

# LED Lighting Solutions for Airport Projects

Custom-engineered | Ultra-Durable | Smart & Efficient

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## 01 Project Understanding and Design Principles

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We assess airport-project backgrounds and lighting challenges, guided by principles of safety, energy efficiency, intelligent control and environmental sustainability.

## 02 Zoned-Based Lighting Solutions

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Custom lighting solutions for airport zones: terminal halls, transit corridors, retail outlets, offices and VIP lounges, tailored to boost spatial quality.

## 03 Core Product Technical Advantages

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High-temperature and dust-resistant, with high-CRI optics and smart IoT control — delivering high efficiency, long lifespan and low lifecycle cost.

## 04 Full-Scenario Airport LED Lighting Solutions

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Covers air-side runways, land-side terminals and commercial areas; intelligent systems enable automated, human-friendly lighting regulation.

# 01 Project Understanding and Design Principles



## Safety & Reliability

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Fully compliant with international aviation-safety standards. Source-level glare elimination, round-the-clock stable performance and robust safety protection.



## Efficiency & Energy Saving

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High-efficacy LED fixture (up to 180 lm/W). DALI-integrated for significant energy savings.



## Intelligence & Human-centric

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One-click multi-scene switching & auto dimming for flight updates and passenger flow. Flicker-free, high-CRI lighting relieves eye strain and elevates travel experience.



## Aesthetics & Functionality

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Minimalist-modern design blends with architecture for beauty and practicality. Precision-tuned optics suit diverse zones, with light accentuating spatial aesthetics.

## 02 Zoned-Based Lighting Solutions



### Terminal Hall

This core airport hub has high ceilings (>8 m), dense foot traffic and mixed functions. Lighting requires high brightness, uniform light distribution and clear visual guidance for safe, comfortable passenger movement.

#### High-Efficacy & Durable Performance

80 W high-power recessed downlight with die-cast-aluminum housing, engineered for complex public-site environments.

#### Deep-Beam Distribution Accurate Beam Focusing

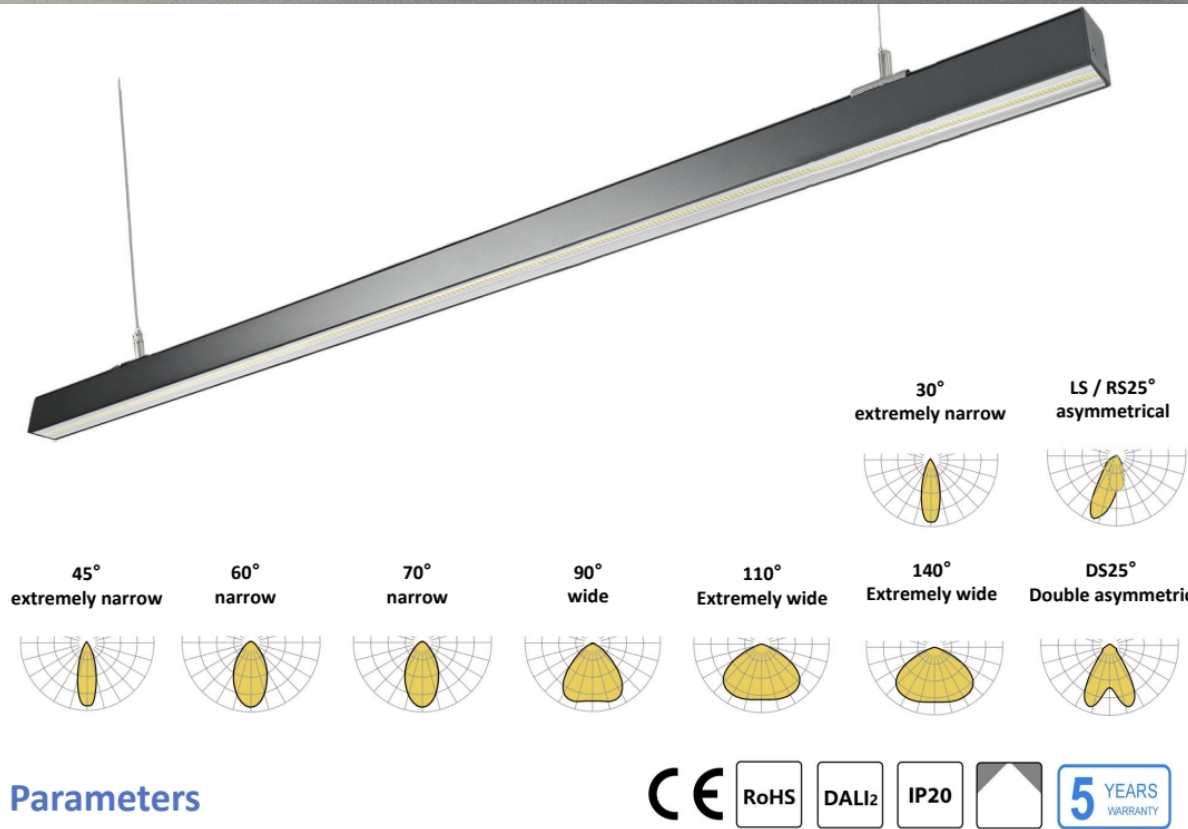
Deep-beam optics for high-ceiling spaces concentrate light onto ground work areas, cut light waste, create “light without visible fixtures” comfort and boost spatial openness.

#### Smart Control Ultra-Long Lifespan

DALI-compatible for grouped dimming, scheduling and scene linkage via building systems. Efficient heat dissipation delivers 50,000+ hours of light source life, cutting maintenance costs.

# 02 Zoned-Based Lighting Solutions

## Corridors & Walkways



Parameters

### Circulation Guidance

Continuous light strips boost spatial depth, guide passenger movement and reduce oppression in narrow elongated spaces.

### Easy Installation & Maintenance

Suspend, surface-mount or recess install. Modular design enables quick inspection and component replacement.

### Long-Term Stable Operation

High-reliability LEDs with 50,000+-hour lifespan for non-stop public-area lighting.

# 02 Zoned-Based Lighting Solutions

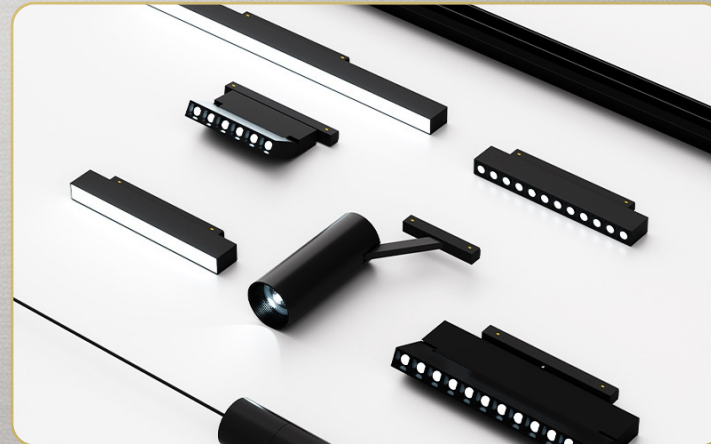
## Retail Shops

### ■ Core Lighting Requirements

Precise light control for merchandise highlighting;  
Layered lighting for premium shopping ambiance;  
Flexible, fast-adjustable lighting for seasonal & thematic updates.

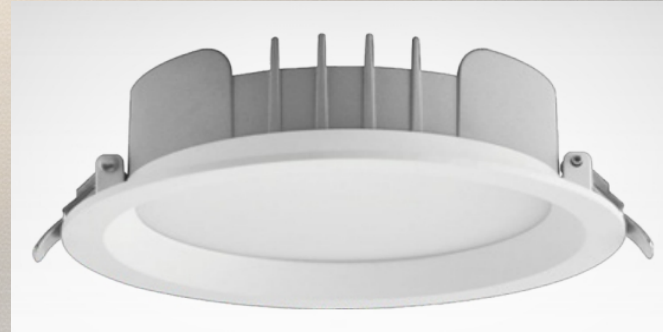
### ■ Solution Advantages

Flexible magnetic track for adjustable lamp positions & angles;  
48V low-voltage, CRI > 90 true-color reproduction;  
Compatible with spotlights, floodlights and linear lights on one track.



# 02 Zoned-Based Lighting Solutions

## Office Areas



For high-intensity office workspaces, lighting balances visual wellness and spatial aesthetics. Deep anti-glare optics reduce glare for screen work. Smart sensors enable occupancy-based lighting to improve staff focus and cut operating energy consumption.

### Core Lighting Requirements

-  **Eye-Friendly Comfort:** Flicker-free and low-glare design eases fatigue from long-hour work.
-  **Smart Energy-Saving:** On-demand lighting cuts power use and operating expenses
-  **Minimalist Integration:** Recessed design enhances the overall aesthetic of the space.

### Recommended Product: LED Deep Anti-Glare Downlight

#### Ultra-Low Glare (UGR<19)

Honeycomb-grid structure for soft, glare-free lighting.

#### High Energy Efficiency (>130lm/W)

Optional radar sensor for extra energy savings.

#### High CRI (CRI>85)

True-to-life color reproduction for enhanced reading comfort.

#### Ultra-Slim Concealed Design

Flush-mount for clean, attractive ceiling appearance.

# 02 Zoned-Based Lighting Solutions

## VIP Lounges

### 01 / Zone Characteristics & Lighting Requirements

Space featuring premium privacy and multi-functionality. Warm low-CCT base lighting with dimmable systems creates tranquil lounge ambiance for flexible business discussions and elevates relaxed, high-end spatial texture.



Comfortable & Serene Lounge Space

Low-CCT ambient light creates ultimate relaxation.

### 02 / Layered Lighting Design Strategy

3-tier lighting system: general / accent / ambient. Art chandeliers set tone, magnetic track spotlights for flexible local lighting, concealed LED strips for spatial layering. DALI dimming enables one-click switching for lounge, reading and business scenarios.



Minimalist Pendant Defines Spatial Tone

2700K warm light for a striking visual focus.



Ambient Light Strips Enrich Spatial Layers

Light visible yet fixtures concealed, elevating the premium feel of the space.

# 03 Core Product Technical Advantages



## 01 Extra-Long Service Life

50,000h+

Even under harsh high-temperature conditions, the product maintains a service life of over 50,000 hours (L90 standard), 3-5 times longer than conventional light sources, reducing equipment replacement frequency from the source.



## 02 Low Maintenance Cost

Operating Expenses ↓

High-reliability industrial design ensures stable equipment operation, significantly reducing the frequency of manual inspections, maintenance and component replacement, effectively controlling total-lifecycle operating costs.



## 03 Return on Investment

3-7 years

Combined with energy-saving benefits and lower maintenance costs, the project features a short payback period. For regions with high electricity and labor costs, the actual payback will be further accelerated.

**Core Value Summary:** Featuring superior performance plus long lifespan and low-maintenance benefits, our products create sustainable cost advantages and maximize long-term return on equipment investment.

# 04 Full-Scenario LED Lighting Solution for Airports

## Core Technology: DALI-2 Global Digital Lighting Protocol



As an internationally open standard in lighting control, DALI-2 supports individual lamp addressing, precise grouping, scene presets and bidirectional status feedback. It breaks down brand barriers, providing a stable, flexible and scalable control foundation for complex multi-zone airport lighting scenarios, serving as a key technical enabler for refined energy management and intelligent scheduling.



### 01 Perception Layer: Full-Domain Data Collection

Equipped with presence sensors and daylight sensors, it captures occupancy flow and ambient light changes in real time to deliver millisecond-grade data for smart dimming.



### 02 Control Layer: Edge-Intelligent Decision-Making

Industrial-grade DALI gateways and local controllers execute control strategies. Offline standalone operation ensures high availability and stability for airport lighting systems.



### 03 Management Layer: Operational Coordination Hub

Seamlessly integrates with airport BMS and FIDS, enabling deep linkage and one-click scheduling for lighting and airport-operation scenarios.



### Daylight-Adaptive Dimming

Auto-compensates brightness per natural light levels, maximizing daylight use to balance energy use and visual comfort.



### Smart Presence Sensing

Lights auto-switch on with occupancy; delayed-off or dim-on-exit to eliminate wasted energy. Ideal for corridors, restrooms and other similar zones.



### Flight-Linked Scenarios

Auto-switches between Morning Peak, Daytime Off-Peak and Night-Time Support modes based on flight schedules, intelligently matching airport operational rhythms.



### Predictive Maintenance Alert

Real-time luminaire status monitoring triggers early alerts for faults and service-life wear, delivering smart O&M and cost control for lighting systems.



# Thank You

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Guided by Light, Empowering a New Smart-Airport Future

Professional-grade lighting illuminates every take-off and landing. Together we build a new ecosystem for smart, safe and green aviation hubs.