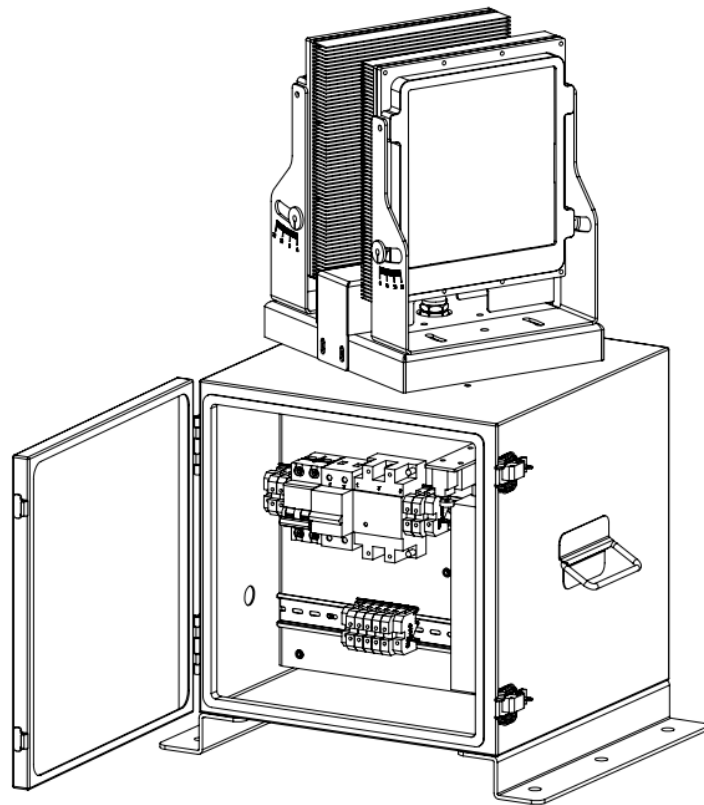


LED AIRFIELD LIGHTING



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Disclaimer/Standard Warranty

All products manufactured by Hangdakang mechanical & electrical technology (Wuhan) co. LTD, hereinafter referred to as HDK, meet the requirements of CAAC, ICAO and IEC. All warranties provided by HDK exclude all cases of gross negligence and handling of all products.

In case of avoidable defects or failure caused by mechanical, electrical or physical defects, the company will provide the necessary spare parts for repair.

The replacement and delivery of spare parts shall meet the requirements of proper storage, installation, and maintenance of the products, and shall submit the spare parts requirements to the Company in writing.

Hangdakang mechanical & electrical technology (Wuhan) co. LTD reserves the right to inspect the avoidable defective or damaged products in its own company facilities.

The obligations of Hangdakang Mechanical & Electrical technology (Wuhan) Co. LTD are limited to the labor cost required for disassembly and assembly of the product and the delivery of the corresponding products.

Hangdakang Mechanical & Electrical technology (Wuhan) co. LTD assumes no liability for injury or damage resulting from any incorrect use of the equipment. All products and their equipment are explicitly designed for their intended use only. Any other use outside the scope of the instructions is considered incorrect and excluded from the warranty.

Included are:

- Use HDK products outside of their intended operating use.
- Any changes or modifications to products that are not explicitly approved.
- Use of unauthorized, incompatible or unapproved tools by HDK or local regulations.

Local regulations on labour safety must always be followed in addition to those of HDK.

HDK reserves the right of interpretation within the scope permitted by law.

1. Safety

Airfield Ground Lighting is installed in high voltage series circuits, where the primary voltage is usually from several hundred to thousand volts and can be fatal if operated improperly. International or national standards referring to the electrical safety and safety of electrical operations should be strictly implemented during the operation and at any stage where powered lighting products are handled or maintained. Correct safety code must be followed during any operation in lighting circuit On and Off state conditions.

Pay attention to all safety instructions in this user manual. Negligence in following safety practices and instructions can result in serious injury, accident, or death. Safety instructions are categorized following the IEC standard and accompanied by an icon accordingly. Safety instructions and icons are listed and explained below:

DANGER:

Risk of electrical shock or flashover. Before any operations disconnect the equipment from line voltage, never connect or disconnect live circuits. Failure to observe "Danger" may result in severe injury, death, or equipment damage.

WARNING:

Failure to observe "Warning" may result in personal injury, death or equipment damage.

CAUTION:

Ignoring or violating "Caution" may cause damage to equipment.

Note:

Explanations and supplements to parts of the description.

2. Instructions

2.1. Instructions for Transportation

The light fixture will be transported in different inland ways according to different import requirement. If they are transported by air, they will be packed in wooden cases; if they are transported by sea, they will be packed in containers. If the light fixture are checked at the customs, they may need to be repackaged. Please handle with care during transportation to avoid paint damage.

2.2. Description of Package

The light fixture are packed in a complete set of wooden frame structure and fixed with reinforced metal mesh belt. Please pay attention to protecting the paint of light fixture when unloading and cutting off the mesh belt.

2.3. Unpack the Unit

Please unload smoothly, handle it gently, and don't throw the light fixture directly from the truck to the ground, no matter whether the ground is concrete or mud pavement, to prevent the light fixture from bumping.

CAUTION: **avoid the damage of light fixture caused by collision and bumping during unloading.**



Please check carefully whether the package is in good condition. After opening the package, please promptly claim compensation from the carrier if the product and accessories in the package are damaged.

When receiving the light fixture cargo, please confirm whether the product information on the cargo list is consistent with the actual construction design. At the same time, please check the quantity, type, specification, color and other characteristics of the

light fixtures on the cargo list are consistent with those of the actual cargo. If you find any problem, please contact the supplier as soon as possible.

CAUTION:  This product package can be used for maintenance, disassembly and subsequent transportation of light fixture. Please keep this product package properly after receiving the goods.

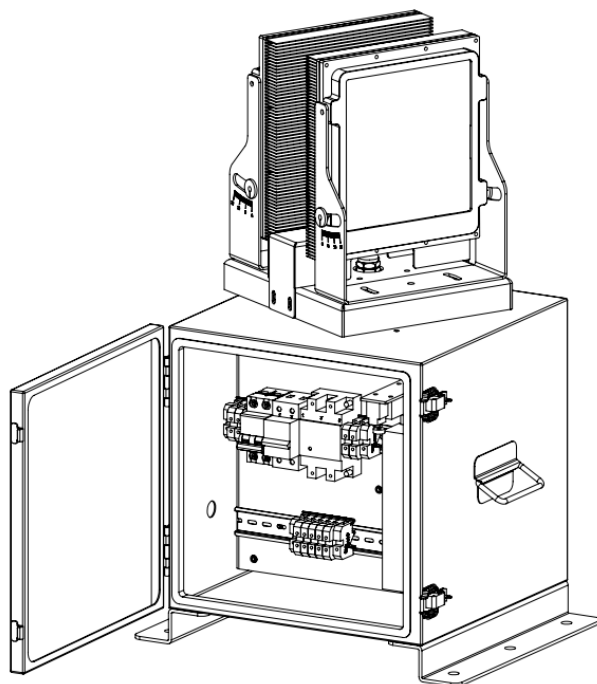
2.4. Storage

If the light fixture does not need to be installed immediately after acceptance at the construction site, please store it properly. Do not stack more than 4 layers, and do not let it soak in water for a long time. Do not stack heavy objects above the light fixture to prevent scratching the paint. Please store the wooden cases of spare parts indoors as far as possible.

3. Product Introduction

The LED airport beacon produced by Hangdakang mechanical & electrical technology (Wuhan) co.,LTD (hereinafter referred to as Hangdakang) adopts energy-saving and long-life LED light source. This series of light fixture has the characteristics of durable structure, exquisite appearance and long maintenance-free period. The products are designed and produced according to ICAO, IEC, FAA standards. It is suitable for airports in various environments.

Figure 1 LED Airport Beacon



3.1. Product Features

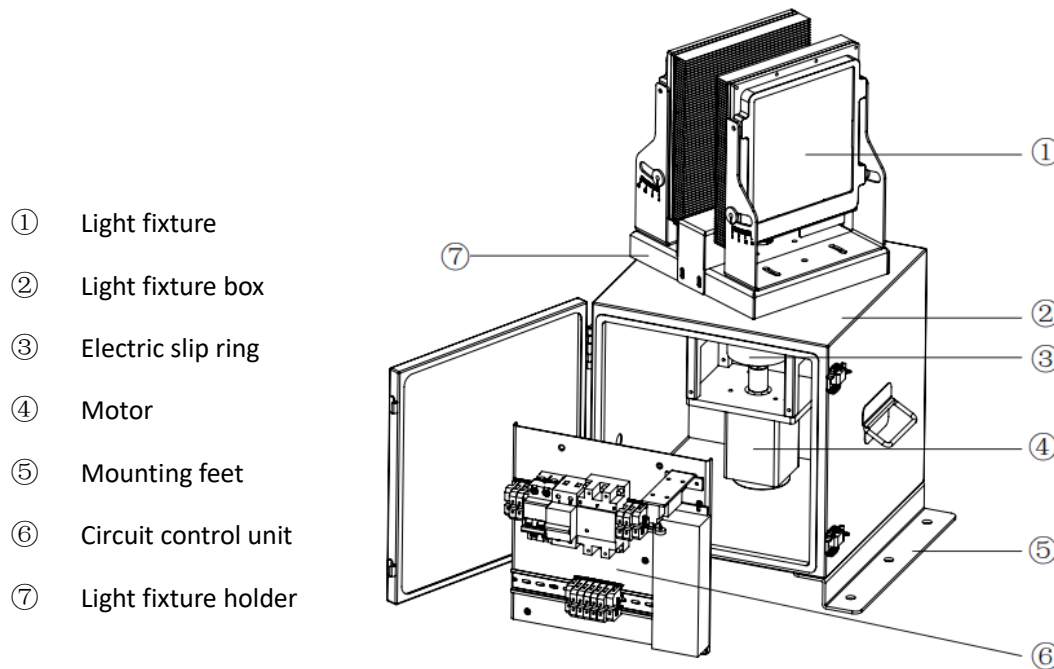
Airport beacon is an aviation signal lamp that uses alternating flashing colored beams to indicate the airport location to the pilots of air planes. It can effectively improve the pilot's ability to identify the orientation of the airport and contribute to the safe approach and landing of the aircraft.

Using international high-quality brand LED source, effectively control the temperature of light fixture to make the service life achieve the highest level of excellent beam projection effect and low power consumption, and reduce operating costs; Standard drive motor realizes high strength, long life and low noise; Built-in overheat protection device improves the reliability of light fixture; Ultra-high flash times, 22~26 times per minute; All fasteners are made of high-quality stainless steel.

3.2. Product component

HDK unidirectional Elevated series light fixture include the following components:

Fig. 2 Diagram of LED Airport Beacon Assembly



Optical performance

- Light fixture color: white-green, flashes alternately (frequency: 22~26 times per minute)
- White light intensity: 37500 min. effective candelas from +1° to +2° vertical and from +8° to +10° vertical, 75000 min. effective candelas from +3° to +7°
- Green light intensity: 5625 min. effective candelas from +1° to +2° vertical and from +8° to +10° vertical, 11250 min. effective candelas from +3° to +7°

Technical properties

- Power: 240W

- Input power supply: AC 220V $\pm$ 10%, 50Hz $\pm$ 10% (**Models for 60 Hz can be customized**)

Mechanical feature

- Two sets of strong LED light projectors installed on the top rotating platform.
- A rotary motor, a transmission shaft assembly and an electrical connection assembly are installed in the bottom box

3.3. Nameplate



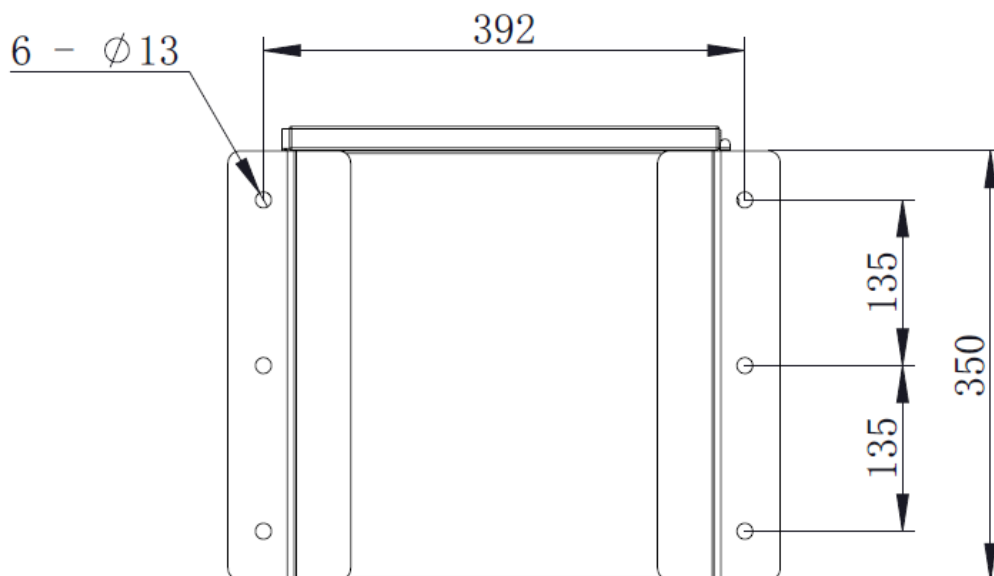
4. Installation

WARNING: Before installation, please confirm the primary circuit of the light fixture is in a power-off state, that is, turn off the power supply of this circuit.



For the installation position of light fixture, please refer to the technical standard of flight area of civil airport MH5001 and the requirements in ICAO Annex 14, Volume 1 to determine the installation position.

Fig. 3 Diagram of Installation Hole Position at the Bottom of Airport Beacon



Installation instructions

- Confirm the hole's diameter and distance between holes according to Figure 3.
- Drilling expansion screws into the ground, then connect expansion screws to the holes with diameter $\phi 11$ in Figure 3 (see Figure 3 for distance between holes).

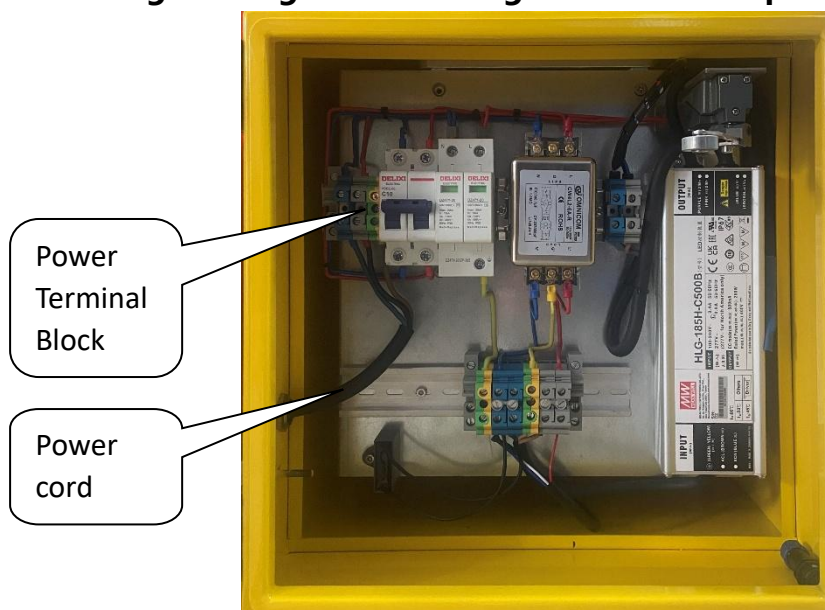
Direction for use

- The product is designed and produced with the actual use, and has been

assembled well before leaving the factory. The user only needs to determine whether the installation site has sufficient space to place it.

- After the installation is completed, connect it to 220V AC as required, the power cord specification is $3 \times 2.5 \text{ mm}^2$, its outer diameter shall be between 8 mm and 14 mm (see Figure 4).

Fig. 4 Diagram of Wiring Position of Airport Beacon



- The control cabinet of airport beacon can be opened or closed with a key. The circuit breaker on the left side of the control cabinet can control the circuit connection when it is on the place of "ON"

5. Maintenance

According to ICAO, Airport Services Manual Part 9, Airport Maintenance Practice and FAA AC 150/5340-26, Maintenance of airport visual AIDS facilities and other documents, the recommended maintenance plan is shown in table 1.

Table 1-General Maintenance Plan of LED Airport Beacon

Maintenance frequency	Maintenance content
daily	Check the light-emitting. Check the glass shade for damage.
monthly	Check the rotating mechanism of light fixture. Check the electrical supporting equipment Check the optical components .
Annual	Check the fasteners, anti-corrosive coatings and sealing parts

Note:



The table above is the recommended plan. The actual implementation of the plan should be subject to the maintenance regulations of the customers.

5.1. Tools preparation

Maintenance tools and materials are as follows

- Torque wrench (specification: nut 17mm/24mm.)
- Socket wrench (Specification: 17mm/24mm)
- Hexagon wrench (metric 3-5)
- 17/24 open-ended wrench
- Clean rag
- Dust-free cloth special for cleaning optical lenses
- Optical lens cleaner
- tweezers

Table 2-Maintenance Items of LED Airport Beacon

Maintenance item	Steps
Test whether works properly.	Connect the power cord, power on the light fixture and Visual inspection
Trouble Shooting	Refer to 5.2 of this manual.
Check sealing performance	Open the control cabinet carefully observe whether there is water stain inside the light fixture.

5.2. Trouble Shooting

Table 3-Trouble Shooting

Malfunction	Trouble shooting steps
Unstable glowing normally	1. Turn on the light fixture again after turning it off for one minute; 2. If the fault is not eliminated, check the power cord plug;
Water leakage inside the light fixture	1. Check the sealing performance of the front cover; 2. If the fault is not eliminated, check the sealing ring; 3. If the fault is not eliminated, check the sealing head of the power cord.

6. Support

6.1. Customer Service

If you need after-sales service, please contact us through the after-sales service hotline or sales consultant.

After sales service hotline

China +86-27-63498449

Please prepare the following information in advance in order to get the service quickly:

- Product name and serial number
- Airport code or company name
- Your phone number and email address

6.2. Recycling

Improper disposal of scrapped electronic equipment may bring negative impacts on the environment and human health. Please follow the relevant local laws regarding the recycling of electronic products.

6.3. About Hangdakang

Hangdakang Mechanical & Electrical Technology (Wuhan) Co., Ltd established in 2003 in Wuhan/China is a professional locally known provider of Airfield Lighting, Navigation Aids, Frangible Mast Systems and Heavy Duty Support Equipment. In 2017 HDK started to create a new LED Airfield Lighting Portfolio supported by known capacities from Europe, to become the supplier for Airfield Customers in China, Asia, Europe and all over the World for reliable, efficient and innovative Airfield Lighting Products at highest quality.

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