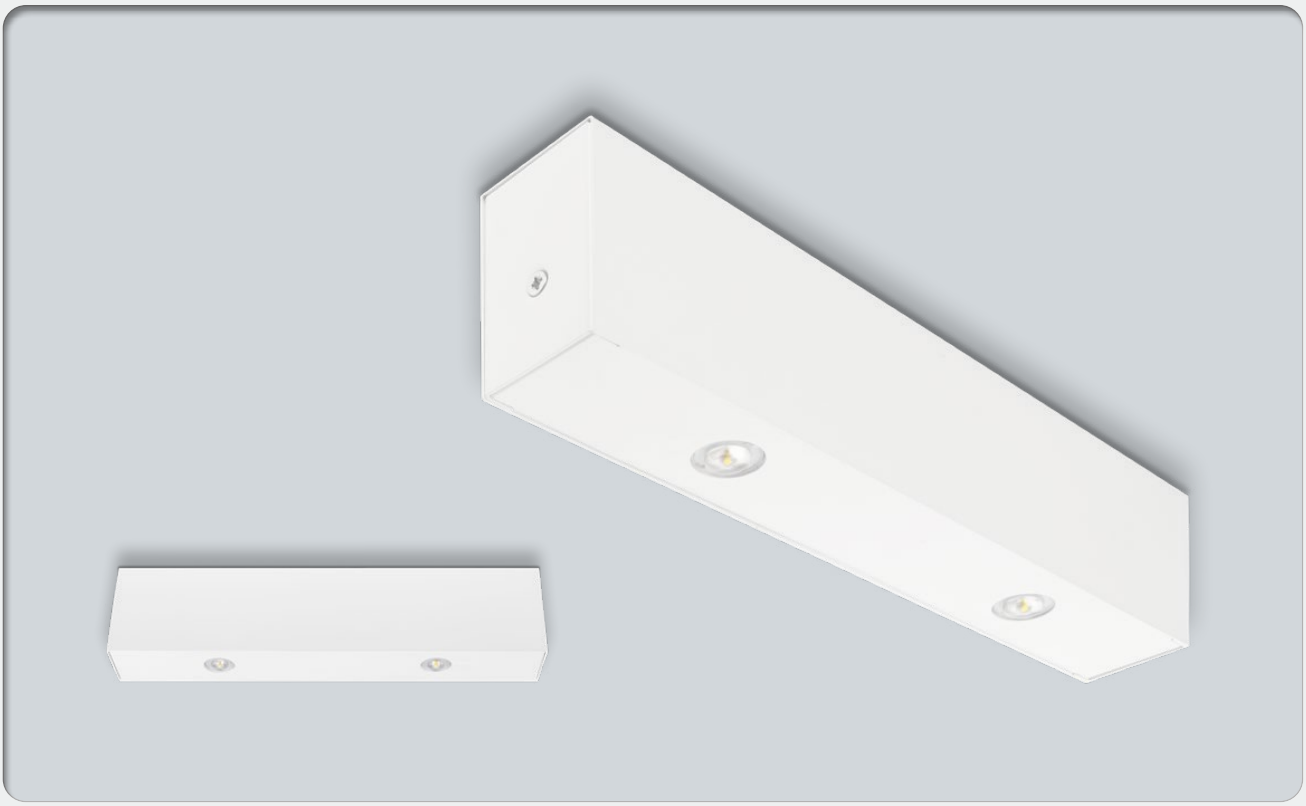
CRYSTAL II

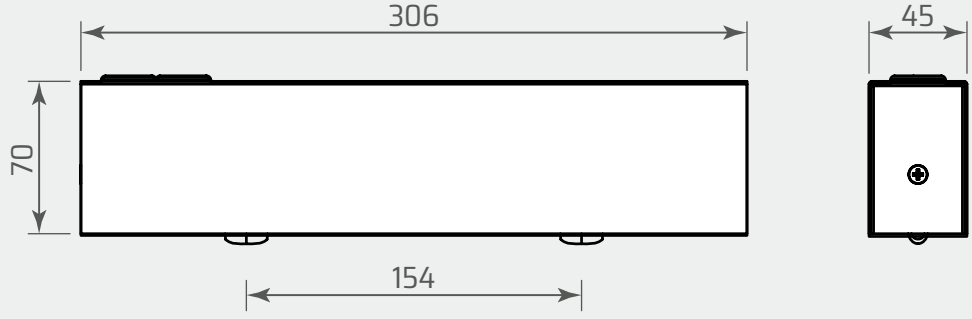
IP40

CNBOP-PIB 5060/2023

CRYSTAL II is a low power LED luminaire designed for emergency escape lighting installed inside buildings. Depending on the mounting type allows for the surface, suspended or recessed installation. Its main task is to illuminate escape routes, evacuation signs, rooms in public facilities, work places, etc.

CRYSTAL II luminaire is compatible with all emergency lighting systems offered by HYBRYD.





LUMINAIRE FEATURES

- Deep discharge battery protection
- Li-Ion battery type
- Adapted to high altitudes
- Maintained/non-maintained or switched maintained operation mode
- Possibility of connecting to the monitoring system or collective power supply system
- Lighting of escape routes, open spaces and fire points
- A lot of mounting types
- Housing is made of steel
- Many luminaire power variants (2-7W)

AVAILABLE SYSTEMS

AUTOTEST – (AT) internal components, battery and light source tests being performed automatically

CENTRALTEST – (CT) internal components, battery and light source tests being performed on command from the main unit of central management system

CB – luminaire supplied from HVCBS (230V AC / 216V DC / 108V DC), without address module

CBAM – luminaire supplied from the HVCBS (230V AC / 216V DC), with built-in address module

LVAM – luminaire supplied with 24V DC from the LVDBS system, with built-in address module

TECHNICAL DATA

Supply voltage	**AT, CT**	230V AC 50/60Hz
	CB	230V AC 50/60Hz 80–275V DC
	CBAM	230V AC 50/60Hz 170–275V DC
	LVAM	10–32V DC
Protection class	**AT, CT, CB, CBAM**	I
	LVAM	III
Ingress protection		IP40
Light source		LED modules [1]
Light colour temperature	**CW**	5200 – 5700K
Light source supply power		2–7W
Light source lifespan		> 50 000h
Battery voltage	**Li-Ion**	7.4V

Battery capacity	**Li-Ion**	0.7Ah, 2.2Ah, 4.4Ah
Battery recharging time	**AT, CT**	≤ 12h
Emergency operation time	**AT, CT**	1h, 3h, 8h
Ambient temperature	**AT, CT**	+5 – +40°C TE: [2] -20 – +40°C
	CB, CBAM	-10 – +45°C TE: [2] -20 – +45°C
	LVAM	-25 – +60°C
Supply cable cross-section area		0.5 – 2.5mm²
Supply cable diameter		≤ 17mm
Communication cable diameter	**CT**	≤ 7mm
Through wiring		✓
Suitable for surface wiring		✓

[1] Non-exchangeable, but serviceable light source; [2] TE – extended temperature range

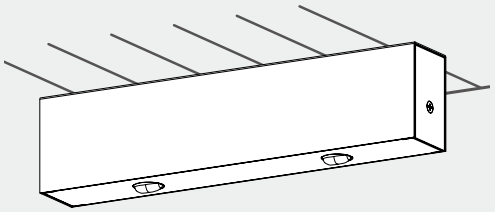
MATERIAL

Housing material – powder coated steel

Housing colour – RAL 9003, other colours on special order

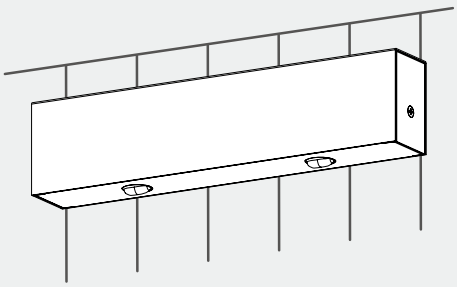
MOUNTING TYPE

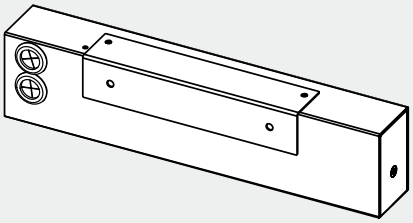
Directly to the ceiling



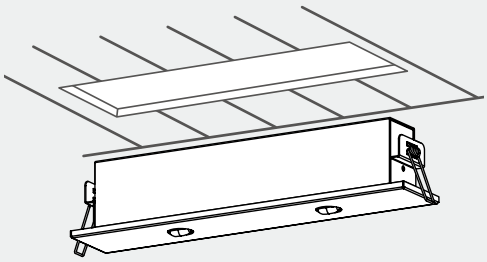
MOUNTING ACCESSORY

W163 – back to the wall

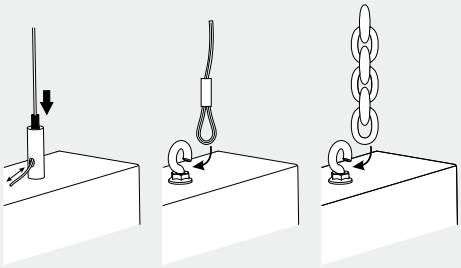




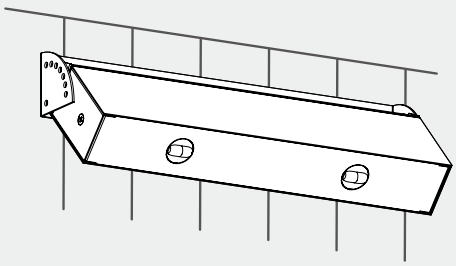
C162 – recessed



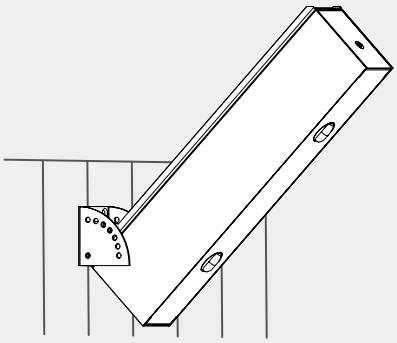
UMK C200, C201, C202 – suspended



W166 – angular (longer side to the wall)

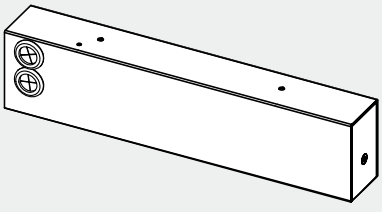


W167 – angular (shorter side to the wall)

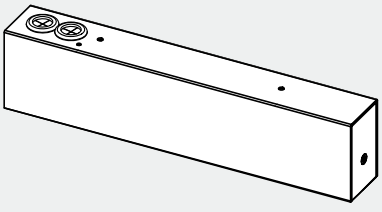


GROMMETS LOCATION

H – insertion of the grommets from the back of the luminaire



V – insertion of the grommets from the top of the luminaire



OPTICS AVAILABLE

AREA – (AR) symmetrical light distribution in all directions, recommended for use in places of considerable height or to illuminate fire points

AREA PLUS – (AP) symmetrical light distribution in all directions, ensuring adequate illumination on a large area

ROAD – (RO) light distribution mainly along the escape route, recommended for use in high corridors

ROAD PLUS – (RP) light distribution mainly along the escape route with a much greater range than for the ROAD optics, for small heights

ROAD PLUS H/V – (RPHV) used to illuminate escape routes at the point of their intersections

MINIMUM LUMINOUS FLUX

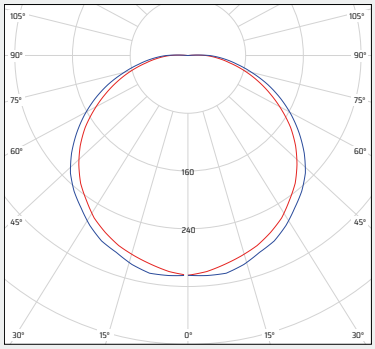
Optics	Power [W]	Flux [lm]
AREA	2	322
AREA	3	473
AREA	5	736
AREA	7	898
AREA PLUS	2	335
AREA PLUS	3	487
AREA PLUS	5	745
AREA PLUS	7	927

Optics	Power [W]	Flux [lm]
ROAD	2	283
ROAD	3	412
ROAD	5	639
ROAD	7	796
ROAD PLUS	2	265
ROAD PLUS	3	385
ROAD PLUS	5	599
ROAD PLUS	7	745

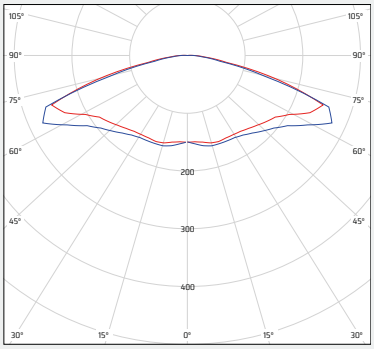
Optics	Power [W]	Flux [lm]
ROAD PLUS H/V	2	311
ROAD PLUS H/V	3	452
ROAD PLUS H/V	5	706
ROAD PLUS H/V	7	879

LIGHT DISTRIBUTION CURVES

AREA

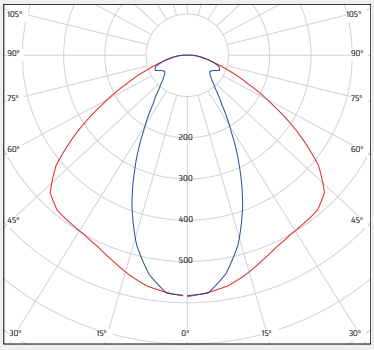


AREA PLUS

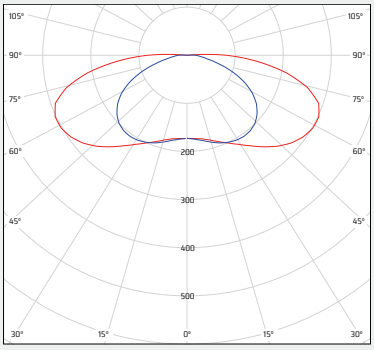


cd/klm
C0 – C180
C90 – C270

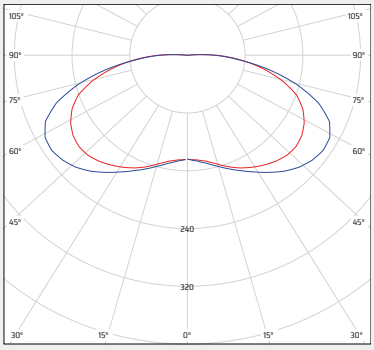
ROAD



ROAD PLUS



ROAD PLUS H/V



ORDERING

CRYSTAL II	0000	-	RP	-	4W	-	AT	-	3h	-	NM	-	TS	-	CW	-	9003	-	FT	-	H

Variant:

0000 – base
0001 – extended warranty
2000 – with smaller housing size (4W, 6W)

Optics:

AR – area
AP – area plus
RO – road
RP – road plus
RPHV – road plus horizontal/vertical
LD – LED strip, transparent cover (2W, 3W)

Light source supply power:

2W – module powered by 2W (LED strip)
3W – module powered by 3W (LED strip)
4W – module powered by 4W
5W – module powered by 5W
6W – module powered by 6W
7W – module powered by 7W

System variant:

AT – autotest
CT – centraltest
CB – HVCBS centrally supplied luminaire
CBAM – HVCBS centrally supplied luminaire, with address module
LVAM – LVDBS centrally low voltage supplied luminaire, with address module

Emergency operation time:

1h – 1 hour
3h – 3 hours
8h – 8 hours
X – not applicable (HVCBS, LVDBS)

Operation mode:

M – maintained
NM – non-maintained
SM – switched maintained
X – not applicable (HVCBS, LVDBS)

Ambient temperature range:

TS – standard
TE – extended

Light colour temperature:

CW – 5200-5700K

Housing colour:

9003 – RAL 9003
9005 – RAL 9005
9006 – RAL 9006
... – other on special order

Surface finishing:

FT – fine texture
... – other on special order, outside of the standard stock program

Grommets location:

H – insertion of the grommets from the back of the luminaire
V – inserting the grommets from the top of the luminaire