

TYPE OF PRODUCTS

IP65 LED compact recessed luminaires, **access from the top and the bottom**. For installation in cut-out ceiling.

MECHANICAL CONSTRUCTION

Luminaire housing made of steel. Powder coated with KilBac white RAL 9003, certified qualicoat class 1 and antibacterial. Upper clamping frame in lacquered steel. Upper cover bright red lacquered. Bottom frame in white lacquered extruded aluminum, screwed on the luminaire housing by 4 stainless steel screws.

LED MODULES

Zagha LED modules Book7, L28W6, with an energy efficiency until 185 Lm/W, rated AA+. Assembled on a 2 mm aluminium plate to ensure an optimal heat dissipation for the lifespan of the LEDs. Low chromatic distortion : 3SDCM. Colour rendering index over 90. Expected luminous flux : L80 at 70.000 h.

OPTICS

- **OPPC** : opal polycarbonate diffuser, high impact resistance.
- **OPMI** : opal diffuser in PMMA, high chemical resistance.
- **MPPC** : polycarbonate micro prismatic diffuser which reduce luminance to achieve UGR lower than 19.
- **MPVR** : optics made of hardened laminated glass and an internal micropism diffuser which reduce luminance to achieve UGRs lower than 19. Excellent resistance to hydrogen peroxide.

CONTAMINATION CONTROL

Reduced risk of microbial growth :

>> **KilBac** technology, broad spectrum antibacterial finish with silver ions (BioCote, validated according to ISO 22196).

>> **CleanSeal** technology, use of two-component antimicrobial seals according to VDI-6022 and DIN EN ISO 846.

The mechanical construction of the luminaire ensures a particle emission class 1 according to ISO 14644-14. This result is certified by the **Fraunhofer IPA** laboratory. This range is made without silicone.

WALKABLE

Luminaires designed and tested to withstand the application of a 100 kg mass on the top cover corresponding to accidental feet pressure on the luminaire in the walkable plenum.

H₂O₂ RESISTANCE

The components that may come into contact with hydrogen peroxide during the decontamination process were tested by cyclic, direct and prolonged contact with a 35% H₂O₂ solution, see the resistance in the reference table.

TEMPERATURE AND HUMIDITY

Reference ambient temperature: 20°C / 68°F. Operating temperature range: 5 to 25°C / 41 to 77 °F (the temperature affects the lifetime of the LEDs). For environments with a moisture content of more than 70%, we recommend the use of lacquered INOX 304 for the housing, in option.

POWER SUPPLY

Luminaires supplied with European-branded EPF electronic driver. Rated voltage 220-240 V. DALI dimming (GDA) available in option. Access from the top or the bottom.

INSTALLATION

Installation in sandwich panels from 15 to 100 mm. Adaptations for different thicknesses are possible on request. Quick installation without opening the luminaire. The sealing between the false ceiling and the lower frame must be applied at the installation.

WIRING

By a waterproof Wieland brand connector, RST20i, fixed to the top of the luminaire (installation on flexible cord).



OPTIONS

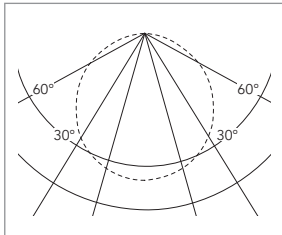


Reinforced clamping frame
Reinforced clamping frame made of 2 mm steel.

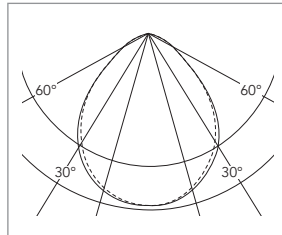


KS3 emergency kit
Philips Trustsight BASIC kit, 3.6 V 4000 mAh NiMH battery, power supply 3 W for 3 h, approx. 300 Lm.

PHOTOMETRY



Opal



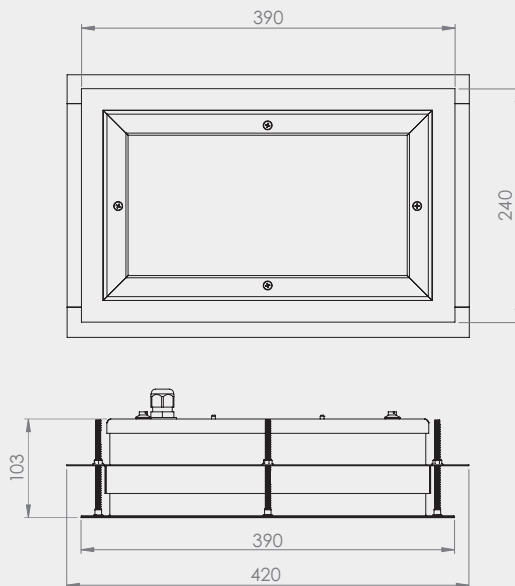
MPVR

FRAUNHOFER IPA TEST

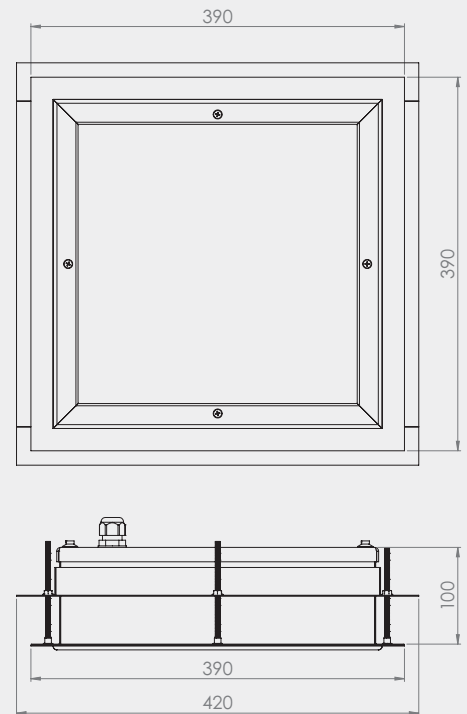


DIMENSIONS (mm)

TYPE A



TYPE B



REFERENCES AND FEATURES

CODE	REFERENCE	Type	Cut-out (mm)	P (W)	Emitted flux (Lm)	Weight (Kg)	H ₂ O ₂
OPMI optics							
EUP2077EPF	BATDX OPMI 390/240 1700/2 14/840 EPF	A	217x367	14	1700	5,5	●
EUP2079EPF	BATDX OPMI 390/390 5300/5 44/840 EPF	B	367x367	44	5300	7	●
EUP2115EPF	BATDX OPMI 390/390 3900/5 31/840 EPF	B	367x367	31	3900	7	●
OPPC optics							
EUP2078EPF	BATDX OPPC 390/240 1450/2 14/840 EPF	A	217x367	14	1450	5,5	●
EUP2080EPF	BATDX OPPC 390/390 4500/5 44/840 EPF	B	367x367	44	4500	7	●
EUP2116EPF	BATDX OPPC 390/390 3400/5 31/840 EPF	B	367x367	31	3400	7	●
MPPC optics							
EUP2118EPF	BATDX MPPC 390/390 5100/5 44/840 EPF	B	367x367	44	5100	7	●
EUP2122EPF	BATDX MPPC 390/390 3700/5 31/840 EPF	B	367x367	31	3700	7	●
MPVR optics							
EUP2123EPF	BATDX MPVR 390/390 3700/5 38/840 EPF	B	367x367	38	3700	6,5	●
EUP2124EPF	BATDX MPVR 390/390 5100/5 48/840 EPF	B	367x367	48	5100	8	●

Light and power output tolerance ± 10%

Standards and warranty

Compliance : information on the compliance of our products with the relevant standards and directives is available on our website.

Warranty : our warranty conditions are indicated in our general terms and conditions of sale. There are special conditions depending on the product range. These conditions can be checked on our website : www.isoone-cleanroom-lighting.com/conditions-generales-de-vente/

Temperature and switches on : the operating temperature and the number of daily switches have an influence on the lifetime of the products. Our luminaires are designed to withstand at least 15.000 switches on following EU 1194/2012.

Please consult us for more information.

Note

ISOONE reserves the right to modify or update this document at any time within the framework of the technological evolution and the updating of our technical documentation. Despite the care taken in the design and the updating of this card, it can not under any circumstances constitute a contractual document.

UE Declaration of Conformity

LA MANUFACTURE DE FRANCE SAS
18 rue Jean Monnet
31240 Saint-Jean

CERTIFIES,
under its own responsibility, that the ISOONE luminaires **BATDX**

EUP2077EPF	EUP2115EPF	EUP2080EPF	EUP2118EPF	EUP2123EPF
EUP2079EPF	EUP2078EPF	EUP2116EPF	EUP2122EPF	EUP2124EPF

are designed and manufactured in accordance with the following harmonized directives and standards :

SECURITY

2014/35/UE (26/02/2014)	Electrical equipment designed for use within certain voltage limits.
EN 60598-1 : 2015	Luminaires - Part 1 : General requirements and tests.
EN 60598-2-2 : 2012	Luminaires - Part 2-1 : Particular requirements - Fixed luminaires for general lighting.
EN 62493 : 2015	Assessment of lighting equipment related to human exposure to electromagnetic Field.
EN 62471 : 2008	Photobiological safety of lamps and devices using lamps.

ELECTROMAGNETIC COMPATIBILITY

2014/30/UE (26/02/2014)	European « EMC » Directive.
EN 55015 : 2013 + A1 : 2015	Limits and methods of measurement of electrical radio interference from electrical lighting and similar equipment.
EN 61000-3-2 : 2019	Electromagnetic compatibility (EMC) - Part 3-2 : Limits - Limits for harmonic current emissions (current drawn by equipment ≤ 16 A per phase).
EN 61000-3-3 : 2014	Electromagnetic compatibility (EMC) - Part 3-3 : Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A per phase and not subject to conditional connection.
EN 61547 : 2009	General purpose lighting equipment - EMC immunity requirements.

ECO-CONCEPTION

2009/125/CE (21/10/2009) + 2019/2020 (01/10/2019)	European « ErP » directive + regulation.
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RESTRICTION OF DANGEROUS SUBSTANCES

2011/65/UE (08/06/2011)	European directive « RoHS ».
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Certificate issued on May 15th 2023

President, Frédéric Colombo



Fraunhofer

TESTED[®] DEVICE

La Manufacture de France
BATDX (EUP2123EPF)
Report No. LA 1810-1073

Particle Emission

Qualification Certificate

This is to certify that the product mentioned above, provided by

La Manufacture de France - ISOONE
Saint-Jean, France

has been awarded a Fraunhofer certificate TESTED DEVICE bearing the report number LA 1810-1073.

The luminaire BATDX - MLED MPVR 390/390 3700/5 31/840 EPF (color: white) was assessed in compliance with ISO 14644-14. When operated under the specified test conditions, it is suitable for use in cleanrooms fulfilling the specifications of the following Air Cleanliness Class according to ISO 14644-1:

Test parameter(s)	Air Cleanliness Class
Structure-borne noise = approx. 5 to 50Hz	1
Overall result	1

It should be noted that cleanrooms of Class 1 to 5 according to ISO 14644-1 have a higher filter occupancy, which may restrict the use of panel lighting systems. Cleanrooms with a horizontal displacement flow form an exception to this. The test result may be affected by the surrounding ceiling system.

LA 1810-1073
Report No. first document

Stuttgart, November 10, 2018
Place, date of first document issued

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Report No. current document

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Place, current date

on behalf of 
Dr.-Ing. Frank Bürger, Project Manager Fraunhofer IPA

DUPLICATE

This document only applies to the named product in its original state and is valid for a period of 5 years from the date the first document was issued. The document can be verified under www.tested-device.com.

Detailed information and parameters of the test environment can be found in the Fraunhofer IPA test report.