensions A/B/H</b>	600x600x108mm / 1200x300x108mm
<b>Ingress protection rating</b>	IP65
<b>Impact resistance</b>	IK10
<b>Finish</b>	antibacterial white epoxy polyester powder
<b>Weight</b>	12/14kg
<b>Luminaire luminous flux (t<sub>a</sub>=25°)</b>	5500lm
<b>Total power</b>	50/44W
<b>Luminaire efficiency</b>	110/125 lm/W
<b>Light colour temperature</b>	4000K
<b>CRI</b>	80
<b>UGR</b>	<19
<b>LED service life</b>	60.000h(L80B10) SDCM 3
<b>Power supply</b>	220-240V, 50-60Hz
<b>Control gear</b>	ECG, DALI
<b>Ex protection degree</b>	II 3GEx nAIIc T4Gc and II 3DEx tcIIIC T65°C Dc.

\* Explosion - proof equipment according to ATEX 2014/34/EU directives





**CLEAN ROOM CLA /C Ex**  
Explosion proof luminaire



**GENERAL** Highly efficient surface mounted luminaire for direct illumination. Luminaire has Ex protection degree II 3GEx nAIIIC T4Gc and II 3DEx tcIIIC 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** All areas requiring class II protection degree, such as pharmaceutical and chemical industry, service stations (tanks), LPG refilling areas, laboratories, aircraft hangars, workshops (with acetylene based welding bays).

