E506617
LOW VOLTAGE LUMINAIRE

COMPACT-ALPHA

ENGLISH

Installation Manual

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1. Product Description

- **COMPACT-ALPHA** is designed for use in different work environments. It is a compact construction combining state-of-the-art LED technology with a sturdy, anodized aluminum housing that is highly resistant to liquids and debris. It is suitable for workplaces with limited space and when high-performance and intense lighting is required.

Featuring:

- Body of Anodized aluminum
- Hardened top-glass
- High power LEDs.
- White Uniform light 5000 K
- Vibration Resistant,
- **IP67 (connector) / IP67-IP69 (cable)** protection rate against coolants, oil, debris
- 22-28 Vdc Built-in Drivers.
- PWM interface
- 4 standard sizes.
- Class 2 power supply.
- Suitable for wet location

Optional Accessories:

- 16 ft (5 m) power cord with pre-assembled Connector M12-4p 4-amps Male, A-Coding,
- CAFX01-CAFX02 Side-mounting brackets
- Magnet Disk B05

2. Safety instructions

Each lighting device in the **CO. ALPHA** series was designed and manufactured based on state-of-the-art techniques.
It is made of well-selected, high-quality materials. It is carefully tested throughout the production process, from the raw material to packaging, following a detailed production schedule to guarantee that the product is safe and reliable.
Material damage, as well as bodily injuries, may nevertheless still occur while using it.



- This manual is part of the equipment and must always be kept with it.
- Please ensure that ALL instructions/information in this manual are carefully read.
- Strict compliance with the instructions provided in this manual and on the luminaire is required for its correct use.
- Installation and use of the product are recommended only provided it is in perfect condition, and the user is well acquainted with all safety instructions.
- CCEA, the manufacturer, waives any responsibility in case of product tampering or improper use.

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2.1 Proper use of the product

This lighting equipment is suitable for wet environments and inside machine tools.

2.2 Product Safety

Electrical Risks

The improper and incorrect use of the equipment may cause bodily injuries and material damage.

- A licensed electrician must carry out all electrical connection procedures.
- Switch off the power supply before installing, maintaining, or repairing systems.
- Please ensure that the power supply-rated tension and frequency meet the requirements shown on the product label. Please respect cable polarity.
- Qualified electricians must only carry out maintenance and reparations.

Risk of explosion

The risk of explosion might occur upon installing and using this product for applications with a

high risk of explosion. It might cause severe body injuries.

- **Do not** install and use this product in hazardous environments (high risk of explosion).

Installation and safety

- Handle the luminaire carefully and avoid having it drop or hit even if it is still packed, which might cause bodily injuries and material damage.
- Ensure the original mounting accessories are used, as available from the manufacturer.
- Set up the mounting accessories properly.
- The equipment must be correctly fastened using the proper screws according to the application, place, and surface where the product is being mounted.
- Ensure that the fastenings are regularly checked.

The danger of dazzling glare due to a white light source

Avoid staring directly at the light source, as it may cause a temporary reduction of vision. Irritation, aches, damage, or accidents may as well occur.

- Avoid staring directly at the light source.
- The device must be adjusted to avoid the light flowing toward the eyes.

Inappropriate spare parts cause danger.

Using inappropriate spare parts may cause bodily injuries and material damage.

- **Do not** use spare parts that the manufacturer has not approved.

Damage caused by the presence of laser beams.

Use of the COMPACT. ALPHA LED lighting equipment **is not** allowed when a high-power laser – see: a laser cutting system - operates since it may damage the LED source.

Danger due to high temperatures

Installing and using the equipment in all the environments where the current temperature remarkably exceeds the foreseen operating temperature will considerably reduce LED lifetime while damaging the built-in electronic components.

- **Do not** use this Device in environments where the device's operating temperature is exceeded.
- **Operating temperature - 4/+113°F (-20/+45°C)**
- Avoid direct solar radiation.

Danger due to repairs

Disassembling or repairing the product without appropriate technical /electrical knowledge

may cause damage to persons and objects.

- **Refrain from trying** to repair or disassemble the equipment. Please apply to qualified technicians for any issues.
- Any product tampering or modifications not approved by the manufacturer will null and void the warranty.

2.3 Damage risk levels



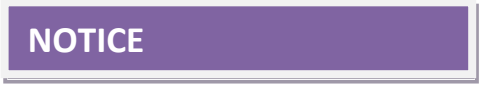
Dangers where noncompliance may **immediately** cause severe injuries and eventually lead to death.



Dangers where failure to satisfy requirements **may** lead to severe injuries or even death.



Dangers where failure to satisfy requirements **may** lead to injuries.



Dangers where failure to satisfy requirements **may** cause damage to objects.

3. Available versions

Please refer to the table hereunder listing all the lighting equipment to identify the version you need and its main features so you can correctly and efficiently install and use the lighting equipment.

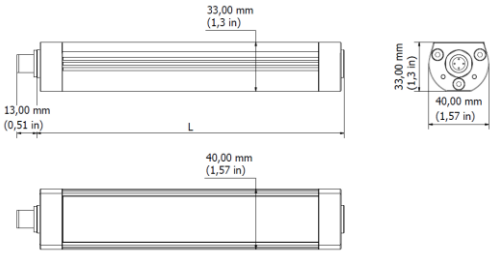
Note: The product code is on the brand name label stuck on the product's backside.

- Find the product code printed on the brand name label and see if you find it on the table.
- Compare the codes and see if you can identify the same model in the table hereunder.
- The code printed on the brand name label shows the device's week and year of production.

Model	Size	Optics		Wattage	Power Usage	Electric Service	Digital input
CA0121S04	204mm	Lens	30°	6W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0121S05	204mm	Lens	90°	6W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0121S06	204mm	Diffuser	110°	6W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0121S07	204mm	Lens	30°	6W	22-28 Vdc	M12-A 4P Male	-
CA0121S08	204mm	Lens	90°	6W	22-28 Vdc	M12-A 4P Male	-
CA0121S09	204mm	Diffuser	110°	6W	22-28 Vdc	M12-A 4P Male	-
CA0121S11	204mm	Lens	30°	6W	22-28 Vdc	M12-A 4P Male	PWM
CA0121S12	204mm	Lens	90°	6W	22-28 Vdc	M12-A 4P Male	PWM
CA0121S13	204mm	Diffuser	110°	6W	22-28 Vdc	M12-A 4P Male	PWM
CA0221S04	354 mm	Lens	30°	12W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0221S05	354 mm	Lens	90°	12W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0221S06	354 mm	Diffuser	110°	12W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0221S07	354 mm	Lens	30°	12W	22-28 Vdc	M12-A 4P Male	-
CA0221S08	354 mm	Lens	90°	12W	22-28 Vdc	M12-A 4P Male	-
CA0221S09	354 mm	Diffuser	110°	12W	22-28 Vdc	M12-A 4P Male	-
CA0221S11	354 mm	Lens	30°	12W	22-28 Vdc	M12-A 4P Male	PWM
CA0221S12	354 mm	Lens	90°	12W	22-28 Vdc	M12-A 4P Male	PWM
CA0221S13	354 mm	Diffuser	110°	12W	22-28 Vdc	M12-A 4P Male	PWM
CA0321S04	504 mm	Lens	30°	18W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0321S05	504 mm	Lens	90°	18W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0321S06	504 mm	Diffuser	110°	18W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0321S07	504 mm	Lens	30°	18W	22-28 Vdc	M12-A 4P Male	-
CA0321S08	504 mm	Lens	90°	18W	22-28 Vdc	M12-A 4P Male	-
CA0321S09	504 mm	Diffuser	110°	18W	22-28 Vdc	M12-A 4P Male	-
CA0321S11	504 mm	Lens	30°	18W	22-28 Vdc	M12-A 4P Male	PWM
CA0321S12	504 mm	Lens	90°	18W	22-28 Vdc	M12-A 4P Male	PWM
CA0321S13	504 mm	Diffuser	110°	18W	22-28 Vdc	M12-A 4P Male	PWM
CA0421S04	654 mm	Lens	30°	24W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0421S05	654 mm	Lens	90°	24W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0421S06	654 mm	Diffuser	110°	24W	22-28 Vdc	CABLE 10ft (3mt)	-
CA0421S07	654 mm	Lens	30°	24W	22-28 Vdc	M12-A 4P Male	-
CA0421S08	654 mm	Lens	90°	24W	22-28 Vdc	M12-A 4P Male	-
CA0421S09	654 mm	Diffuser	110°	24W	22-28 Vdc	M12-A 4P Male	-
CA0421S11	654 mm	Lens	30°	24W	22-28 Vdc	M12-A 4P Male	PWM
CA0421S12	654 mm	Lens	90°	24W	22-28 Vdc	M12-A 4P Male	PWM
CA0421S13	654 mm	Diffuser	110°	24W	22-28 Vdc	M12-A 4P Male	PWM

4. Installation guide

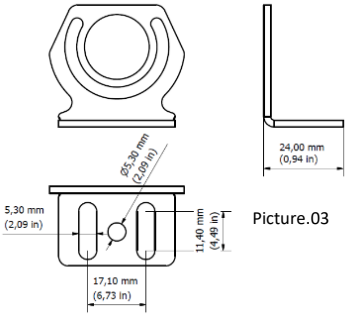
4.1 Product sizes and accessories



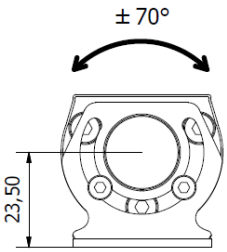
Model	L
CA0121SXY	204 mm
CA0221SXY	354 mm
CA0321SXY	504 mm
CA0421SXY	654 mm

4.2 COMPACT-ALPHA side mounting brackets CAFX01-CAFX02





Picture.03



Picture.04

4.3 Installation

ATTENTION

The lamp falling may cause damage to persons and objects.

- When mounting the light, ensure that the original fastenings are used, which you may purchase from the supplier.
- Have the fastening accessories correctly mounted?

WARNING

Switch off the power supply before proceeding to installation.

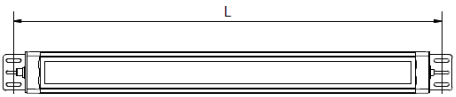
Correct installation using only the original brackets CAFX01 CAFX02.

The COMPACT-ALPHA mounting accessories are made of:

- N.2 side fasteners of chrome-plated steel with M3 fixing screws and steel handle washers.
- Direction of the luminous flux adjustable at +/- 70°.

Installation with CAFX01 CAFX02 side-mounting brackets

- Hook the two side brackets on the lamp sides using the two bolts.
- Bore the fixing holes on the machine surface, as shown hereunder (Side mounting pitch):
-

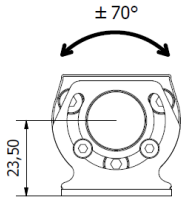


Picture.05

Model	L (mm)
CA0121SXY	232
CA0221SXY	382
CA0321SXY	532
CA0421SXY	682

- After the mounting holes have been made, fix the lamp to the machine structure using M5 screws of at least 8 mm. (2 screws for each fastener). The plate where the light will be mounted has to be at least 2 mm thick.

- The lamp position can be adjusted by rotating the same concerning the vertical surface once the two M3 screws on each side have been loosened. Once the correct position is found, tighten both screws (see picture hereunder).



Picture.06

NOTICE

Damaged or broken luminaire.

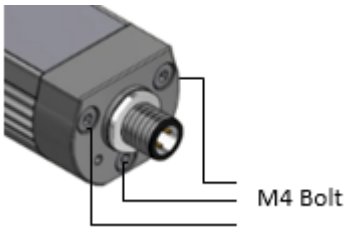
- When side mounting the luminaire, ensure to never completely loosen the M3 screws allowing for lamp rotation, to avoid having the luminaire fall.
- The side fasteners must be checked regularly, and the M5 screws on the brackets must be tightened to the machine's surface.

NOTE: The mounting parts are available as accessories. For further details, visit our website: www.ccealights-usa.com.

WARNING

4.4 Loose Bolts cause Liquid leaks inside the luminaire and can lead to serious and costly breakdowns.

- M4 Bolts must be securely checked and tight every 9 months.
- Check the M4 Bolts often if the luminaire is installed in a vibrating environment.



5. Electrical Service

NOTICE

Material damage caused by liquid leakage.

- Use a connector securing the same protection rate as the lamp, if not greater.
- Ensure that the power cord is correctly plugged into the female connector.

5.1 Low voltage plug-in with M12 connector

NOTICE

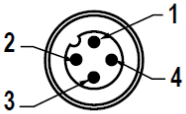
Wrong wiring may cause damage to the luminaire.

- Qualified electricians must carry out all electrical connections.
- Please respect the polarity of the connectors
- Always use the power cord supplied with the luminaire.
- Supply wiring: located in class 2, any wiring, rated min. 20 AWG, min. 50V, min. 90°C.

NOTICE

COMPACT-ALPHA Luminaires are equipped with Standard M12-4P-Male, A-Coding, 4 Amp.





picture.07

PIN	Connection	Conductor
1	**DC + (24VDC**	Brown
2	Not Connected	White
3	**DC – (0VDC)**	Blue
4	Not Connected	Black

NOTICE

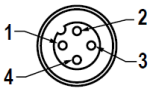
Voltage Supply range 22 ÷ 28Vdc.

- **The voltage supply range must be respected to avoid damage to the LED drivers.**

5.2 PWM -I/O Extension Cord

Cod. M12AFC5: M12 4 poles A-Coding, 60 Vdc female connector, pre-assembled with 16-ft (5 m) Long PVC-Cable, 90°, 4x0,75 mm2. Cross-section.





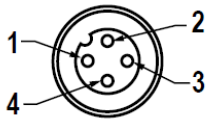
Picture 8

PIN	Connection	Conductor
1	**DC + (24VDC)**	Brown
2	Not Connected	White
3	**DC – (0VDC)**	Blue
4	Not Connected	Black

5.3 Analog PWM dimming interface

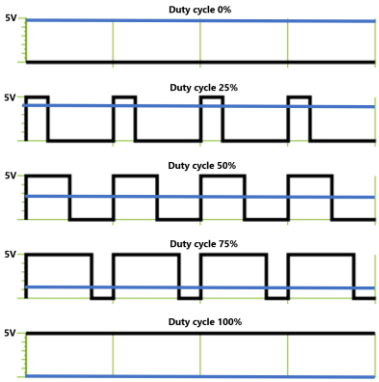
- A PWM signal is applied to pin 2 to activate dimming. The brightness depends on the **duty cycle** of the signal.
- 0-100% Dimming is possible.
- The frequency of the PWM signal must be between 100Hz to 1000Hz.

Brightness calculation: Duty cycle[%}= 100% - brightness [%]



PIN	Connection	Conductor
1	**DC + (24VDC**	Brown
2	PWM-Signal	White
3	**DC – (0VDC)**	Blue
4	Not Connected	Black

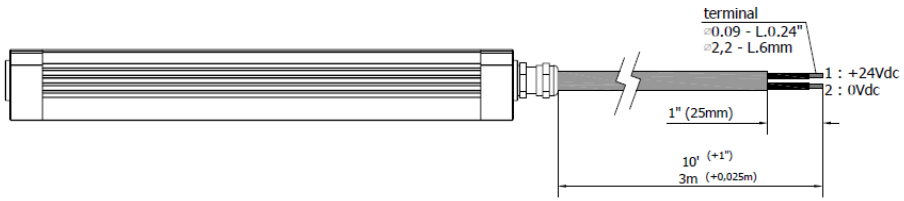
Pulse Width Modulation Cycles from 0-100%



Note: Black is Pwm signal, blue is lamp intensity

5.4 Models with Power Cord

PVC Power Cord 2x0,75mmq UL90° - 10 ft (3 mt) Long



#1 & 2 are printed on wire Coating

PIN	Connection	Conductor
1	**DC + (24VDC)**	Black 1
2	**DC – (0VDC)**	Black 2

6. Switch on – Switch off.

- The lamp is not equipped with an independent switch on switch off the system.
- The luminaire will switch on when plugged in and off when the power is off.

7. Troubleshooting

In case the lamp doesn't turn on:

- Check that the luminaire is wired correctly to the supply voltage.
- Check that polarity wiring has been carried out correctly.

Please contact CCEA's technical support service if the lamp is defective.

CCEA Technical Support Service
Phone: 1-623-526-9599
Techsupport@ccealights-usa.com
www.ccealights.com

8. Replacing the LED light source

The outstanding lifetime of the LED light source, over 60.000 hours, makes it unnecessary to replace the PCB LED if the lamp is installed correctly and used following the instructions in this manual. Please get in touch with CCEA's Technical Support service - or your Reseller – in case the replacement of the PCB LED is needed for any defects not covered by the warranty.

9. Product maintenance and cleaning

WARNING

Switch off the power supply before installing, maintaining, or reparation procedures.

This product is maintenance-free.

- Cleaning must be done only after the luminaire is switched off and the surfaces have cooled down.
- Carefully rinse the luminaire surface with a mild cleanser and wipe it off using a soft cloth to avoid scoring it.

NOTICE

Liquid leaks may damage the luminaire.

- If the luminaire works in environments with a heavy flow of lubricants, coolants, or oil, cleaning should be done every 8 weeks.

10. Repairs

NOTICE

All material damage caused by poorly executed repairs may damage the luminaire.

- All repairs must be carried out by the manufacturer or by qualified technicians.
- Only use spare parts have been approved by the manufacturer.

11. Warranty

Terms of warranty

CCEA ensures that any control procedures or repairs are carried out exclusively at/by the CCEA Technical Service department or any CCEA'S official dealer and are covered throughout the entire product's lifetime. Because of the above, preserve the product label and case to be submitted if any repair operations are needed.

All repair and spare parts costs will be notified after the defects have been examined.

The warranty does not cover the following:

- Any transport, packaging, or shipping costs.
- Any damages or deterioration caused by:
  - Installation and operation are carried out in different ways.
  - Any unauthorized repairs or attempts to repair the product.
  - Equipment operation under environmental conditions other than the user manual.
  - Liquid leaks inside the luminaire.
  - Failure to follow the safety precautions related to transport and shipping the product back for repair (please make sure to have it shipped back in its original case).

Period of warranty

The warranty period covers 24 months, starting from the delivery date. CCEA guarantees that the products have no manufacturing defects or malfunctions.

12. Product disposal (EU Regulations)

All the electrical and electronic equipment (WEEE) must be managed with selective waste sorting and cannot be disposed of as municipal waste, as provided in Directive 2012/19/Use.

Given the above, this equipment, all its components, subsystems, and consumables, which are an integral part of the product, must be conveyed to the local collection facilities for them to be disposed of under the current legislation.

Please apply to the council offices of your residence to find out where the collection facilities are located.



13. Technical data

NOTE: Please refer to the date printed on the label or engraved on the lamp.

Power supply	22÷28 VDC
Power input	6-12-18-24W (see label)
IEC Class	III
Degree of protection	IP67/IP67-IP69 compatible with NEMA 6
LED driver	I.D.S. (Integrated System Driver)
Light color temperature	5000K
CRI	80
Operating temperature	-20/+ 45°C

For any further information please refer to the table on page 7.

14. Symbol keys

CE	CE Conformity marking
III	Protection class III device
IP67 **IP67-IP69**	Connector Cable
c UL us	UL 2108 STANDARD FOR LOW VOLTAGE LIGHTING SYSTEM – Edition 2 – Revision Date 2017/05/30 CSA C22.2 NO.9.0-96 LUMINAIRES – Edition 1 – Revision Date 1998/07/01. Reaff. 2016

15. Declaration of Conformity

C.C.E.A. SRL, via Piave 2 – 36077 Altavilla Vicentina (VI) - P.I. e C.F. 02374040240, declares that the light equipment is named COMPACT-ALPHA – to which the present Declaration of Conformity is related - was manufactured by CCEA SRL under the following Directives: 2014/35/UE on Low Voltage Equipment Safety and the Directive of Electromagnetic Compatibility 89/336/CEE (EMC) 2014/30/UE. The unit complies with the following regulations:

- **Directives**:

CE

Machinery Directive 2006/42/EC
Low Voltage Directive 2014/35/EU
EMC Directive 2014/30/EU

- **Certification:**

c UL us

In Compliance with
UL 2108 STANDARD FOR LOW VOLTAGE LIGHTING SYSTEM – Edition 2 – Revision Date 2017/05/30
CSA C22.2 NO.9.0-96 LUMINAIRES – Edition 1 – Revision Date 1998/07/01. Reaff. 2016

- **Harmonized Standards**

  - CEI EN 60598-1 “Lighting equipment. Part 1: General instructions and tests”
  - CEI EN 60598-2-4 “Lighting equipment part 2: particular requirements – part 4 Portable general-purpose luminaries”.
  - CEI EN 62031 “LED modules for general lighting. Safety specifications”.
  - CEI EN 62384 “DC or AC supplied electronic control gear for LED modules. Performance requirements”.

This standard product is manufactured following a detailed production schedule, ensuring that inspections and destructive tests are carried out for a safe, functional, and sustainable product to be delivered.

CCEA Technical Lighting Corp. disclaims any responsibility for tampering and wrong device use.

Date: _____
Week of production: _____
Product code: _____

C.C.E.A. srl
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