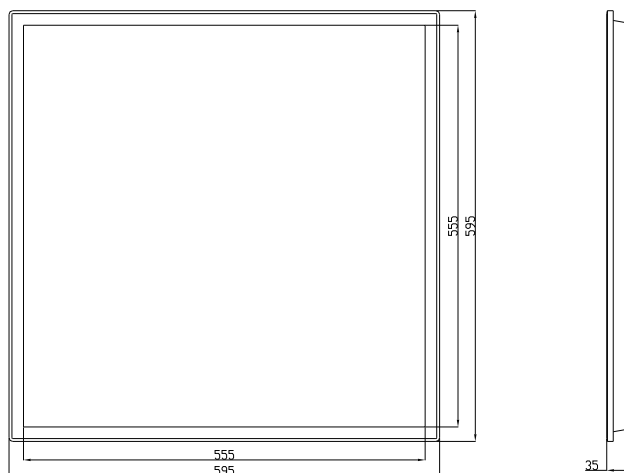




Energy Saving

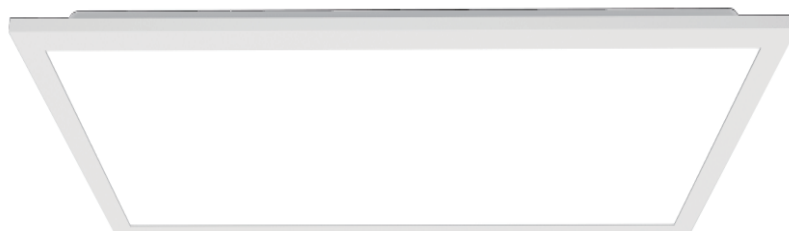
Dimensions :



Product Data

Source Life :	50,000 hours@25°C
Light Source:	High Intensity LEDs
Power Consumption:	30 W Max.
Function	Bluetooth (Dimming :1~100%)
Power Factor :	≥0.90
Color Temperature:	4000K
Color rendering index (CRI)	≥80~90 Max.
Luminous Flux:	3300 lm
Luminous Efficacy :	110 lm/W
Optical Cover :	PMMA (Optical Lens + PS (Diffuser)
Housing Material :	Aluminum (Frame)

Emission Wave Length :	3000K / 4000K / 6500K
Connection:	3 pin AC connector
Listing :	CE
Beam Angle	120°
Operating Temperature :	-25 to 55°C (Tc max =70°C)
Storage Temperature:	-25 to 80°C
Operating Voltage:	110-230 V AC, 50/60 Hz
Control:	Bluetooth mesh
Dimension:	595(L) x 595(W) x35 mm
IP Rating:	IP54
Weight:	1.5Kg



Kinetic Pte. Ltd.

51 Goldhill Plaza
#07, Unit No. 007
Singapore 308900
E-mail : info@kineticspacesolution.com
<https://kineticspacesolution.com>

AI-R Recessed light

Ai-R Recessed light Manual, Automatic & Ai-Controlled Lighting

Overview

AI-R Recessed light is a drop-in replacement Recessed light that adds three layers of control to standard fluorescent-format lighting: manual (wall switch / app / remote), automatic (sensor-driven), and AI-adaptive (usage-pattern learning and predictive scheduling). It is designed for retrofit installs in offices, warehouses, retail, corridors, and residential garages/utility spaces anywhere a standard Recessed light fixture already exists.

The Recessed light ships three control -readiness tiers so customers only pay for the intelligence they need:

Tier	Control modes	Typical use case
AI-R Recessed light Basic	Manual only	Direct fixture retrofit, cost-driven upgrade, preset dim level
AI-R Recessed light Sense	Manual + Automatic	Occupancy/daylight-driven spaces (storage, restrooms, corridors)
AI-R Recessed light Intelligence	Manual + Automatic + AI	Offices, retail, warehouses with variable occupancy/usage patterns

Control Modes

1. Manual

- Standard wall-switch compatible (bypasses existing--light ballast per install guide).
- Companion app (iOS/Android) for on/off, brightness (0–100%) via Bluetooth or Wi-Fi
- Physical remote (RF, 30 m range) supported as an optional accessory.
- Voice assistant integration: Amazon Alexa, Google Assistant, Apple HomeKit.

2. Automatic

- Built-in PIR occupancy sensor (detection range 6–8 m, 110° field of view) triggers on/off or dim-up/dim-down.
- Ambient light sensor enables daylight harvesting--light dims or shuts off when sufficient natural light is present, maintaining a target lux level at the work plane.
- Configurable hold time (default 5 min, adjustable 30 sec–30 min) before dimming after last detected motion.
- Fully rule-based; operates without cloud connectivity or app pairing.

3. AI-Controlled

- Onboard microcontroller logs occupancy, ambient light, and usage timestamps to build a local usage profile (7–30 day rolling window).
- Predictive pre-lighting: anticipates occupancy in recurring-traffic spaces (e.g., ramps up before a 7:45 AM arrival pattern) rather than reacting only after motion is detected.
- Anomaly flagging: identifies unusual after-hours activity and can trigger a notification via the app.
- Fleet-level learning (multi-light/multi-fixture installs) : light on the same network share occupancy data to coordinate zone-wide dimming rather than acting independently, reducing "light chasing" in open-plan spaces.
- AI processing runs primarily on-device (edge inference); cloud sync is optional and used only for fleet analytics and firmware updates.

Technical Specifications

Spec	Value
Size	595*595*35 mm
Wattag	30W
Luminous efficacy	≥110 lm/W
Lumen output	3,300 lm
Color temperature Options	3000K/4000K/6500K
CRI	≥80~90 Max. (Ra)
Beam angle	120°
Dimming range	1%-100%, flicker-free
Input Voltage	110-240V AC,50/60Hz
Connectivity	Bluetooth Mesh 5.0
Available Sensors	PIR motion, ambient light, temperature
Rated lifespan	50,000 hours (L70)
Operating temperature	-20°Cto 45°C
Ballast compatibility	Ballast bypass required (direct AC line install)
Certifications	CE
Photobiological Safety	IEC62471/IEC62778

Installation

1. De-energize the fixture and remove the existing light and ballast.
 2. Rewire sockets for direct line voltage per the included ballast-bypass
 3. Insert AI-R Recessed light connect AC line
 4. Re-energize and pair via the app (Sense/Intelligence tiers) - light broadcasts a Bluetooth setup beacon for 60 seconds after first power-on.
 5. For Intelligence tier fleet installs, add each light to a project/zone in the app to enable cross-light coordination.
-

Data & Privacy

- Occupancy data is stored as anonymized timestamp/duration events — no imaging or audio capture.
 - On-device learning models can run fully offline; cloud sync is opt-in and limited to aggregate analytics and OTA firmware updates.
 - Local network communication uses Bluetooth Mesh (Intelligence/Sense tiers) with AES-128 encryption.
-

Use Cases

- **Open-plan offices:** zone-based AI dimming reduces energy use during partial occupancy without manual reconfiguration.
 - **Warehouses/aisles:** predictive pre-lighting ahead of forklift/foot traffic based on historical movement patterns.
 - **Retail:** daylight harvesting near storefront windows paired with manual override for merchandising events.
 - **Corridors/stairwells:** automatic-only (Sense tier) motion-triggered lighting for energy code compliance (e.g., ASHRAE 90.1) without requiring app setup.
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Note: Specifications above reflect an illustrative product design intended to accompany the AI-R Recessed light branding concept; actual electrical sensor, and connectivity specs should be validated against manufacturing/engineering documentation before publication.