



vizULO

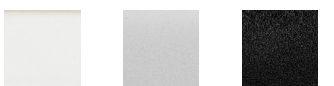
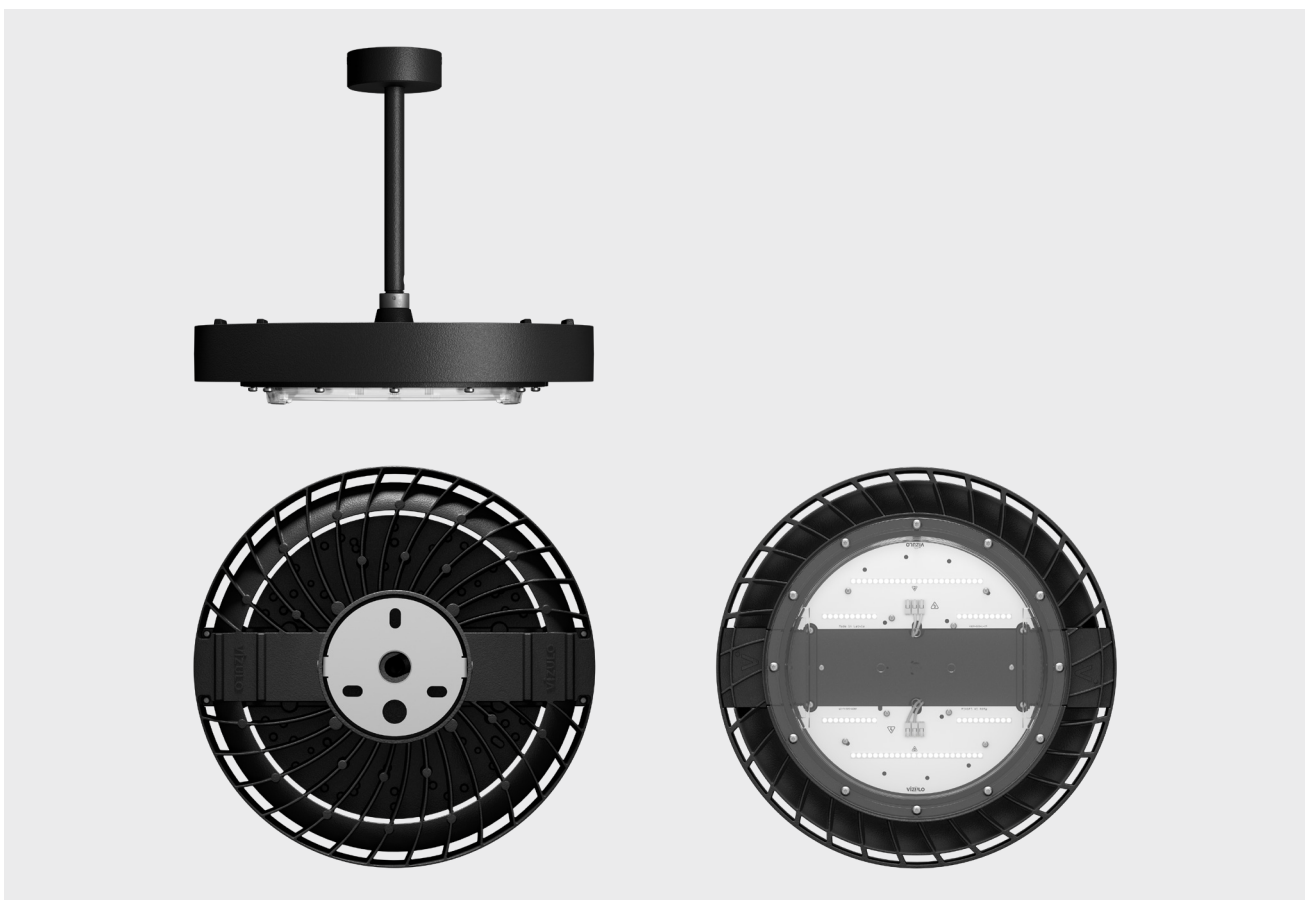
ACORN  
Gen2

with Rod Suspension



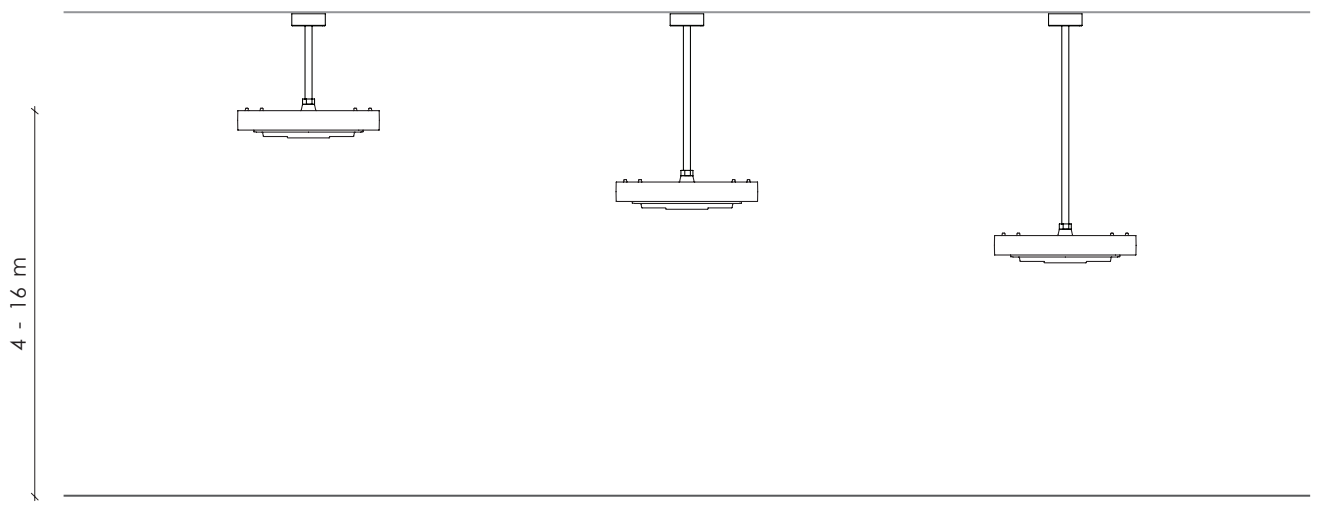
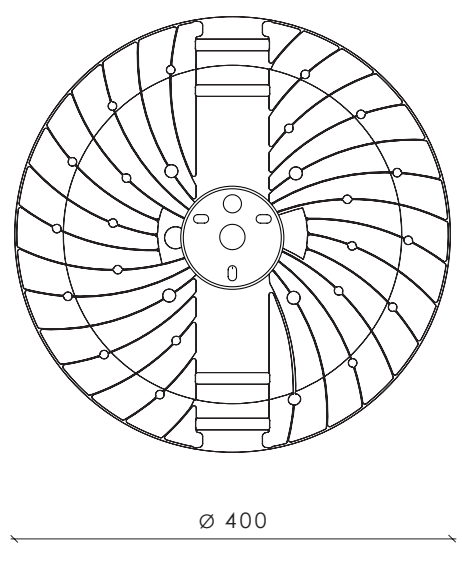
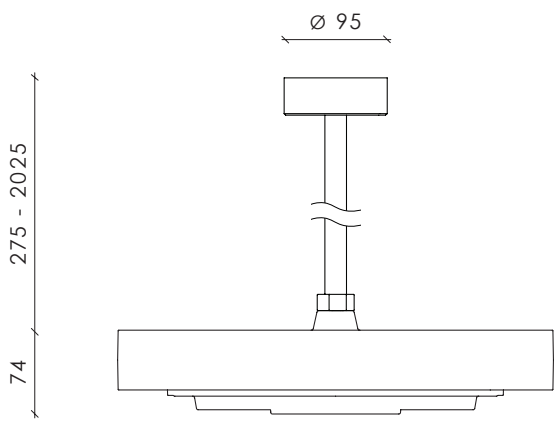
# Acorn Gen2

with rod suspension



RAL9016 RAL7035 RAL9005

Other colors available on request






# Features

## ▾ ACORN GEN2 WITH REFLECTOR

ACORN Gen2 reflector is available in two materials: metal and plastic.\*

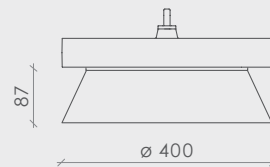
**Metal reflector** comes in three standard colors:

-  white (RAL 9016)
-  light grey (RAL 7035)
-  black (RAL 9005)

and offers the flexibility to match the luminaire's color, with additional color options available on request.

**Plastic reflector** is available exclusively in white (RAL 9016)!

\* See the Accessories section below.



# Applications



↘ Sports hall



↘ Industrial luminaires

## Technical information



<b>V</b>	220 - 240
<b>Hz</b>	50 - 60
<b>W</b>	50 - 270 <sup>(1)</sup> 30 - 200 <sup>(2)</sup> 30 - 150 <sup>(3)</sup>
<b>lm</b>	4 902 - 45 172 <sup>(4)</sup>
<b>lm/W</b>	Up to 167
<b>K</b>	3000 / 4000 <sup>(5)</sup>
<b>°C</b>	-40 up to +50 <sup>(6)</sup>
<b>CRI</b>	>70 / >80 / >90 <sup>(5)</sup>

<b>Body:</b>	Die-cast aluminium
<b>Dimming:</b>	DALI / 1-10 V / Bluetooth / Non dimmable
<b>Sensor:</b>	Microwave / PIR / PIR + Daylight
<b>Initial chromaticity:</b>	MacAdam 5 MacAdam 3 (on request)
<b>Lifetime:</b>	100 000 h (L80B10) at Ta = 25 °C*
<b>Warranty:</b>	5 years 2 years (emergency configuration)
<b>Optics:</b>	Symmetrical / Asymmetrical
<b>Mounting:</b>	On Rod
<b>Human Centric</b>	
<b>Lighting:</b>	Available
<b>Neto weight:</b>	Up to 6.12 kg

<sup>1)</sup> With optics C01 / C02 / C03

<sup>2)</sup> With optics D02 / D03

<sup>3)</sup> Emergency configuration

<sup>4)</sup> Lumen output indicated at 4000 K, CRI > 70

<sup>5)</sup> 1800 / 2200 / 2700 / 3500 / 5000 / 5700 / 6500 K available on request along with other not listed CRI and CCT

<sup>6)</sup> Operating temperature differs depending on chosen output wattage

<sup>7)</sup> Emergency configuration IP40

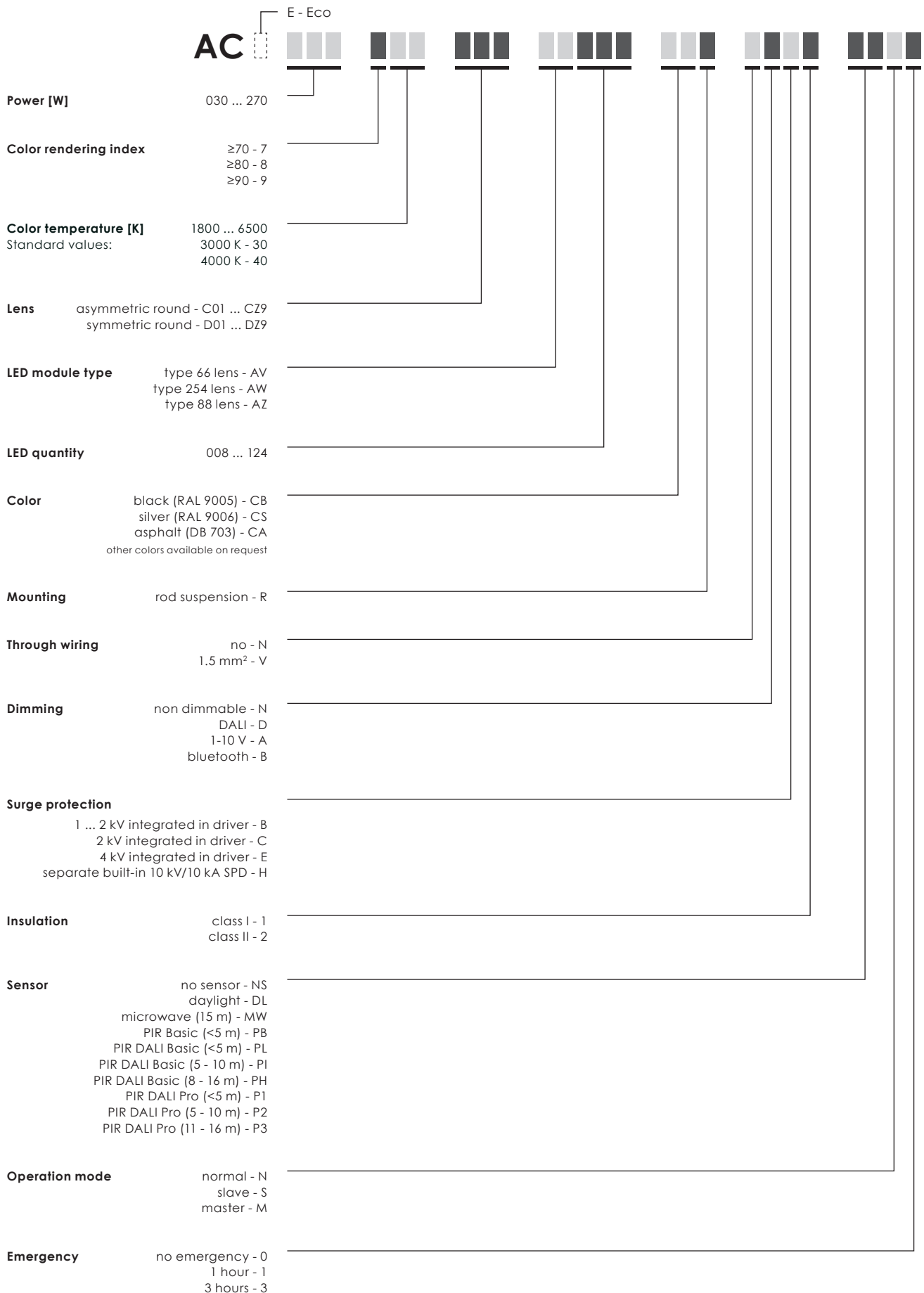
<sup>8)</sup> Ball proof: tested according to DIN 57710-13

<sup>9)</sup> Check SundaHus web page for product assessment results

\* This value is only informative and may change according to selected article. LED Lifetime is strongly depending from LEDs current and junction temperature – increase in LED current and luminaire power lead to increase of junction temperature and as consequence lifetime decrease. Thus, luminaire models with lower power, lower current (and lower junction temperature) will have higher lifetime than standard models. And high power and high current luminaire models may have negative lifetime deviation comparing to standard models. To receive precise value please contact VIZULO export representatives.

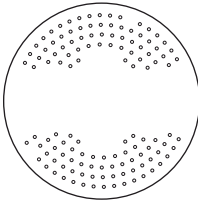
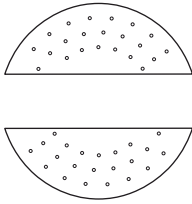
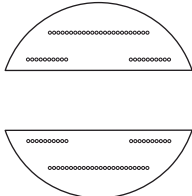
Technical parameters for final product can differ from typical data by 7% due to special conditions of LED manufacturing processes.

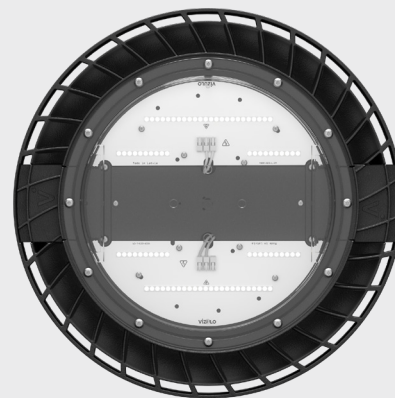
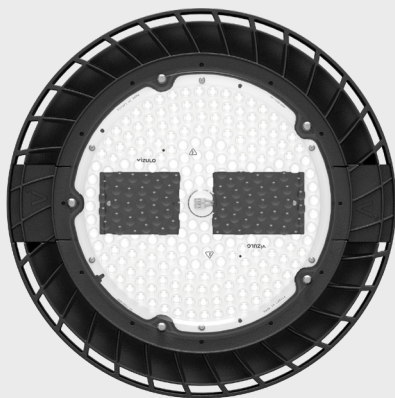
# Model name principles



**EXAMPLE** ACE 150 730 DA7 AW124 CBR NNE1 NSN1

# LED modules

Type	Min LED QTY per luminaire	Max LED QTY per luminaire	LED step	LED type	Lens type	Layout
AW	44	124	4	Eco	type 254 lens	
AV	8	44	4	Eco	type 66 lens	
AZ	16	88	8	Eco	type 88 lens	



↘ AW type  
LED module

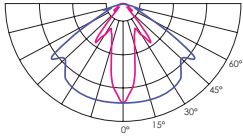
↘ AV type  
LED module

↘ AZ type  
LED module

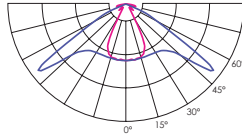


# Optics

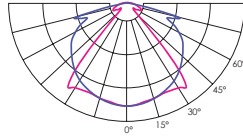
C01



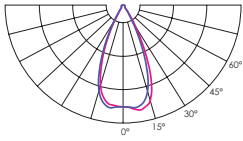
C02



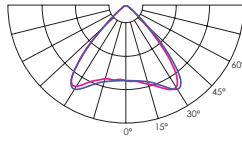
C03



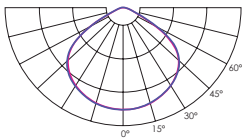
D02



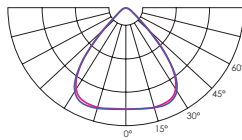
D03



DA7



DA8



# Sensors

## MICROWAVE SENSOR (ON-OFF)

<b>Power source:</b>	220 – 240 VAC
<b>Rated load:</b>	800 W
<b>HF system:</b>	5.8 GHz (± 75 MHz)
<b>Hold-time:</b>	2 s ~ 30 min (selectable)
<b>Sensitivity:</b>	10% / 50% / 75% / 100%
<b>Daylight sensor:</b>	2 ~ 500 lux, disable
<b>Detection range (max):</b>	20 m (Ø) / 15 m (H) (adjustable)
<b>Detection angle:</b>	360°
<b>Working temperature:</b>	-20 °C ~ +50 °C *
<b>IP rating:</b>	IP65
<b>Certificates:</b>	Semko, CB, CE, EMC, RED, RCM



## MICROWAVE SENSOR (DALI)

<b>Power source:</b>	120 – 277 VAC
<b>Rated load:</b>	max 20 DALI devices
<b>HF system:</b>	5.8 GHz (± 75 MHz)
<b>Hold-time:</b>	2 s ~ 30 min (selectable)
<b>Sensitivity:</b>	10% / 50% / 75% / 100%
<b>Daylight sensor:</b>	2 ~ 500 lux, disable
<b>Stand-by period:</b> (corridor function)	0 s ~ 1 h, +∞ (selectable)
<b>Stand-by dimming level:</b>	10% / 20% / 30% / 50%
<b>Detection range (max):</b>	20 m (Ø) / 15 m (H) (adjustable)
<b>Detection angle:</b>	360°
<b>Working temperature:</b>	-20 °C ~ +50 °C *
<b>IP rating:</b>	IP65
<b>Certificates:</b>	Semko, CB, CE, EMC, RED, RCM



## DAYLIGHT SENSOR

<b>Power source:</b>	220 - 240 V
<b>DALI output devices:</b>	10 / 32
<b>DALI output:</b>	2 channels
<b>Type:</b>	light and presence
<b>Max detection area (Ø):</b>	7 - 9 m
<b>Max installation height:</b>	5 m
<b>Presence detection angle:</b>	40° - 90° (fixed or adjustable)
<b>Light-control range:</b>	10 - 800 lux
<b>Hold-time:</b>	user-definable
<b>Working temperature:</b>	-20 °C ~ +50 °C *
<b>Remote control (optional):</b>	set and control with IR remote control **

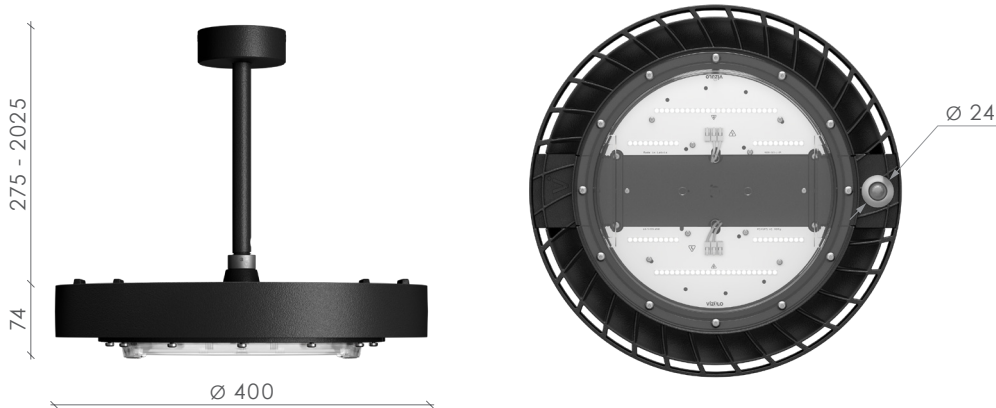


\* Minimal luminaire working temperature will be same or higher than for specific sensors (if used)

\*\* Remote control can be ordered separately. See the Accessories section below

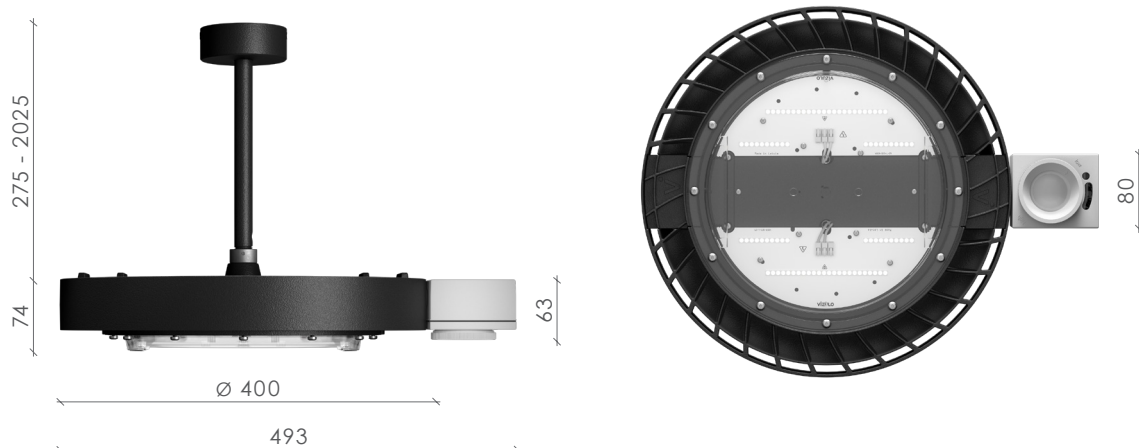
## MID-RANGE DALI-2 MULTISENSOR (PIR SENSOR)

<b>Power source:</b>	DALI
<b>Mounting height (H):</b>	5 - 10 m
<b>Detection range for PIR (max):</b>	8 m (@H = 10 m)
<b>Detection angle for PIR:</b>	72° (tagential) / 44° (radial)
<b>Detection angle for light measurement:</b>	30° - 40°
<b>Light-control range:</b>	0.5 - 2000 lux (adjustable)
<b>Working temperature:</b>	-20 °C ~ +50 °C *
<b>Min temperature difference between ambient temperature and detected object:</b>	± 4 °C
<b>Remote control (optional):</b>	set and control with IR remote control **



## LONG-RANGE DALI-2 MULTISENSOR (PIR SENSOR)

<b>Power source:</b>	DALI
<b>Mounting height (H):</b>	8 - 12 m (range position "low") 12 - 16 m (range position "high")
<b>Detection range for PIR (max):</b>	18 m (@H = 16 m)
<b>Detection angle for PIR detection angle "low":</b>	72°
<b>Detection angle for PIR detection angle "high":</b>	60°
<b>Detection angle for light measurement:</b>	13°
<b>Light-control range:</b>	0.5 - 2000 lux (adjustable)
<b>Working temperature:</b>	-20 °C ~ +50 °C *
<b>Min temperature difference between ambient temperature and detected object:</b>	± 4 °C
<b>Remote control (optional):</b>	set and control with IR remote control **



\* Minimal luminaire working temperature will be same or higher than for specific sensors (if used)

\*\* Remote control can be ordered separately. See the Accessories section below

# Emergency lighting

ACORN Gen2 has an option to have Emergency lighting (up to **150 W**).

## Features

- Self contained emergency lighting
- 1 or 3 h rated duration
- Dimmable and non-dimmable versions available
- Constant power output
- Deepdischarge protection

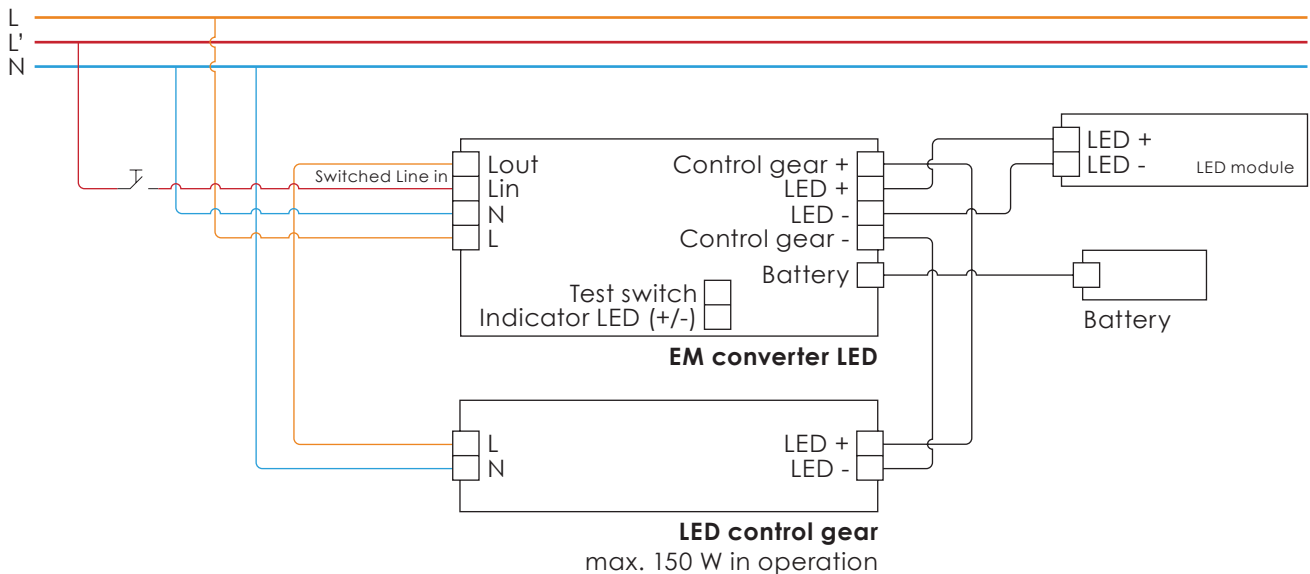
While Mains voltage is present Emergency controller is also charging the connected battery. Rated emergency duration can be chosen (based on battery capacity) and can be 1 h or 3 h.

## Operation

ACORN Gen2 luminaire which is equipped with Emergency lighting will work in 2 modes based on electrical conditions:

1. If Mains voltage is present, luminaire will work with its programmed power (just like in case without Emergency lighting);
2. If there is outage of Mains voltage, luminaire will work in Emergency mode with little power (about 2.5 W) while feeding from the battery.

## Simple wiring diagram



### Additional Test switch

For connection to the emergency  
For checking the device function

### Status indication LED

Two-colour status display LED (bi-color)  
Green: system OK, Red: fault



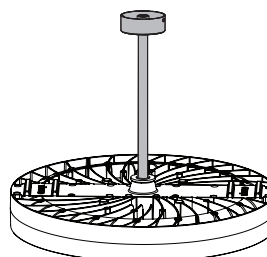


# Accessories

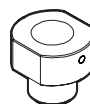
## Rod with ceiling box

black (RAL 9005)

Rod length [m]	Non dimmable	DALI
0.25	Art. 70059010	Art. 70059018
0.5	Art. 70059011	Art. 70059019
0.75	Art. 70059012	Art. 70059020
1	Art. 70059013	Art. 70059021
1.25	Art. 70059014	Art. 70059022
1.5	Art. 70059015	Art. 70059023
1.75	Art. 70059016	Art. 70059024
2	Art. 70059017	Art. 70059025



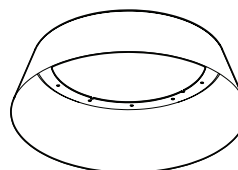
**ACORN Gen2 rod adapter** ..... Art. 70058042



## ACORN Gen2 reflector from metal

-  white (RAL 9016) ..... Art. 70058047
-  light grey (RAL 7035) ..... Art. 70058043
-  black (RAL 9005) ..... Art. 70058044

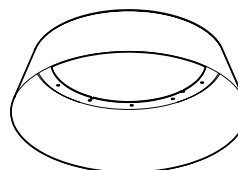
Other colors available on request



## ACORN Gen2 reflector from plastic

-  white (RAL 9016) ..... Art. 70058028

Other colors are NOT available for plastic version!



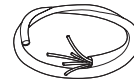
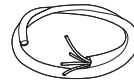
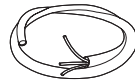
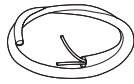
**Remote control** ..... Art. 70000670

Available only in combination with a luminaire equipped with PIR function



## Cable order information\*

\* Custom cable lengths available on request



Cable length [m]	2 x 1.5 mm <sup>2</sup>	3 x 1.5 mm <sup>2</sup>	4 x 1.5 mm <sup>2</sup>	5 x 1.5 mm <sup>2</sup>
0.5	Art. 70100184	Art. 70100179	Art. 70100402	Art. 70100409
1	Art. 70100156	Art. 70100193	Art. 70000527	Art. 70100220
1.5	Art. 70100391	Art. 70100258	Art. 70100403	Art. 70100410
2	Art. 70100202	Art. 70100177	Art. 70000515	Art. 70100262
2.5	Art. 70100392	Art. 70100213	Art. 70100404	Art. 70100411
3	Art. 70100166	Art. 70100178	Art. 70000529	Art. 70100217
4	Art. 70100172	Art. 70100144	Art. 70000530	Art. 70100189
5	Art. 70100173	Art. 70100146	Art. 70000531	Art. 70100185
6	Art. 70100099	Art. 70000512	Art. 70000532	Art. 70000370
7	Art. 70100174	Art. 70100182	Art. 70000533	Art. 70100201
8	Art. 70100152	Art. 70000630	Art. 70000534	Art. 70100212
9	Art. 70100176	Art. 70000381	Art. 70000535	Art. 70100192
10	Art. 70100153	Art. 70000631	Art. 70000536	Art. 70000387
11	Art. 70100191	Art. 70100143	Art. 70000537	Art. 70000388
12	Art. 70100167	Art. 70100147	Art. 70000538	Art. 70100200
13	Art. 70100186	Art. 70100187	Art. 70000539	Art. 70100412
14	Art. 70100204	Art. 70100164	Art. 70000540	Art. 70100165
15	Art. 70100380	Art. 70100030	Art. 70000541	Art. 70100183
20	Art. 70100393	Art. 70100397	Art. 70100405	Art. 70100413
25	Art. 70100276	Art. 70100398	Art. 70100406	Art. 70100414

# Certification



**CE** – conformity with European Union's health, safety and environmental protection standards

The CE mark is placed on products to state conformity with the relevant EU health, safety and environmental protection standards. In case of electronic products, the standards are, for example, the Restriction of Hazardous Substances in Electrical and Electronic Equipment (RoHS) directive, Waste Electrical and Electronic Equipment (WEEE) directive, the Electromagnetic Compatibility (EMC) directive etc. The mark ensures that the product can be sold anywhere in the European Economic Area (EEA).



**UKCA** - conformity with the relevant essential requirements of Great Britain

UKCA is a product mark intended to demonstrate compliance with the directives set by Great Britain (England, Scotland and Wales). It is analogous to the European Union's CE marking, meaning that depending on the type of product the applicable regulations are different. In case of LED lighting, the relevant requirements are compliance with the Electromagnetic Compatibility Regulations, the Electrical Equipment (Safety) Regulations, the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations and the Ecodesign for Energy-Related Products and Energy Information (Lighting Products) Regulations.



**RoHS** – compliance with European Union's RoHS directive

The RoHS (Restriction of Hazardous Substances in Electrical and Electronic Equipment) directive restricts (with exceptions) the use of ten hazardous materials in the manufacture of various types of electronic and electrical equipment. The aim of the directive is to prevent the risks posed to human health and the environment related to the management of electronic and electrical waste.



**Byggsvarubedömningen** – product chemical content and life cycle assessment

Byggsvarubedömningen is a non-profit organization owned by large constructors and property owners in Sweden. The organization conducts assessments of various construction products based on chemical content and sustainability criteria. The constituent substances and product life cycle are evaluated and the product is assigned one of three levels:



Recommended (green)



Accepted (yellow)



To be avoided (red)

Note! *The Recommended level assessment is unavailable for electronic products since it is assumed that all electronic products contain brominated flame retardants.*



**Ball-proof** – compliance with the requirements of the DIN 57710-13 testing standard

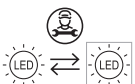
The ball-proof test is described in the standard DIN 57710-13 (Luminaires with operating voltages below 1000 V; luminaires safety to ball throwing). The standard defines the requirements set for impact resistance of luminaires meant for use in indoor sports facilities. It states that a luminaire struck by a ball must withstand any damage that could cause parts of the luminaire to fall to the ground.



**SundaHus** – product material data assessment

SundaHus i Linköping AB (publ) is a consulting company for the improvement of indoor environmental quality. The company conducts health and environmental assessments of building materials and assigns each product a letter evaluation:

- A** products that provide minimal health risks
- B** products that do not qualify for A, but do not match the criteria for C+, C- or D
- C+** products that risk exposure to substances of very high concern
- C-** products that risk exposure to toxic or volatile substances, as well as negatively impact the environment
- D** products that cannot be assessed due to insufficient data



**LED module replaceable by a professional**

This pictogram shows that the LED modules included in the luminaire are only replaceable by a professional. This labeling is a requirement following the introduction of European Union's Regulation on energy labelling for light sources (EU) 2019/2015.



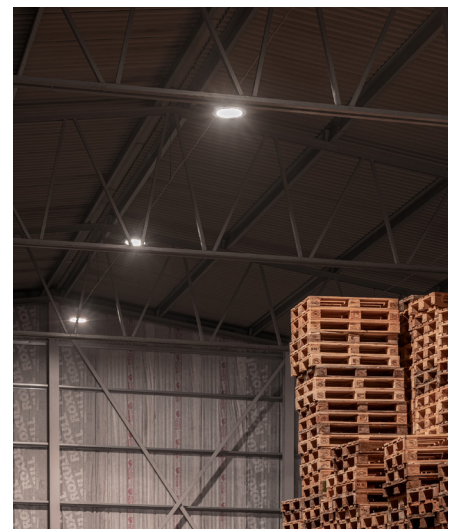
**LED driver replaceable by a professional**

This pictogram shows that the LED driver included in the luminaire is only replaceable by a professional. This labeling is a requirement following the introduction of European Union's Regulation on energy labelling for light sources (EU) 2019/2015.

# References

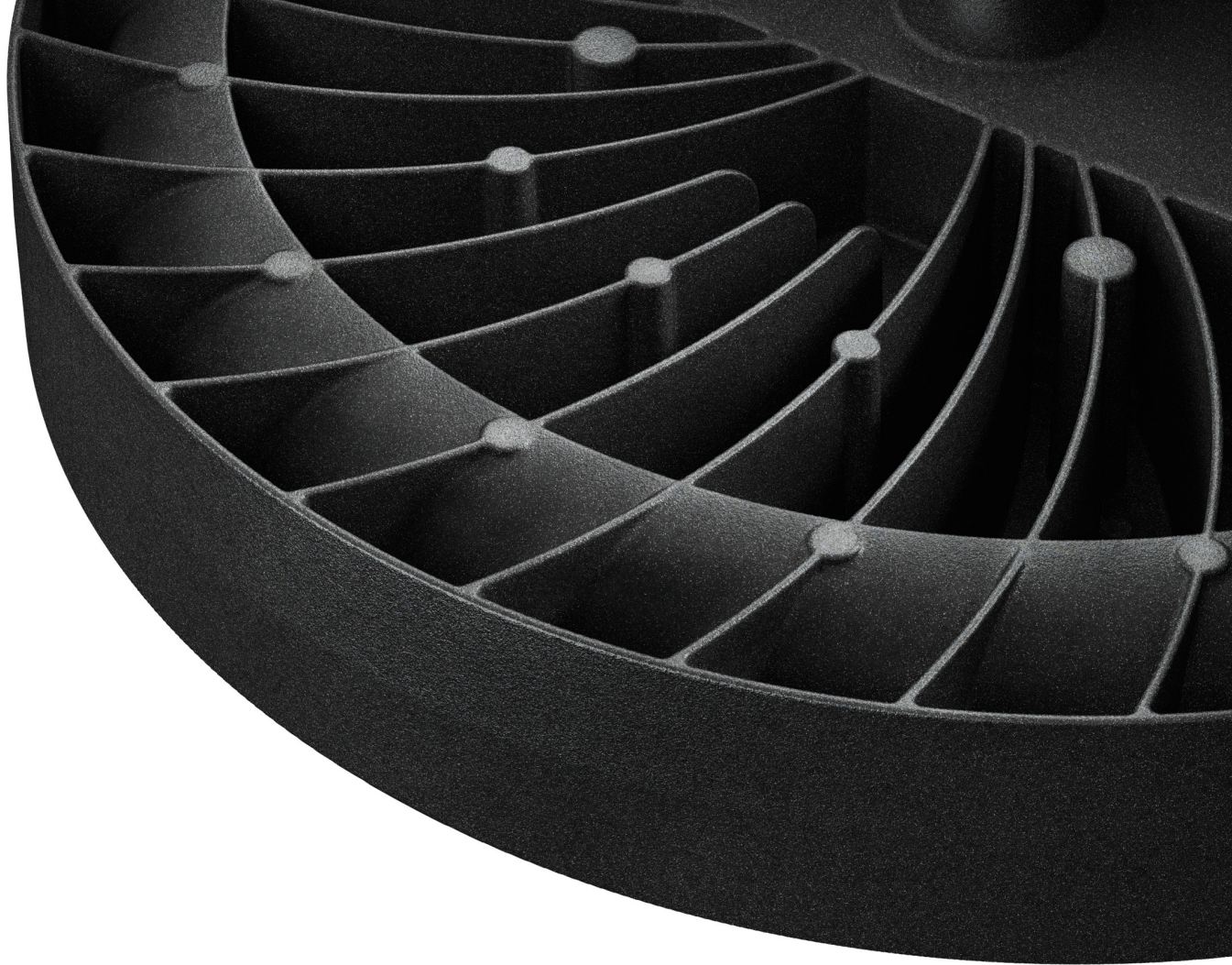


↘ Hestheimar horse farm,  
Iceland



↘ Warehouse in Halmstad,  
Sweden





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 VIZULO

 VIZULOSOLUTIONS