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# BR Technologies International Limited

Innovative Technology Solutions Provider

Product overview by applications

 HONG KONG

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 [www.brtechinternational.com](http://www.brtechinternational.com)

# Logistics, Warehouses

Lighting a warehouse isn't just about "turning the lights on"—it's about balancing safety, energy costs, and the specific layout of your racking. Because warehouses often have high ceilings and narrow aisles, the choice of fixture is critical.

## Primary Fixture Types

Choosing the right shape determines how well light reaches the floor (and the labels on your pallets).

**LED High Bays:** Round fixtures ideal for open areas. They are easy to install and provide a wide, circular light pattern

1. SILVERSUN Highbay HBC Series
2. SILVERSUN Highbay HBD Series

•**Linear LED High Bays:** Best suited for **racking and aisles**. Their rectangular shape mimics the aisle layout, reducing "wasted" light on top of the racks.

1. AERO-X Linear Highbay

•**Linear Line Light / Trunking light.** Perfect solution for Warehouses with Isle systems. Offers a quick and easy installation with a modern design and perfect beam angle for Isle warehousing\

1. Linear Light: SILVERSUN Trunking Light E-1 series

For outside storage areas Floodlight solutions with a high IP rating are ideal

1. SILVERSUN FLSpro Series
2. SILVERSUN FLS Series



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## 2. Key Technical Considerations

To get the most out of an LED upgrade, keep these three metrics in mind:

Feature

Importance

**Lumens per Watt**

The higher the ratio, the less electricity you use for the same brightness. Aim for >140 lm/W.

**Color Temperature**

**5000K (Cool White)** is standard. It mimics daylight, which helps keep workers alert and makes labels easier to read.

**Beam Angle**

Use a **90° or 120°** angle for open spaces, but a narrower **60° or 30x70°** angle for deep aisles to penetrate

## 3. Smart Controls & Automation

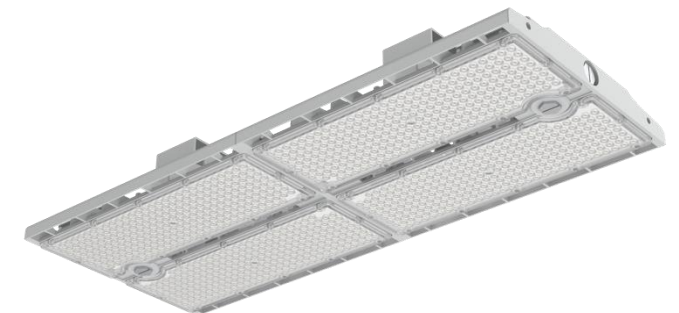
Since warehouses often have low-traffic zones, smart sensors are where the real ROI (Return on Investment) happens.

- Motion Sensors (PIR):** Lights dim or turn off when an aisle is empty.
- Daylight Harvesting:** Photocells detect natural light from skylights and automatically dim the LEDs to maintain a constant brightness level.
- Zoning:** Grouping lights together so a forklift driver triggers an entire path of light rather than just one bulb at a time.

## 4. Why the Switch?

If you're moving away from Metal Halide or Fluorescent, the benefits are immediate:

- Instant On:** No "warm-up" period. LEDs reach 100% brightness instantly.
- Reduced Heat:** LEDs run much cooler, which can lower your HVAC costs in climate-controlled facilities.
- Maintenance:** With a lifespan of **50,000 to 100,000 hours**, you won't need a scissor lift for bulb changes for years.



## Sports Installations: stadiums and courts

Unlike standard industrial or warehouse lighting, sports lighting must account for high-speed tracking (like a tennis ball or hockey puck), spectator visibility, and strict glare regulations. LED floodlights have quickly replaced traditional Metal Halide systems to become the definitive standard for sports venues.

### 1. Key Performance Metrics

When selecting sports floodlights, general brightness is only half the battle. The quality of the light dictates player performance and safety.

- Uniformity:** In sports, shadows are dangerous. Lighting layouts aim for a high uniformity ratio (usually **0.6 to 0.7+**), meaning the dimmest areas of the field are nearly as bright as the brightest areas.

- Color Rendering Index (CRI) & TLCI:** For recreational play, a **CRI > 70 or 80** is standard. For professional venues or televised games, a Television Lighting Consistency Index (TLCI) > **80 to 90** is required to ensure accurate colors on camera.

- Flicker-Free Drivers:** High-definition and 4K slow-motion replays require specialized, high-frequency LED drivers. Standard LEDs will produce a "strobing" effect on TV broadcasts.



#### Level of Play

#### Average Target (Lux)

#### Common Application

Recreational / Training

200 – 300 lx

Local community parks, school practices

Club / Amateur Matches

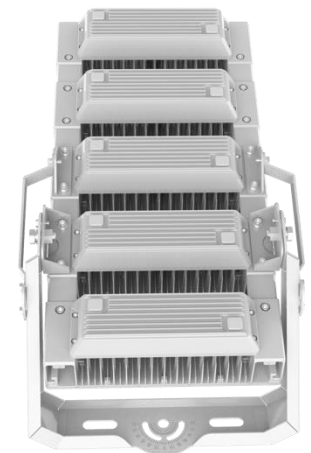
500 – 750 lx

Regional tournaments, collegiate sports

Professional / Broadcast

1,000 – 2,000+ lx

Professional stadiums, FIFA/ITF standards



## Sports Installations: stadiums and courts

### 3. Optical Engineering & Glare Control

Throwing massive amounts of light from high poles can easily blind players looking up for a ball, or disturb neighboring residential properties.

- Asymmetric Optics:** Instead of a round cone of light, asymmetric floodlights push light forward and downward at an angle. This puts the light exactly on the playing surface while keeping the beam out of the players' direct line of sight.

- Narrow Beam Angles (10° to 40°):** Because sports fixtures are typically mounted on high masts (15 to 40+ meters high), tight beam angles are used to punch the light down to the ground without it scattering.

- Shields and Visors:** Physical external louvres or visors are frequently added to cut off "sky glow" and prevent light trespass into the surrounding community (often a requirement for Dark Sky compliance).

### 4. Durability Specs

Sports floodlights are completely exposed to the elements and occasional stray balls.

- IP66 to IP67 Ratings:** Total protection against dust and high-pressure water jets (or heavy downpours).

- IK10 Impact Rating:** Vandal-proof and robust enough to withstand high-velocity ball impacts without shattering the lens.

- Advanced Thermal Management:** High-wattage floodlights (often 600W to 1500W+) generate significant localized heat. Premium fixtures utilize heavy-duty aluminum heat sinks to ensure the LEDs maintain their 100,000-hour lifespan.



**IDEAL SILVERSUN SOLUTION: FLOODLIGHT SERIES FLS and FLSpro**

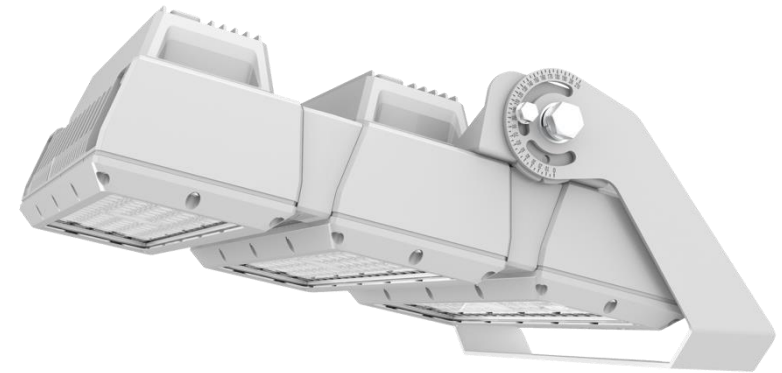
**LED Floodlights** for general outdoor applications are designed to provide high-intensity, broad-beamed light for security, safety, and architectural enhancement. In 2026, the trend has moved away from simply "blasting light" toward precision, warmth, and integrated security. Mounted on walls or masts

## Key Features

Modern general-purpose floodlights have evolved beyond basic utility to include:

- Precision Optics:** Instead of a simple "bucket" of light, 2026 models use **Bat-wing** or **Asymmetric lenses** to direct light downward. This prevents "light trespass" into neighbors' windows and keeps the night sky dark.
- Warmth over Brilliance:** There is a significant shift from clinical blue-ish light (6000K) to **Warm White (2700K – 3000K)**. This provides a "resort-style" feel that is easier on the eyes and better for local ecosystems.
- Hybrid Material Engineering:** High-end housings now use **UV-stabilized engineering plastics** (like ABS+PC) combined with aluminum heat sinks. This prevents the corrosion and peeling common in older all-metal fixtures, especially in coastal or humid areas.

•**PRODUCTS: FLS & FLSpro**



## Street Lighting Public and Private / General outdoor

Modern street lighting has evolved from simple "on-off" lamps into a data-driven network. In 2026, the focus has shifted toward **ultra-high efficacy** (more light for less power) and **Smart City integration**, where the light pole acts as a hub for urban sensors.

### 1. Leading Technologies for 2026

Modern fixtures have pushed the boundaries of physics to maximize municipal budgets.

- Ultra-High Efficacy (UHE):** While standard LEDs provide ~140 lm/W, 2026-grade "Peak Engineering" fixtures now reach **210–220 lm/W**. This allows cities to cut energy consumption by an additional 30–50% compared to first-generation LED retrofits.
- Asymmetric "Bat-Wing" Optics:** Specialized lenses shape the light into a wide "bat-wing" pattern. This ensures the road is perfectly illuminated while preventing light from spilling into residents' bedroom windows or up into the night sky (Dark Sky Compliance).
- Tool-Free Maintenance:** New "Snap-Lock" housings allow technicians to service drivers or sensors without tools, often featuring an automatic power-off switch when the casing is opened for safety.

### 2. Light Quality & Urban Health

Recent standards (like **EN 13201**) emphasize the impact of light on human and ecological well-being.

**PRODUCTS: BRT-HV-FS-XXW, 30W, 60W, 90W, 120W, 150W, 200W**



## Street Lighting Public and Private / Solar Solutions

**Solar LED street lights** are raised, outdoor light sources that operate completely independently of the traditional electrical grid. They capture sunlight during the day and convert it into electricity to power bright, energy-efficient LED lights at night.

### How They Work (The Daily Cycle)

**1. Daytime (Charging):** The solar panel absorbs sunlight and converts it into direct current (DC) electricity via the *photovoltaic effect*. This electricity passes through a controller and is stored in a rechargeable battery.

**2. Nighttime (Lighting):** When the sun goes down, a sensor detects the drop in light. The controller automatically stops charging and switches the battery's stored power over to the LED light fixture, illuminating the area.

### Core Components

A standard solar street light system consists of five main parts:

- **Solar Panel:** Usually mounted at the top of the pole to catch maximum sunlight. They are typically made of high-efficiency monocrystalline or polycrystalline silicon.
- **LED Light Fixture:** LEDs are used because they offer high brightness (lumens) while consuming up to 50% less energy than traditional street lamps, maximizing the battery life.
- **Rechargeable Battery:** Stores the daytime energy. Modern systems primarily use **Lithium-ion (Li-ion)** or **Lithium Iron Phosphate (LiFePO4)** batteries because they are lightweight, efficient, and long-lasting.
- **Smart Controller:** The "brain" of the system. It prevents the battery from overcharging during the day or draining too deeply at night, regulates the voltage, and handles automatic scheduling or dimming.
- **Pole and Housing:** A durable, weather-resistant structure designed to withstand heavy winds and support the weight of the components

**PRODUCT: AEGIS SOLAR Street Light**



## General Lighting / Offices / Supermarkets

**LED Linear Trunking Systems** are continuous-row lighting structures where a pre-wired structural rail (the trunking) supports snap-in LED modules. Instead of wiring dozens of individual fixtures, electricians mount one long track and click the lights into place.

It is the definitive standard for spaces requiring long, uninterrupted lines of glare-free light.

### 1. Application: Supermarkets (Product Focus)

In retail, trunking systems are used to guide customers, eliminate shadows on lower shelves, and make merchandise look appealing.

- Asymmetric & Double-Asymmetric Optics:**

These specialized lenses push light sideways directly onto the shelf faces rather than wasting it on the center of the floor. This makes product labels incredibly easy to read.

- High Color Crispness:** Retailers use fixtures with a high Color Rendering Index (**CRI > 90**) to ensure fresh produce, meats, and packaging look vibrant and true-to-life.

- Spotlight Integration:** Modern trunking rails feature integrated tracks. You can snap a general linear light into the rail, and then click a directional spotlight right next to it to highlight a promotional end-cap display.

### 2. Application: Offices (Visual Comfort & Flexibility)

In office environments, trunking systems prioritize employee well-being, clean aesthetics, and adaptability for changing floor plans.

- Low Glare (UGR < 19):** Micro-prismatic diffusers prevent light from reflecting harshly off computer screens, heavily reducing eye strain and headaches.

- Human-Centric Lighting (Tunable White):** The trunking modules can automatically shift color temperatures—from an energizing **4000K (Cool White)** in the morning to a calming **3000K (Warm White)** in the late afternoon—to support natural circadian rhythm<sup>S</sup>.

- Easy Reconfiguration:** As offices adopt hybrid setups or move desks around, facility managers can snap out lighting modules and reposition them without any rewiring.



## General Lighting / Offices / Supermarkets

Feature

Benefit

**Pre-Wired Rails**

Cuts installation time and labor costs by up to 60% compared to traditional standalone fixtures.

**Seamless Aesthetic**

Creates a clean, continuous line of light with zero dark zones between modules.

**Phase Selection**

Features independent internal circuits, allowing you to turn off every second light module via a switch to save energy during off-hours.

**Smart Node Integration**

Emergency battery packs, daylight sensors, and motion detectors can be snapped into the exact same rail seamlessly.



PRODUCT SILVERSUN TRUNKING E-1

## Supermarkets / Parking / Outside areas

**IP65 Tri-Proof Lights** (also known as Vapor Tight or Non-Corrosive fittings) are the "rugged SUVs" of the lighting world. They are specifically designed to be **dust-tight**, **water-proof**, and **impact-resistant**, making them the go-to choice for parking garages, tunnels, car washes, and industrial kitchens.

### 1. What makes them "Tri-Proof"?

The "Tri" refers to the three core protections built into the housing:

**1. Water:** Protected against low-pressure water jets from any angle (IP65/IP66).

**2. Dust:** Total protection against dust ingress, essential for woodworking or flour mills.

**3. Corrosion/Impact:** Usually made from high-grade Polycarbonate (PC) or Aluminum with stainless steel clips to resist chemical corrosion and physical damage (often rated **IK08 to IK10**).

### Model Breakdown: With vs. Without Sensors

#### Standard Models (Without Sensors)

These are "dumb" fixtures that are either ON or OFF, controlled by a central switch or timer.

•**Best For:** Areas where constant illumination is required for safety (e.g., 24/7 production lines or high-security zones).

•**Maintenance:** Fewer electronic components mean a lower chance of individual part failure.

•**Cost:** Lower upfront purchase price.

#### Sensor-Integrated Models

These fixtures include a built-in Microwave or PIR (Passive Infrared) sensor tucked inside the waterproof housing.

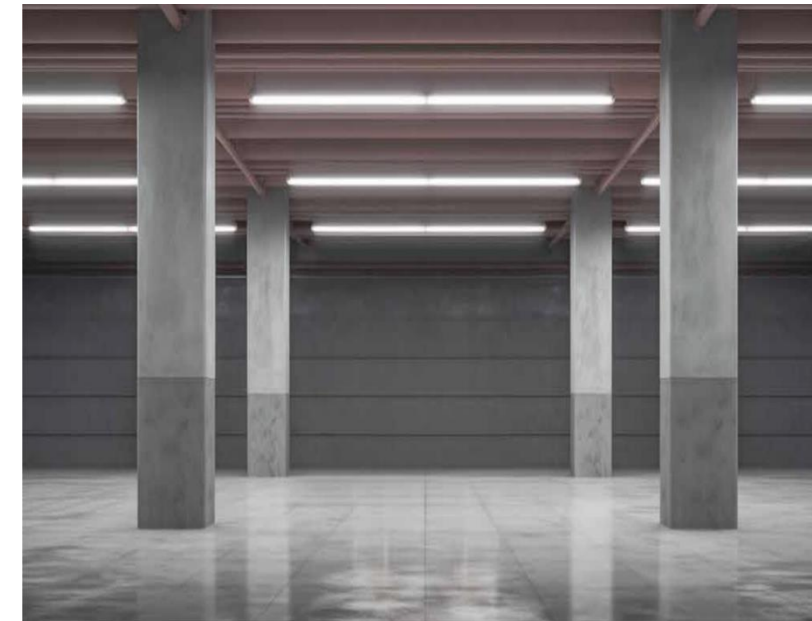
•**Best For:** Areas with intermittent traffic, such as parking decks, stairwells, or warehouses.

•**Functionality:**

•**On/Off:** Lights turn on when they detect movement and off after a set delay.

•**Step-Dimming (Corridor Function):** The most popular setting. Lights stay at a low **10%–20%** "safety" brightness and ramp up to **100%** only when someone enters the area.

•**Savings:** Can reduce energy consumption by up to **80%** in low-traffic zones compared to standard models.



**PRODUCT: SILVERSUN BRT09 TRIPROOF**



## Solar Go / Solar Mobile Lighting Tower

The **SolarGo Solar Mobile Lighting Tower Trailer** is a portable, off-grid illumination system designed to provide high-intensity lighting without relying on fossil fuels or grid connectivity.

### Core Functions & Usage

- Daytime Energy Harvesting:** Equipped with high-efficiency photovoltaic solar panels that automatically collect and convert sunlight into electricity, storing it in heavy-duty onboard batteries.
- Nighttime Illumination:** At dusk, the integrated control system (often equipped with automated photocells or timers) powers high-lumen LED floodlights mounted on an adjustable telescopic mast, casting widespread light over a large area.
- Rapid Deployment:** The unit is built on a towable trailer chassis, allowing it to be easily transported by standard vehicles and set up by a single operator using stabilizing outriggers and manual or electric mast winches.

### Primary Applications

- Construction & Civil Engineering:** Provides safe, continuous lighting for overnight shifts on highways, bridges, and building sites.
- Mining & Industrial Projects:** Delivers durable, high-visibility illumination in remote, off-grid excavation environments.
- Events & Festivals:** Offers bright, silent lighting for outdoor concerts, parking lots, and temporary festival grounds without the disruptive noise or exhaust fumes of traditional diesel generators.
- Emergency Response & Disaster Relief:** Functions as a reliable, rapid-response light and power source for search and rescue operations during blackouts or natural disasters.
- Security & Surveillance:** Used as a standalone crime deterrent in remote yards or checkpoints, SolarGo can be integrated with security cameras.





# Digital signage

BR Technologies stands out as a premier provider of high-quality, customizable digital solutions and displays by blending advanced engineering with a deeply client-centric approach.

## 1. Advanced LED & Display Engineering

BR Technologies specializes in high-resolution, high-brightness LED technology that ensures visibility even in challenging environments like industrial ports, outdoor retail hubs, and large-scale commercial centers. Their displays are built for **durability and clarity**, maintaining color accuracy and performance over long life cycles.

## 2. Bespoke Customization

Unlike "one-size-fits-all" vendors, BR Technologies excels in tailoring hardware and software to specific architectural and functional needs. This includes:

- Custom Form Factors:** Creating displays that fit unique physical spaces, from curved surfaces to ultra-thin profiles.
- Integrated Solutions:** Seamlessly merging digital signage with existing IT infrastructures or specialized industrial control systems.

## 3. Comprehensive Ecosystem

They provide more than just screens; they offer a full-service ecosystem. This typically involves:

- Smart Content Management:** Intuitive platforms that allow users to update messaging in real-time across multiple global locations.
- Energy Efficiency:** A commitment to sustainable technology that reduces power consumption without sacrificing display vibrancy.

## 4. Strategic Global Sourcing & Support

With a strong presence in key international markets (including Germany, the UAE, and the UK), they leverage a robust supply chain to source the latest consumer electronics and components. This ensures that their clients always have access to cutting-edge technology backed by reliable professional support.

