Haneolnuri

Haneolnuri Co., Ltd.

Solar Power System
Solar Street Light
LED Luminaires
Electrical Work
Information and Communication Construction
Firefighting System Construction

www.haneolnuri.com

Haneolnuri Leads the Future Society Where People and Nature Thrive Together
through Eco-Friendly Renewable Energy Technology!

Around the world, the need to address environmental concerns has intensified the focus on developing renewable energy to replace fossil fuels. Our company is at the forefront of the future energy industry, dreaming of sustainable development and the Green New Deal. By actively utilizing the energy provided by nature and continuously engaging in research and development, we strive to lead the renewable energy sector. We are committed to ethical management, always humbly considering humanity, our customers, families, and society.

Haneolnuri Co., Ltd. pursues the highest quality and the best service. Through creative efforts and innovative growth in the eco-friendly renewable energy industry, we will create a future society where people and nature coexist harmoniously.

About Haneolnuri

Haneolnuri Business Areas

Manufacturing

Construction Business

Haneolnuri
Haneolnuri Co., Ltd.

HISTORY

2024
· Industry-University Collaboration with Cheongju University
  / Chungbuk National University
· Industry-University Collaboration with Semyung University
  / Korea National University of Transport
· Applied for Three Patents

2023
· Re-designated as Chungbuk Star Company
· Designated as KICT (Korea Institute of Civil Engineering and Building Technology)
  Family Company
· Selected as an excellent case in wind power hybrid by the Ministry of Trade, Industry
  and Energy (Chungbuk TP)
· Received Prime Minister's Commendation
· Registered Three Patents / Applied for Two Patents
· G-PASS Designation / · Performance Certification
· Obtained Pilot Purchase Certification from the Ministry of SMEs and Startups

Global Leader   **Innovation**

2022
· Certified as a Leading SME in the Region (CBTP No. 2022-0144)
· Obtained ISO 45001 Certification for Safety and Health
  Management Systems (GSR-O-1326)
· Obtained 1st Grade GS Certification and Registered Copyright for
  Monitoring and Remote Control Program
· Obtained LED Lamp KC Certification, High-Efficiency Equipment
  Certification, and Registered Patents
  - Wireless Communication System including Communication
    Devices and Data Communication Methods
    (Patent No. 10-2047335)
  - Wind Power Simulation System (Patent No. 10-1089606)
  - Street Lights Using Wind Power Generation
    (Patent No. 10-1341411)
· Patent Applications
  - Remote control device and method for street lights by group
    (10-2022-0079981)
  - Map-based remote control device and method for street lights
    (10-2022-007982)
  - Multifunctional smart poles (10-2022-0102685)
  - Hybrid street lights (10-2022-0094856)

2021
· Designated as an Energy-Specialized Company (No. 2021-55)
· Certified as a Specialist in Materials, Parts, and Equipment (No. 26119)
· Received Special Award at the Chungbuk SME Awards
  (No. 2021-1054)
· Certified as an Excellent Technology Evaluation Company (T2)
  (NICE-2021-36-000479)
· Obtained SPC1 (Solar Power Controller 1) CE Certification, KC
  Certification, LED Lamp KC Certification, and High-efficiency
  Equipment Certification
· Group Standard Product Certification: Carbon Steel Pipe Poles and
  Stainless Steel Pipe Poles
· Patent Registration - Solar Power Facility Maintenance System
  (Patent No. 10-2056290)

2020
· Certified as a Management Innovation SME (MAIN-BIZ)
· Certified as a Technology Innovation SME (INNO-BIZ)
· Selected as a Chungbuk Star Company (Promising SME in the
  Chungbuk Region)
· Certified as a Root Company (20100-09470)
· Multiple Supplier Contract with Public Procurement Service
  - [Six Types of Independent Solar Street Lights]
· Obtained LED Lamp KC Certification, High-Efficiency Equipment
  Certification, and KS Certification for Solar Power Connection Boxes
· Patent Registrations
  - Street Light Design (Patent No. 30-1066324)
  - Solar Tracking Device (Patent No. 10-2143959)
  - Solar Street Light and its Operation Method
    (Patent No. 10-2163719)
  - Energy Storage System for Extending Battery Life and its Control
    Method(Patent No. 10-1761035)
  - Method for Adjusting the Height of Solar Structures Based on Soft
    Ground Settlement(Patent No. 10-1356587)

2019
· Selected as a Dedicated Repair Company for Four Consecutive Years by the Korea
  Energy Agency's New and Renewable Energy Center
· Certified as an Excellent Technology Evaluation Company (T3) (NICE-2019-36-000447)
· Registered as a Software Business Operator
· Trademark Registration (No. 40-1518840)
  - Patent Registration - Performance Evaluation Method for Solar Modules and the
    System for the Same (Patent No. 10-1946380)

2018
· Certified as a Venture Business (No. 20180107121)
· Certified as an Excellent Technology Evaluation Company (T4) (NICE-2018-77-002017)
· Patent Registrations
  - Control Device and Method for Independent Solar Power Generation System
    (Patent No. 10-1294807)
  - Silicon Ingot Manufacturing Device (Patent No. 10-1698540)

2017
· Designated as a Military Service Company by the Chungbuk Regional Military Manpower
  Administration
· Selected as a Family-Friendly Certified Company (No. 2017-0288)
· Established a Corporate Research Institute (No. 2017113086)
· Certified as an Excellent Technology Evaluation Company (T5) (NICE-2017-77-003593)
· Registered as an Overseas Construction Company (No. 1923)
· Obtained ISO 14001 Certification for Environmental Management System (E210717)

Better Life Story	Grow together

2016
· Designated for Quality Certification (Q-Mark)
  - 11 Types of Grid-Connected Solar Power Systems
    (L135(01)-2016-101)
  - 11 Types of Solar Power System Supports (S32-2016-003)
· Certified as an Excellent Employment Company
  (Chungbuk Employment No. 47)

2015
· Factory Registration - Solar Power Generation Devices
· Multiple Supplier Contract with Public Procurement Service
  - Solar Power Generation Devices
· ISO 9001 Certification for Quality Management System (Q427217)

2012
· Certified as an Underground Power Distribution Specialist by KEPCO
  [Simultaneous Construction of Non-Power-Interrupting Projects]
· Acquired 170KV High-Voltage Cable Connection License from
  German Company, PFISTERER

2011
· Registered as a Qualified Contractor for Double Conductor Overhead
  Transmission Line Construction by KEPCO
· Certified as a Qualified Contractor for 345KV Substation Construction
  by KEPCO

2010
· Registered as a Specialized Company for Renewable Energy Facility
  Installation (No. 2010-5925)

2005
· Registered for Firefighting Facility Construction (No. 2005-17)

2004
· Certified for Non-Power-Interrupting Construction by KEPCO (No. 49)
· Relocated Headquarters to Danyang-gun, Chungcheongbuk-do
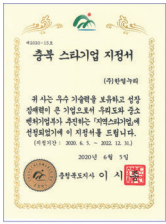· Changed Company Name to Haneolnuri Co., Ltd.

2001
· Incorporated as Daeha Electric & Firefighting Co., Ltd. (Andong-si,
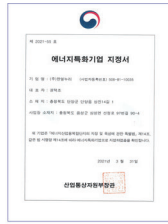 Gyeongsangbuk-do)

Certificates and Registrations

Company Certificates
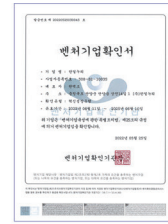

Certificates and Registrations
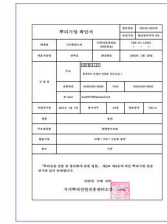

Certificates and Registrations

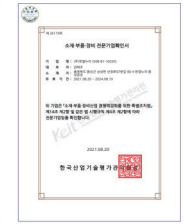Management Innovation SME Certification (Main-Biz)

Technology Innovation SME (Inno-Biz)
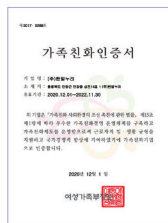

Venture Company

Root Company

Specialist in Materials, Parts, and Equipment

Leading SME in the Region

Family-Friendly Certified Company

Corporate Research Institute

KICT Family Company

Trademark Registration
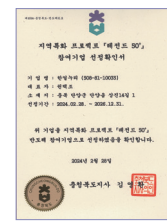
Regional Specialization Project Participation [Legend 50+]
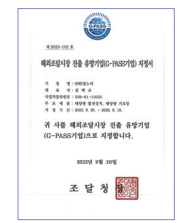
G-PASS Company Designation

Registrations

Business Registration Certificate

Factory Registration
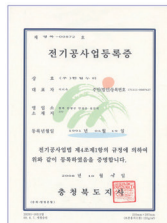
Electrical Works Registration

Firefighting Facilities Construction Registration

Information and Communication Constructions Registration
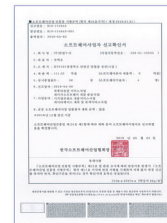
Software Business Registration

Overseas Construction Business Confirmation
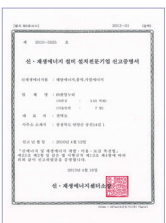
Specialized Company for Renewable Energy Facility Installation

Group Standard Product Certification

Direct Production Confirmation [Solar Power Devices]

Direct Production Confirmation [Street Light Poles and Accessories]

Direct Production Confirmation [Street Light Poles and LED Luminaires]

Direct Production Confirmation [Software Engineering]

Direct Production Confirmation [Software Maintenance and Support]

Direct Production Confirmation [System Management]

Direct Production Confirmation [Management Information Systems]

Direct Production Confirmation [Internet Services]

Haneolnuri continually researches and develops to provide high-quality products and safe construction. Here are our certificates and licenses.

ISO and Product Certifications

Quality Management System Certification ISO-9001

Environmental Management System Certification ISO-14001

Safety and Health Management System Certification ISO-45001

SPC KC Certification

SPC CE Certification

SPC1 KC Certification

SPC1 CE Certification

KS Certification for Solar Power Connection Boxes

LED Lamp KC Certification

LED Lamp High-Efficiency Energy Equipment Certification

1st Grade GS Quality Certification for HSPC1 Monitoring System

Performance Certification
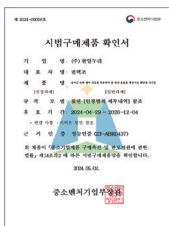
Pilot Purchase Product Confirmation

Patents

Control Device and Method for Independent Solar Power Generation System

Method for Adjusting the Height of Solar Structures Based on Soft Ground Settlement

Silicon Ingot Manufacturing Device

Energy Storage System for Extending Battery Life and its Control Method

Performance Evaluation Method for Solar Modules and System

Solar Power Facility Maintenance System

Solar Street Light and Its Operation Method

Solar Tracking Device

Street Light Design

Street Light Using Wind Power Generation

Wireless Communication Systems and Data Communication Methods including Communication Devices

Wind Power Simulation System

Hybrid Street Light

Map-based Street Light On/Off Control Device and Method

Bypass Device and Control Method for Non-Power-Interrupting Replacement of Power Equipment

Heavy Equipment Access Detection System and Method for Transmission Lines

Remote Control Device and Method for street lights by Group

Street Light Design

LED Lighting Control System and Method

17 Patents including Inverter Control Device for Solar Power Generation

Copyright Registration [HSPC1 Monitoring System v1.0]

Introduction to **Haneolnuri** Business Areas

Solar Street Lights

· Basic Type
· Premium Type
· Grid-Connected Type
· Hybrid Type

LED Luminaires

· DC LED Luminaires
· AC LED Luminaires
· AC LED Tunnel Luminaires
· AC Dimming LED Street Luminaires
· AC Dimming LED Tunnel Luminaires
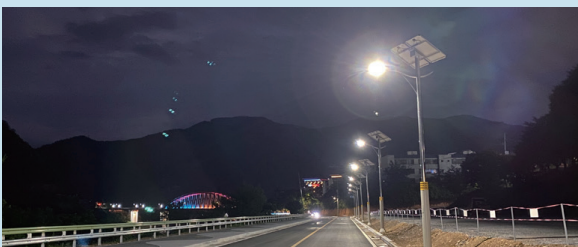
Street Light Poles

· Stainless Steel
· Iron
· Accessories

Solar Street Light Power Controller

· Display Power Management
· Built-in Sunrise/Sunset Information
· LED Lamp Dimming Control
· Battery Efficiency Management
· Various Control Functions via Sensor Connection

Remote Monitoring and Power Control System

· Equipped with a Bidirectional System
· Monitoring of Solar Street Lights and General Street Lights
· Provides Performance Reports by Period and Device
· Provides Various Information through Statistics
· Device Control via Remote Control

Smart Sensor

· Detects Human and Object Movement
· Detects Ambient Light Levels
· Single and Dual Sensor Configurations · Adjustable Detection Zones(Up, Down, Left, Right)

Solar Power System

· Roof-Mounted Type
· Open Field Type
· Building-Integrated Type

Information and Communication Construction

· Wired and Wireless Communication Construction
· Communication Power Supply
  (DC, AC, Battery, Generator, Grounding Construction)
· Maintenance and Construction of High-Altitude Relay
  Stations
· High-Speed Internet
· 5G Repeater Installation and Maintenance
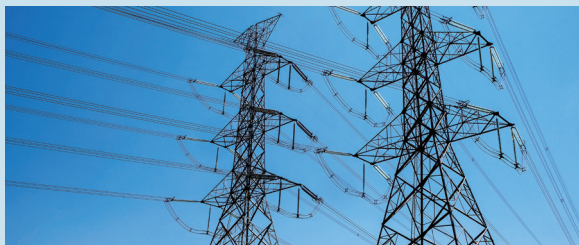
Electrical Work

· Transmission and Substation Construction
· Distribution Construction (Overhead, Underground)
· Railway Electrical and Signal Systems
· Landscape Lighting and Street Light Construction
· General Building and Industrial Electrical Construction
· Electric Vehicle Charging (EV) Projects

Firefighting System Construction

· Alarm Systems
· Fire Extinguishing Systems
· Evacuation Equipment

Key Features of Haneolnuri Solar Street Lights POINT

Haneolnuri Solar Street Lights Challenges the Limits
of Solar Street Lights with Patent-Verified Power Control Technology

Patent-Verified Power Controller

Haneolnuri's unique power control patent technology prevents overcharging and complete discharge of the battery, extending the lifespan of both the battery and street light

Monitoring and Remote Control via Bidirectional Communication

Using high-speed and high-capacity bidirectional communication with LoRa or Cat.M1, the status of solar street lights can be monitored in real-time and remotely controlled via PC or mobile as needed

Lighting Control through IoT Sensors

Efficient energy use through brightness adjustment and power control of lighting via motion detection sensors

LED Lamps without the Need for Power Conversion

Energy-saving technology equipped to control LED lighting power without the need for power conversion

IoT Technology-Based Smart Street Lights

Provides useful information through the detection of surroundings and display using various IoT sensors

Hybrid Street Lights Utilizing Indirect Wind Power

An additional wind turbine is mounted on the solar street light to establish a continuous power generation system

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Quick tips The model names for Haneolnuri solar street lights are designated as follows.

HS	S	-	M	S	60	F	5
Haneol Solar Street Light	S : Circular Pole R : Rectangular Pole H : Hybrid		S : Monitoring Not Available M: Monitoring Available	S : Stainless Steel F: Iron	LED lamp Power(W)	L : Lithium-Ion F : Lithium Iron Phosphate	Pole Height(m)

Basic
Solar Street
Lights

- Patent-Verified Power Controller
- Power control through real-time input/ output power measurement
- Provides various information via Graphic LCD   Built-in sunrise/sunset information
- Equipped with LED dimming function

Solar Street Lights

| Iron / Lithium-Ion | Iron / Lithium Iron Phosphate | Stainless Steel / Lithium-Ion | Stainless Steel / Lithium Iron Phosphate |

○ Product Identification No. 25256010 — STS 304 Li

Model Name	HSS-SS30L3	Charge Controller	DC12V 20A / MPPT
Solar Panel	60Wp × 2EA	Product Height	3m
LED Lamp	30W	Pole Material	Stainless Steel
Battery Capacity	75Ah / 14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

○ Product Identification No. 25256009 — STS 304 Li

Model Name	HSS-SS30L4	Charge Controller	DC12V 20A / MPPT
Solar Panel	60Wp x 2EA	Product Height	4m
LED Lamp	30W	Pole Material	Stainless Steel
Battery Capacity	75Ah / 14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

○ Product Identification No. 25256008 — STS 304 Li

Model Name	HSS-SS30L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	60Wp × 2EA	Product Height	5m
LED Lamp	30W	Pole Material	Stainless Steel
Battery Capacity	75Ah / 14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

○ Product Identification No. 25256007 — STS 304 Li

Model Name	HSS-SS40L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp x 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Stainless Steel
Battery Capacity	95Ah / 14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

○ Product Identification No. 25256005 — STS 304 Li

Model Name	HSS-SS50L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp x 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Stainless Steel
Battery Capacity	115Ah / 14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

○ Product Identification No. 25256003 — STS 304 Li

Model Name	HSS-SS60L6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	140Ah / 14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

◉ Product Identification No. 25255970
STS 304 | Li

Model Name	HSS-SS60L6.5	Charge Controller	DC12V 20A/MPPT
Solar Panel	120Wp X 2EA	Product Height	6.5m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	140Ah/14.8V(4S)	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
Battery Type	Lithium-Ion		

◉ Product Identification No. 25255969
STS 304 | Li

Model Name	HSS-SS100L8	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	8m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
Battery Type	Lithium-Ion		

◉ Product Identification No. 25255975
STS 304 | Li

Model Name	HSS-SS100L9	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
Battery Type	Lithium-Ion		

◉ Product Identification No. 25255971
STS 304 | Li

Model Name	HSS-SS100L10	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
Battery Type	Lithium-Ion		

◉ Product Identification No. 25256006
STS 304 | LFP

Model Name	HSS-SS40F5	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Stainless Steel
Battery Capacity	110Ah / 12.8V(4S)	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
Battery Type	Lithium Iron Phosphate		

◉ Product Identification No. 25256004
STS 304 | LFP

Model Name	HSS-SS50F5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp x 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Stainless Steel
Battery Capacity	135Ah / 12.8V(4S)	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
Battery Type	Lithium Iron Phosphate		

Solar Street Lights

| Iron / Lithium-Ion | Iron / Lithium Iron Phosphate | Stainless Steel / Lithium-Ion | Stainless Steel / Lithium Iron Phosphate |

● Product Identification No. 25256002   STS 304 LFP

Model Name	HSS-SS60F6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	160Ah / 12.8V(4S)	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Battery Type	Lithium Iron Phosphate		

● Product Identification No. 25255977   STS 304 LFP

Model Name	HSS-SS100F9	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	220Ah/12.8V(4S)	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Battery Type	Lithium Iron Phosphate		

● Product Identification No. 25255973   STS 304 LFP

Model Name	HSS-SS100F10	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	220Ah/12.8V(4S)	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Battery Type	Lithium Iron Phosphate		

● Product Identification No. 25256001   Fe LFP

Model Name	HSS-SF100F9	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp x 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	220Ah / 12.8V(4S)	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Battery Type	Lithium Iron Phosphate		

● Product Identification No. 25255974   Fe LFP

Model Name	HSS-SF100F10	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	220Ah/12.8V(4S)	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Battery Type	Lithium Iron Phosphate		

● Product Identification No. 25255976   Fe Li

Model Name	HSS-SF100L9	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	200Ah/14.8V(4S)	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Battery Type	Lithium-Ion		

◉ Product Identification No. 25255972   Fe Li

Model Name	HSS-SF100L10	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	200Ah/14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

Rectangular Pole

◉ Product Identification No. 25408435   STS 304 Li

Model Name	HSR-SS40L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Stainless Steel
Battery Capacity	95Ah/14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

Rectangular Pole

◉ Product Identification No. 25408437   STS 304 Li

Model Name	HSR-SS50L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Stainless Steel
Battery Capacity	115Ah/14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

Rectangular Pole

◉ Product Identification No. 25408439   STS 304 Li

Model Name	HSR-SS60L6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	140Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

Rectangular Pole

◉ Product Identification No. 25408442   STS 304 Li

Model Name	HSR-SS100L9	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium-Ion		

Premium Solar Street Lights

※ Monitoring system is included.

- Includes all basic features
- Bidirectional monitoring and remote control
- Remote adjustment of on/off times
- Provides various information via support for LoRa or Cat.M1
- Lighting control based on the surrounding environment of the street light
- Equipped with motion detection sensors for lighting control and energy efficiency management

◉ Product Identification No. 25256000   STS 304 | Li

Model Name	HSS-MS30L3	Charge Controller	DC12V 20A / MPPT
Solar Panel	60Wp x 2EA	Product Height	3m
LED Lamp	30W	Pole Material	Stainless Steel
Battery Capacity	75Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

◉ Product Identification No. 25255999   STS 304 | Li

Model Name	HSS-MS30L4	Charge Controller	DC12V 20A / MPPT
Solar Panel	60Wp x 2EA	Product Height	4m
LED Lamp	30W	Pole Material	Stainless Steel
Battery Capacity	75Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

◉ Product Identification No. 25255998   STS 304 | Li

Model Name	HSS-MS30L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	60Wp x 2EA	Product Height	5m
LED Lamp	30W	Pole Material	Stainless Steel
Battery Capacity	75Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

◉ Product Identification No. 25255997   STS 304 | Li

Model Name	HSS-MS40L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp x 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Stainless Steel
Battery Capacity	95Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

◉ Product Identification No. 25255991   STS 304 | Li

Model Name	HSS-MS50L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp x 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Stainless Steel
Battery Capacity	115Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

Solar Street Lights

Iron / Lithium-Ion   Iron / Lithium Iron Phosphate   Stainless Steel / Lithium-Ion   Stainless Steel / Lithium Iron Phosphate

Product Identification No. 25255987   `STS 304` `Li`

Model Name	HSS-MS60L6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	140Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

Product Identification No. 25255983   `STS 304` `Li`

Model Name	HSS-MS100L9	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp x 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

Product Identification No. 25255979   `STS 304` `Li`

Model Name	HSS-MS100L10	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp x 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

Product Identification No. 25255996   `Fe` `Li`

Model Name	HSS-MF40L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp x 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Iron
Battery Capacity	95Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

Product Identification No. 25255993   `Fe` `Li`

Model Name	HSS-MF50L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp x 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Iron
Battery Capacity	115Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

Product Identification No. 25255989   Fe | Li

Model Name	HSS-MF60L6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Iron
Battery Capacity	140Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification

Product Identification No. 25255985   Fe | Li

Model Name	HSS-MF100L9	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp x 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	200Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification

Product Identification No. 25255981   Fe | Li

Model Name	HSS-MF100L10	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp X 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	200Ah / 14.8V(4S)	양방향 원격제어	Available
Battery Type	Lithium-Ion	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification

Product Identification No. 25255995   Fe | LFP

Model Name	HSS-MF40F5	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp x 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Iron
Battery Capacity	110Ah / 12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification

Product Identification No. 25255992   Fe | LFP

Model Name	HSS-MF50F5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Iron
Battery Capacity	135Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification

Solar Street Lights

Iron / Lithium-Ion   Iron / Lithium Iron Phosphate   Stainless Steel / Lithium-Ion   Stainless Steel / Lithium Iron Phosphate

● Product Identification No. 25255988   `Fe` `LFP`

Model Name	HSS-MF60F6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Iron
Battery Capacity	160Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

● Product Identification No. 25255984   `Fe` `LFP`

Model Name	HSS-MF100F9	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp x 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	220Ah / 12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

● Product Identification No. 25255980   `Fe` `LFP`

Model Name	HSS-MF100F10	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp x 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	220Ah / 12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

● Product Identification No. 25255994   `STS 304` `LFP`

Model Name	HSS-MS40F5	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp x 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Stainless Steel
Battery Capacity	110Ah / 12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

● Product Identification No. 25255990   `STS 304` `LFP`

Model Name	HSS-MS50F5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp x 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Stainless Steel
Battery Capacity	135Ah / 12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

◉ Prduct Identification No. 25255986   STS 304 LFP

Model Name	HSS-MS60F6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	160Ah / 12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification

◉ Product Identification No. 25255982   STS 304 LFP

Model Name	HSS-MS100F9	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	220Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification

◉ Product Identification No. 25255978   STS 304 LFP

Model Name	HSS-MS100F10	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp x 2EA	Product Height	10m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	220Ah / 12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification

◉ Product Identification No. 25255964   Performance Certified Product   STS 304 LFP

Model Name	HSSP-S40W5M	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Stainless Steel
Battery Capacity	110Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification

◉ Product Identification No. 25255966   Performance Certified Product   STS 304 LFP

Model Name	HSSP-S50W5M	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Stainless Steel
Battery Capacity	135Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	• Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification

Iron / Lithium-Ion   Iron / Lithium Iron Phosphate   Stainless Steel / Lithium-Ion   Stainless Steel / Lithium Iron Phosphate

Performance Certified Product

⦿ Product Identification No. 25255968   STS 304 LFP

Model Name	HSSP-S60W6M	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	160Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

Performance Certified Product

⦿ Product Identification No. 25255963   Fe LFP

Model Name	HSSP-F40W5M	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Iron
Battery Capacity	110Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

Performance Certified Product

⦿ Product Identification No. 25255965   Fe LFP

Model Name	HSSP-F50W5M	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Iron
Battery Capacity	135Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

Performance Certified Product

⦿ Product Identification No. 25255967   Fe LFP

Model Name	HSSP-F60W6M	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Iron
Battery Capacity	160Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

Rectangular Pole

⦿ Product Identification No. 25408434   STS 304 Li

Model Name	HSR-MS40L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	5m
LED Lamp	40W	Pole Material	Stainless Steel
Battery Capacity	95Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

○ Product Identification No. 25408436

Rectangular Pole

STS 304 Li

Model Name	HSR-MS50L5	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	5m
LED Lamp	50W	Pole Material	Stainless Steel
Battery Capacity	115Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

○ Product Identification No. 25408438

Rectangular Pole

STS 304 Li

Model Name	HSR-MS60L6	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	140Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

○ Product Identification No. 25408440

Rectangular Pole

STS 304 Li

Model Name	HSR-MS100L8	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp X 2EA	Product Height	8m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

○ Product Identification No. 25408441

Rectangular Pole

STS 304 Li

Model Name	HSR-MS100L9	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification

Grid-Connected Solar Street Lights

※ **Automatically switches to grid power when solar power generation is insufficient for street light operation**

- Includes all basic features
- Bidirectional monitoring and remote control
- Remote adjustment of on/off times
- Provides various information via support for LoRa or Cat.M1
- Lighting control based on the surrounding environment of the street light
- Equipped with motion detection sensors for lighting control and energy efficiency management

◉ Product Identification No. 25408424

Grid-Connected Type

STS 304 LFP AC

Model Name	HSS-SS60F6AC_Link	Charge Controller	DC12V 20A/MPPT
Solar Panel	80Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	110Ah/12.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium Iron Phosphate		

◉ Product Identification No. 25408425

Grid-Connected Type

Fe LFP AC

Model Name	HSS-SF100F9AC_Link	Charge Controller	DC12V 20A/MPPT
Solar Panel	100Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	135Ah/12.8V(4S)	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
Battery Type	Lithium Iron Phosphate		

◉ Product Identification No. 25408426

Grid-Connected Type

Fe Li AC

Model Name	HSS-MF60L6AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Iron
Battery Capacity	95Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification
AC Connection	Available		

◉ Product Identification No. 25408427

Grid-Connected Type

Fe LFP AC

Model Name	HSS-MF60F6AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Iron
Battery Capacity	110Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	·Patent (10-2163719) Applied ·KC Certification ·CE Certification ·G-PASS Certification

Solar Street Lights

Iron / Lithium-Ion   Iron / Lithium Iron Phosphate   Stainless Steel / Lithium-Ion   Stainless Steel / Lithium Iron Phosphate

Product Identification No. 25408428

Grid-Connected Type

STS 304 | Li | AC

Model Name	HSS-MS60L6AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	95Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification
AC Connection	Available		

Product Identification No. 25408429

Grid-Connected Type

STS 304 | LFP | AC

Model Name	HSS-MS60F6AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	80Wp X 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	110Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification
AC Connection	Available		

Product Identification No. 25408430

Grid-Connected Type

Fe | Li | AC

Model Name	HSS-MF100L9AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	115Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification
AC Connection	Available		

Product Identification No. 25408431

Grid-Connected Type

Fe | LFP | AC

Model Name	HSS-MF100F9AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Iron
Battery Capacity	135Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	•Patent (10-2163719) Applied •KC Certification •CE Certification •G-PASS Certification
AC Connection	Available		

Grid-Connected Type

○ Product Identification No. 25408432   STS 304 Li AC

Model Name	HSS-MS100L9AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	115Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
AC Connection	Available		

Grid-Connected Type

○ Product Identification No. 25408433   STS 304 LFP AC

Model Name	HSS-MS100F9AC_Link	Charge Controller	DC12V 20A / MPPT
Solar Panel	100Wp x 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	135Ah/12.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium Iron Phosphate	Technical Certifications	・Patent (10-2163719) Applied ・KC Certification ・CE Certification ・G-PASS Certification
AC Connection	Available		

Hybrid Solar Street Lights

❋ Monitoring system is included.

- Includes all premium street light features
- Additional power generation using wind energy
- Minimized noise from wind turbine blade rotation
- Capable of generating power from wind caused by passing vehicles

◉ Product Identification No.   STS 304 | Li

Model Name	HSH-MS60L6T	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	140Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	• Patent (10-2486497) Applied • Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Wind Power Generation	Top		

◉ Product Identification No.   STS 304 | Li

Model Name	HSH-MS100L9T	Charge Controller	DC12V 20A/MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	• Patent (10-2486497) Applied • Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Wind Power Generation	Top		

◉ Product Identification No.   STS 304 | Li

Model Name	HSH-MS60L6M	Charge Controller	DC12V 20A / MPPT
Solar Panel	120Wp x 2EA	Product Height	6m
LED Lamp	60W	Pole Material	Stainless Steel
Battery Capacity	140Ah / 14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	• Patent (10-2486497) Applied • Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Wind Power Generation	Central (Indirect Wind)		

◉ Product Identification No.   STS 304 | Li

Model Name	HSH-MS100L9M	Charge Controller	DC12V 20A / MPPT
Solar Panel	150Wp X 2EA	Product Height	9m
LED Lamp	100W	Pole Material	Stainless Steel
Battery Capacity	200Ah/14.8V(4S)	Bidirectional Remote Control	Available
Battery Type	Lithium-Ion	Technical Certifications	• Patent (10-2486497) Applied • Patent (10-2163719) Applied • KC Certification • CE Certification • G-PASS Certification
Wind Power Generation	Central (Indirect Wind)		

LED
Luminaires

• DC LED Luminaires

Equipped with energy-saving technology that does not require power conversion during LED lighting power control.

• AC LED Luminaires

Operates on AC input, uses high-quality, high-efficiency converters for extended lifespan and energy savings, and has obtained high-efficiency equipment certification.

• AC LED Tunnel Luminaires

Uses housing material that is resistant to corrosion and certified with IP rating to withstand the humid environment inside tunnels.

• AC Dimming LED Luminaires

Allows brightness adjustment for energy saving, enabling users to change the light to the desired brightness.

• AC Dimming LED Tunnel Luminaires

Adjustable brightness for improved driver visibility when entering and exiting tunnels.

Quick tips The model names for Haneolnuri LED Luminaires are designated as follows

HSL	-	L	Number	A
Haneol Street Light		L : LED	W : (Watt)	A : AC Luminaires / D: DC Luminaires AD : AC Luminaires, Dimming

Quick tips The model names for Haneolnuri LED Tunnel Luminaires are designated as follows

HTL	-	L	Number	A
Haneol Tunnel Light		L : LED	W : (Watt)	A : AC Luminaires / D: DC Luminaires AD : AC Luminaires, Dimming

DC LED Luminaires

| HSL-L60D |

○ Product Identification No.

Standard Name	HSL-L60D
Dimensions (mm)	498×230×105
Watt	60W
CCT	5700K
Initial Luminous Flux (lm)	11486
Certifications	Green Certification
CRI(RA)	79
LM/W	181
PKG	Samsung
Input voltage	12V
IP	66

| HSL-L120D |

○ Product Identification No.

Standard Name	HSL-L120D
Dimensions (mm)	634×271×108
Watt	120W
CCT	5700K
Initial Luminous Flux (lm)	18840
Certifications	Green Certification
CRI(RA)	79
LM/W	151
PKG	Samsung
Input voltage	12V
IP	66

AC LED Luminaires

| HSL-L25A |

◉ Product Identification No. 24389412

Standard Name	HSL-L25A
Dimensions (mm)	498×230×105
Watt	25W
CCT	5700K
Initial Luminous Flux (lm)	3558
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	75
LM/W	142
PKG	Samsung
Input voltage	95V~235V
IP	65

| HSL-L50A |

◉ Product Identification No. 24389413

Standard Name	HSL-L50A
Dimensions (mm)	498×230×105
Watt	50W
CCT	5700K
Initial Luminous Flux (lm)	7179
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	75
LM/W	144
PKG	Samsung
Input voltage	95V~235V
IP	65

| HSL-L75A |

◉ Product Identification No. 24393367

Standard Name	HSL-L75A
Dimensions (mm)	498×230×105
Watt	75W
CCT	5700K
Initial Luminous Flux (lm)	10858
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	75
LM/W	148
PKG	Samsung
Input voltage	95V~235V
IP	65

AC LED Luminaires

| HSL-L60A |

⊙ Product Identification No. 24273911

Standard Name	HSL-L60A
Dimensions (mm)	498×230×105
Watt	60W
CCT	5700K
Initial Luminous Flux (lm)	8213
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	81
LM/W	139
PKG	Samsung
Input voltage	95V~235V
IP	65

| HSL-L100A |

⊙ Product Identification No. 24389416

Standard Name	HSL-L100A
Dimensions (mm)	634×271×108
Watt	100W
CCT	5700K
Initial Luminous Flux (lm)	14576
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	75
LM/W	147
PKG	Samsung
Input voltage	95V~235V
IP	65

| HSL-L120A |

⊙ Product Identification No. 24254224

Standard Name	HSL-L120A
Dimensions (mm)	634×271×108
Watt	120W
CCT	5700K
Initial Luminous Flux (lm)	16197
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	81
LM/W	139
PKG	Samsung
Input voltage	95V~235V
IP	66

AC LED Luminaires

| HSL-L125A |

○ Product Identification No. 24389417

Standard Name	HSL-L125A
Dimensions (mm)	634×271×108
Watt	125W
CCT	5700K
Initial Luminous Flux (lm)	18035
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	75
LM/W	149
PKG	Samsung
Input voltage	95V~235V
IP	65

| HSL-L150A |

○ Product Identification No. 24389418

Standard Name	HSL-L150A
Dimensions (mm)	634×271×108
Watt	150W
CCT	5700K
Initial Luminous Flux (lm)	21868
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	75
LM/W	150
PKG	Samsung
Input voltage	95V~235V
IP	65

| HSL-L200A |

○ Product Identification No. 24389419

Standard Name	HSL-L200A
Dimensions (mm)	634×271×108
Watt	200W
CCT	5700K
Initial Luminous Flux (lm)	28052
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	80
LM/W	141
PKG	Samsung
Input voltage	95V~235V
IP	65

AC LED Tunnel Luminaires

| HTL-L50A |

● Product Identification No. 24389404

Standard Name	HTL-L50A
Dimensions (mm)	514×408×106
Watt	50W
CCT	5700K
Initial Luminous Flux (lm)	7051
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	76
LM/W	141
PKG	Samsung
Input voltage	95V~235V
IP	66

| HTL-L75A |

● Product Identification No. 24389405

Standard Name	HTL-L75A
Dimensions (mm)	514×408×106
Watt	75W
CCT	5700K
Initial Luminous Flux (lm)	10576
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	76
LM/W	145
PKG	Samsung
Input voltage	95V~235V
IP	66

| HTL-L100A |

● Product Identification No. 24292038

Standard Name	HTL-L100A
Dimensions (mm)	514×408×106
Watt	100W
CCT	5700K
Initial Luminous Flux (lm)	14080
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	79
LM/W	141
PKG	Samsung
Input voltage	95V~235V
IP	66

AC LED Tunnel Luminaires

| HTL-L150A |

◉ Product Identification No. 24389406

Standard Name	HTL-L150A
Dimensions (mm)	683×408×106
Watt	150W
CCT	5700K
Initial Luminous Flux (lm)	21212
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	76
LM/W	147
PKG	Samsung
Input voltage	95V~235V
IP	66

| HTL-L200A |

◉ Product Identification No. 24292039

Standard Name	HTL-L200A
Dimensions (mm)	683×408×106
Watt	200W
CCT	5700K
Initial Luminous Flux (lm)	28932
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	80
LM/W	145
PKG	Samsung
Input voltage	95V~235V
IP	66

AC Dimming LED Luminaires

What is dimming? It's a function that allows brightness adjustment

| HSL-L60AD | Dimming

◯ Product Identification No. 24680511

Standard Name	HSL-L60AD
Dimensions (mm)	498×230×105
Watt / CCT	60W / 5700K
Initial Luminous Flux (lm)	7609
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	85
LM/W	126
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HSL-L75AD | Dimming

◯ Product Identification No. 24680501

Standard Name	HSL-L75AD
Dimensions (mm)	498×230×105
Watt / CCT	75W / 5700K
Initial Luminous Flux (lm)	9792
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	85
LM/W	131
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HSL-L100AD | Dimming

◯ Product Identification No. 24680502

Standard Name	HSL-L100AD
Dimensions (mm)	634×271×108
Watt / CCT	100W /5700K
Initial Luminous Flux (lm)	13403
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	85
LM/W	133
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HSL-L120AD | Dimming

◯ Product Identification No. 24680503

Standard Name	HSL-L120AD
Dimensions (mm)	634×271×108
Watt / CCT	120W / 5700K
Initial Luminous Flux (lm)	15434
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	86
LM/W	128
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

AC Dimming LED Luminaires

What is dimming? It's a function that allows brightness adjustment

| HSL-L125AD | Dimming

○ Product Identification No. 24680504

Standard Name	HSL-L125AD
Dimensions (mm)	634×271×108
Watt	125W
CCT	5700K
Initial Luminous Flux (lm)	16313
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	86
LM/W	134
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HSL-L150AD | Dimming

○ Product Identification No. 24680505

Standard Name	HSL-L150AD
Dimensions (mm)	634×271×108
Watt	150W
CCT	5700K
Initial Luminous Flux (lm)	19837
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	85
LM/W	134
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HSL-L200AD | Dimming

○ Product Identification No. 24680506

Standard Name	HSL-L200AD
Dimensions (mm)	634×271×108
Watt	200W
CCT	5700K
Initial Luminous Flux (lm)	25260
Certifications	KC Certification, High-Efficiency Certification
CRI(RA)	87
LM/W	128
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

AC Dimming LED Tunnel Luminaires

What is dimming? It's a function that allows brightness adjustment

| HTL-L75AD | Dimming

○ Product Identification No. 24680507

Standard Name	HSL-L75AD
Dimensions (mm)	514×408×106
Watt	75W
CCT	5700K
Initial Luminous Flux (lm)	9634
Certification	KC Certification, High-Efficiency Certification
CRI(RA)	86
LM/W	130
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HTL-L100AD | Dimming

○ Product Identification No. 24680508

Standard Name	HTL-L100AD
Dimensions (mm)	514×408×106
Watt	100W
CCT	5700K
Initial Luminous Flux (lm)	12997
Certification	KC Certification, High-Efficiency Certification
CRI(RA)	86
LM/W	130
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HTL-L150AD | Dimming

○ Product Identification No. 24680509

Standard Name	HTL-L150AD
Dimensions (mm)	683×408×106
Watt	150W
CCT	5700K
Initial Luminous Flux (lm)	19280
Certification	KC Certification, High-Efficiency Certification
CRI(RA)	85
LM/W	131
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

| HTL-L200AD | Dimming

○ Product Identification No. 24680510

Standard Name	HTL-L200AD
Dimensions (mm)	683×408×106
Watt	200W
CCT	5700K
Initial Luminous Flux (lm)	26132
Certification	KC Certification, High-Efficiency Certification
CRI(RA)	86
LM/W	136
PKG	Samsung
Input voltage	95V~235V
IP	66
Features	Dimming Control

Street Light Poles

- Street Light Poles
- Iron Street Light Poles
- Accessories

Stainless Steel Street Light Poles

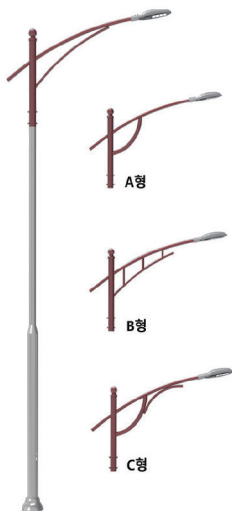| Specification	HAN-SP02-41
Type	Stainless Steel Street Light Poles
Identification No.	24481099
Characteristics	4M, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP02-51
Type	Stainless Steel Street Light Poles
Identification No.	24481100
Characteristics	5m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP08-82
Type	Stainless Steel Street Light Poles
Identification No.	24485333
Characteristics	8m, Single Light + Pedestrian Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP08-92
Type	Stainless Steel Street Light Poles
Identification No.	24485332
Characteristics	9m, Single Light + Pedestrian Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP08-102
Type	Stainless Steel Street Light Poles
Identification No.	24485331
Characteristics	10m, Single Light + Pedestrian Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover
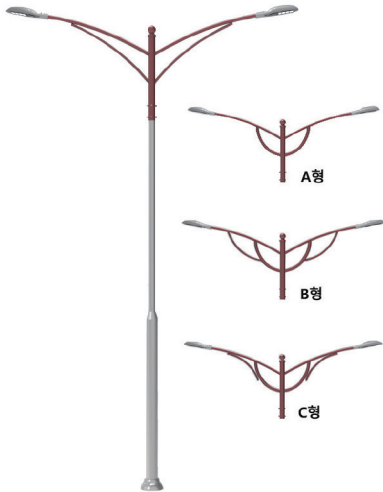
Specification	HAN-SP05-82
Type	Stainless Steel Street Light Poles
Identification No.	24485336
Characteristics	8m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP05-92
Type	Stainless Steel Street Light Poles
Identification No.	24485335
Characteristics	9m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP05-102
Type	Stainless Steel Street Light Poles
Identification No.	24485334
Characteristics	10m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP05-81
Type	Stainless Steel Street Light Poles
Identification No.	24485345
Characteristics	8m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP05-91
Type	Stainless Steel Street Light Poles
Identification No.	24485344
Characteristics	9m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP05-101
Type	Stainless Steel Street Light Poles
Identification No.	24485343
Characteristics	10m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

A형
B형
C형

G-PASS PPS
단체표준인증

A형

B형

C형
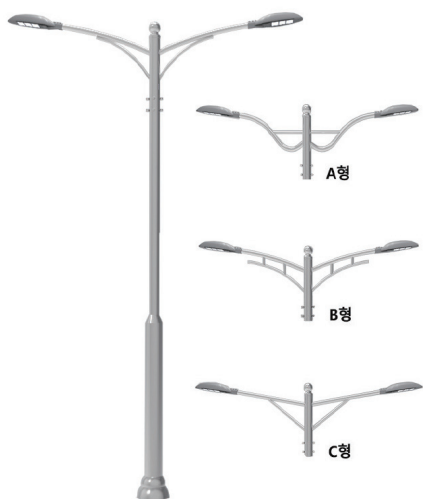
Specification	HAN-SP01-42
Type	Stainless Steel Street Light Poles
Identification No.	24485351
Characteristics	5m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-SP01-52
Type	Stainless Steel Street Light Poles
Identification No.	24485350
Characteristics	5m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

A형

B형

C형
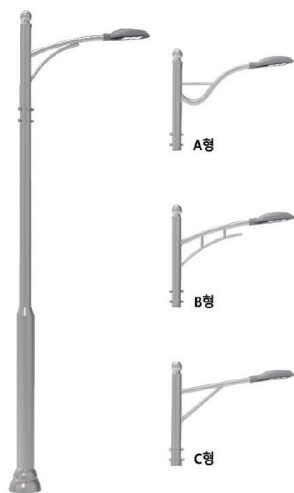
Specification	HAN-SP01-51
Type	Stainless Steel Street Light Poles
Identification No.	24485356
Characteristics	5m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Iron Street Light Poles

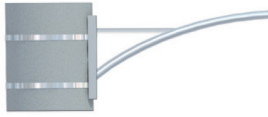| Specification	HAN-CP01-51
Type	Iron Street Light Poles
Identification No.	24481102
Characteristics	5m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP02-41
Type	Iron Street Light Poles
Identification No.	24481103
Characteristics	4m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP02-51
Type	Iron Street Light Poles
Identification No.	24481104
Characteristics	5m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP04-81
Type	Iron Street Light Poles
Identification No.	24481108
Characteristics	8m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP04-91
Type	Iron Street Light Poles
Identification No.	24481109
Characteristics	9m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP04-101
Type	Iron Street Light Poles
Identification No.	24481110
Characteristics	10m, Single Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP03-81
Type	Iron Street Light Poles
Identification No.	24481105
Characteristics	8m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP03-91
Type	Iron Street Light Poles
Identification No.	24481106
Characteristics	9m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP03-101
Type	Iron Street Light Poles
Identification No.	24481107
Characteristics	10m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP03-82
Type	Iron Street Light Poles
Identification No.	24481111
Characteristics	8m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP03-92
Type	Iron Street Light Poles
Identification No.	24481112
Characteristics	9m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP03-102
Type	Iron Street Light Poles
Identification No.	24481113
Characteristics	10m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Iron Street Light Poles

Specification	HAN-CP05-82
Type	Iron Street Light Poles
Identification No.	24481114
Characteristics	8m, Single Light + Pedestrian Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP05-92
Type	Iron Street Light Poles
Identification No.	24481115
Characteristics	9m, Single Light + Pedestrian Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP05-102
Type	Iron Street Light Poles
Identification No.	24481116
Characteristics	10m, Single Light + Pedestrian Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Specification	HAN-CP01-52
Type	Iron Street Light Poles
Identification No.	24485329
Characteristics	5m, Double Light
Options	Luminaires, Ballast, Lamp, HSPC, and Base Cover

Accessories

Specification	HAN-ACA-02
Type	Street Light Pole Accessories
Identification No.	24488496
Characteristics	Pedestrian Light Arm, Single Light

Specification	HAN-ACA-03
Type	Street Light Pole Accessories
Identification No.	24488494
Characteristics	Pedestrian Light Arm, Single Light
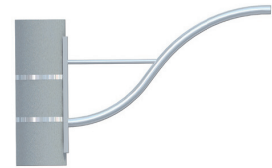
Specification	HAN-ACA-04
Type	Street Light Pole Accessories
Identification No.	24488498
Characteristics	Pedestrian Light Arm, Single Light
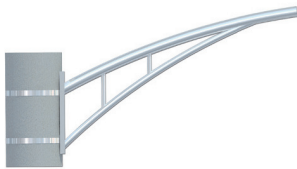
Specification	HAN-ACA-05
Type	Street Light Pole Accessories
Identification No.	24488500
Characteristics	Pedestrian Light Arm, Single Light

Specification	HAN-ACA-07
Type	Street Light Pole Accessories
Identification No.	24485328
Characteristics	Park Light Arm, Single Light

Specification	HAN-ACA-08
Type	Street Light Pole Accessories
Identification No.	24485327
Characteristics	Park Light Arm, Double Light

Specification	HAN-ACA-09
Type	Street Light Pole Accessories
Identification No.	24485326
Characteristics	Street Light Arm, Single Light

Specification	HAN-AC-01
Type	Street Light Pole Accessories
Identification No.	24485324
Characteristics	Base Cover

Specification	HAN-AC-02
Type	Street Light Pole Accessories
Identification No.	24485323
Characteristics	Base Cover

Specification	HAN-AC-03
Type	Street Light Pole Accessories
Identification No.	24485322
Characteristics	Flag Holder, Dual Socket

Specification	HAN-AC-04
Type	Street Light Pole Accessories
Identification No.	24485321
Characteristics	Banner Holder

Solar Street Light Power Controller (HSPC)

- **Key Features of the Solar Power Controller**
  - Lighting control based on the input sunrise and sunset information
  - Lighting control and energy efficiency management using various IoT sensors
  - User-defined on/off time settings
  - SKT LoRa, Cat.M1 bidirectional data transmission
  - Wireless remote control functions (forced off, forced on, reset, charge stop)
  - LED lamp dimming control
  - Battery efficiency management
  - Various controls through motion sensors and light sensors

Performance Evaluation Method and System for Solar Modules

Solar Street Light and Its Operation Method

▲ HSPC1

▲ HSPC3

LCD Display Items

- Real-time generation, charging, discharging (current, voltage, power)
- Battery level
- Operation time available
- Cumulative charging and discharging power

Cat.M1 & LARa modem   PC Screen   Mobile Screen

Solar Panel   HSPC   Smart Senser   LED Lamp

Lithium-Ion, Lithium Iron Phosphate Battery
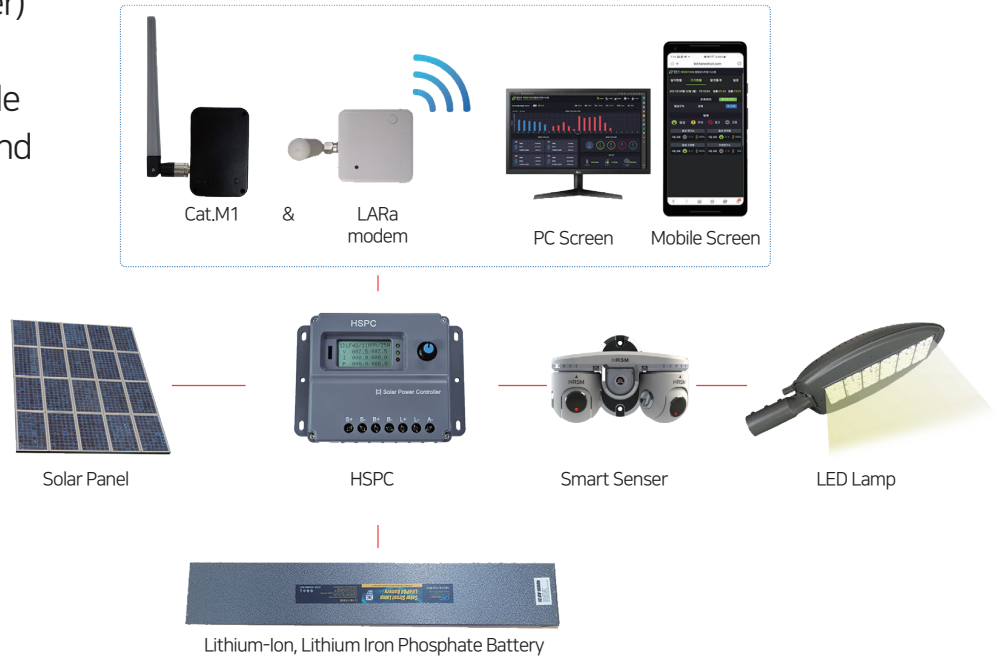
Real-Time Measurement

· Measure current, voltage, and power generated by the solar panel
· Measure charging current, voltage, and power via MPPT function
· Measure discharging current, voltage, and power to the LED Lamp
· Measure cumulative generation power and charging power

Remote Monitoring and Power Control

· Ensure reliability using SKT LoRa and Cat.M1 communication networks
· Transmit over 20 HSPC status data points every 10 minutes
· Allow user to remotely control solar street lights as needed (forced on, forced off, reset, time setting)

LED Lamp Dimming Control

· Implement soft turn on/off functions for a natural ambiance
· AI dimming control based on battery level
· Available to set lamp power from 0 to 120W

Graphic LCD with Rich Information Display and Easy Setup

· Display information using a 128*64 Graphic LCD
· Convenient UI with separate information display and setup windows
· Easy device reset through factory reset function

Environment Detection Using Smart Sensors

· Detect human and object motion using motion sensors
· Detect ambient brightness using light sensors
· Save energy by controlling lamp brightness based on environmental detection

Remote Monitoring and Power Control System

This system is designed to monitor solar street lights in real-time, transmitting all status information of the solar street lights.

Utilizing LoRa or Cat.M1 networks ensures high reliability with minimal data loss due to wireless transmission and can be operated at a very low cost. Unlike typical unidirectional systems that only send status data of solar street lights, our bidirectional system allows users to remotely control the solar street lights as needed.

Over 20 data points, including generation, charging, and discharging amounts, are transmitted, and users can perform remote control actions such as forced on, forced off, reset, and stop charging. The data received from the solar street lights allows for equipment diagnostics, enabling preventive maintenance and inspections. Additionally, monitoring can be accessed via PC and mobile devices, allowing users to check the status of solar street lights anytime and anywhere.

▶ Real-Time Data Wireless Collection Device

Real-time data transmission using LoRa or Cat.M1 modem connected to HSPC

▶ Smart Infrastructure Monitoring System

Optimized for various devices, including PCs and smartphones (iOS, Android)

▶ Secure and safe data collection and management

Data collection and database management with security All-in-one infrastructure monitoring

▶ Remote Control

Allows for remote resolution of issues by forced on, forced off, and resetting solar street lights during emergencies or construction Enables remote control of on/off times for solar street lights according to user needs

▶ Cat.M1, LoRa

Offers various communication methods for user selection, optimized for the street light installation environment and usage

Bidirectional System Diagram
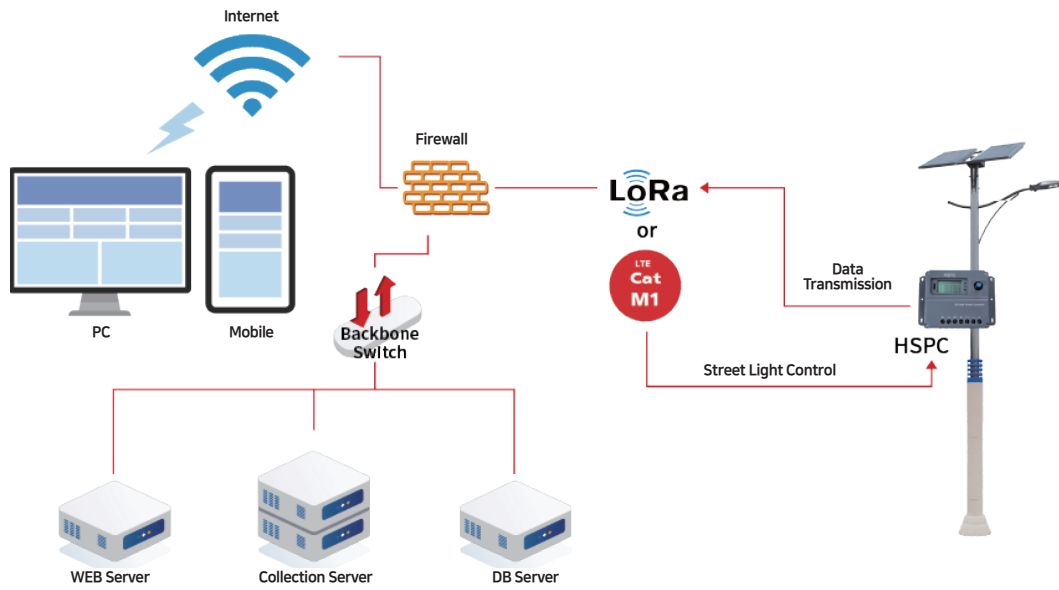
PC Screen

Mobile Screen
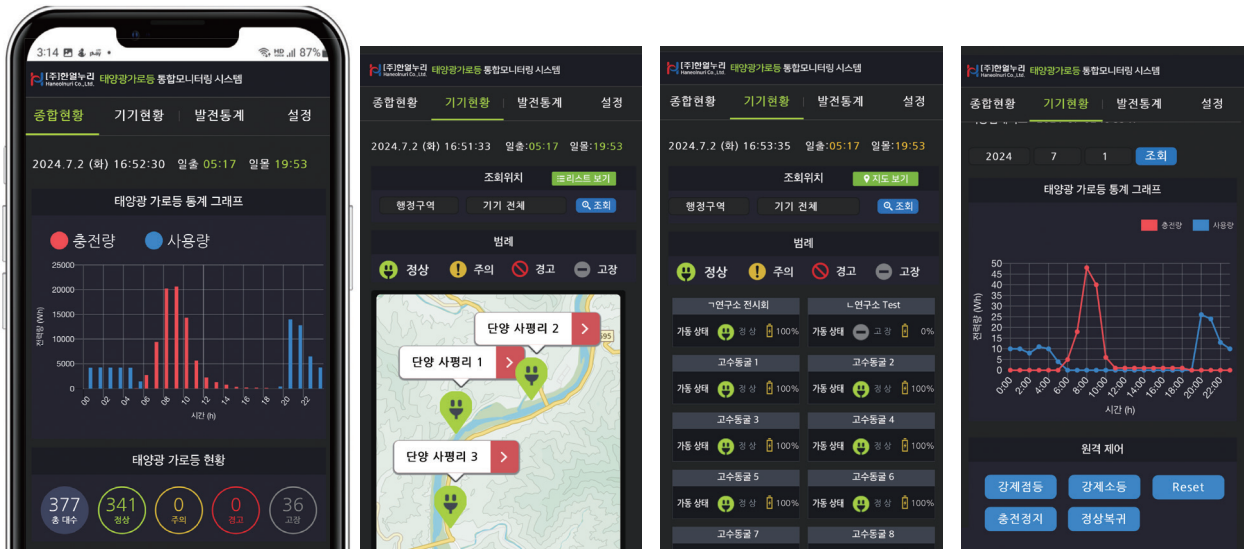
Smart Sensors (HRSM)

▲ HRSM(Dual)

▲ HRSM(Single)

Function	Detailed Description
Motion Detection Sensor	▷ 24GHz [Dual] Radar Sensor : Adjustable detection angle in 15-degree increments horizontally (6 steps) for a 220-degree detection range : Adjustable detection angle in 15-degree increments vertically (6 steps) for a 90-degree detection range : No blind spots with 220-degree horizontal and 90-degree vertical detection : Unaffected by environmental factors (temperature, humidity, wind, dust, light)
	▷ 24GHz [Single] Radar Sensor: Detection distance: up to 20 meters : Detection angle: 101° (Elevation), 26° (Horizontal) : Unaffected by environmental factors (temperature, humidity, wind, dust, light)
Illuminance Sensor	▷ CDS Light Sensor : Automatically senses ambient brightness to detect sunrise and sunset and control LED lighting dimming

LED Dimming Controller (HSDC)

Function	Detailed Description
Sensor Support	Monitors surrounding movements using a 24G radar sensor Monitors ambient brightness through connection with an illuminance sensor
Automatic Time Adjustment	Built-in circuit for power outage compensation
Tracks sunrise and sunset times	Control based on region-specific sunset and sunrise data, allowing users to set desired on/off times and dimming levels via remote control
Midnight Off Control Function	If the installation area is near crops, lights can be turned off or dimmed at night to prevent damage to crop growth
Wireless Remote Fault Monitoring Control	Diagnoses equipment status through device status data Determines converter fault in LED luminaires Manages power consumption for LED lighting Continuously detects power outages
Dimming Control Function	Supports dimming control using the 0V~10V (Zero to Ten) method
Group Control Function	Allows grouping and control of necessary devices
Long-Distance Wireless Communication Function	Supports high-quality wireless communication using Cat.M1
Power Information Measurement	Measures voltage, current, and power consumption
Settings	Allows necessary settings via remote control

Solar Street Light Installation Cases
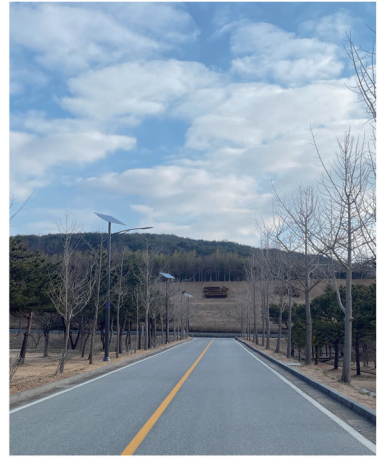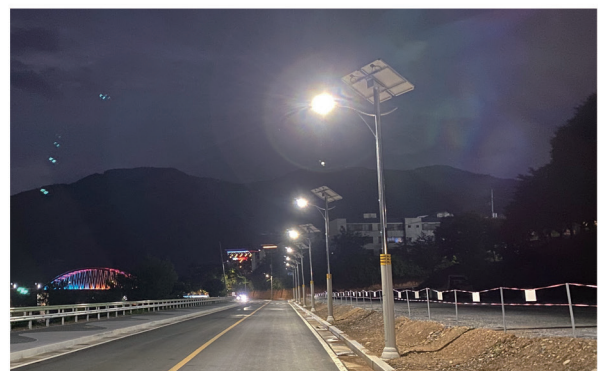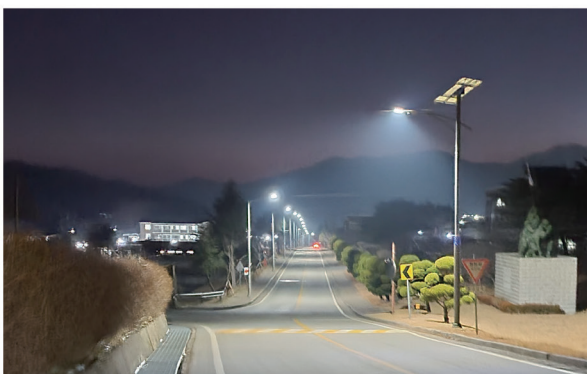
Solar
Power
System
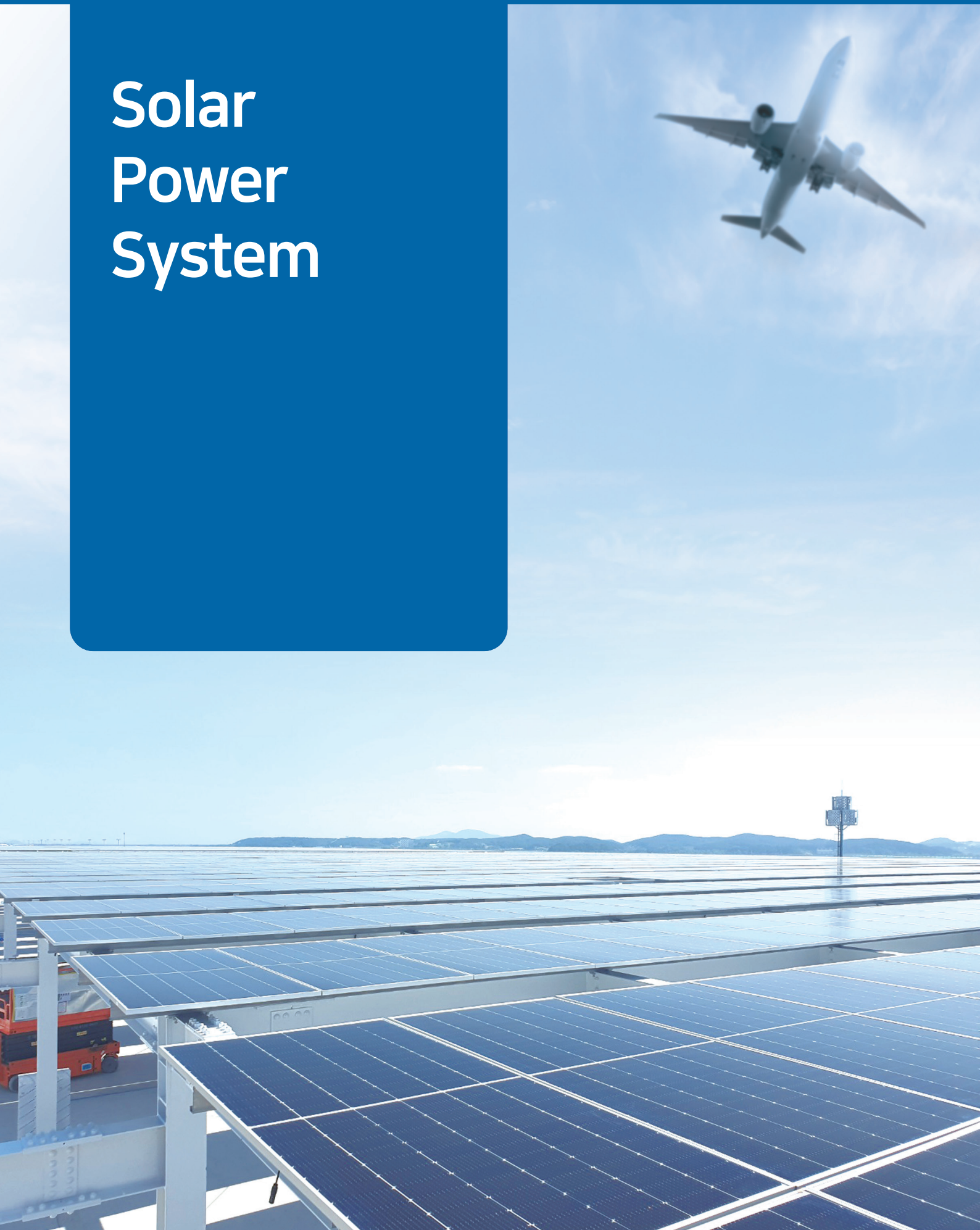
Solar Power System Installation Cases

◉ Incheon Airport

◉ Osan LG CS Campus

◉ Danyang Waste Treatment Plant

Solar Power System Installation Cases
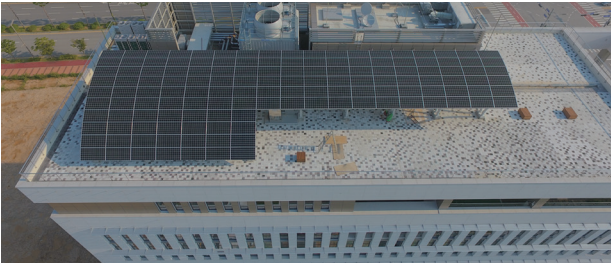
NH Nonghyup Chungnam Regional Headquarters

Korea Limestone New Material Research Center

SM Solar Power Plant, Jeju

DNP Corporation, Jeungpyeong

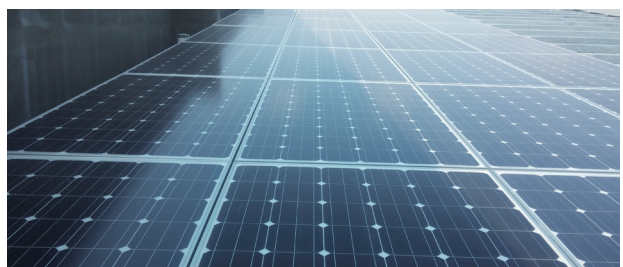Guinsa International Meditation Center

Nonghyup Mokuchon, Gimje

Dasarang Senior Care Hospital, Danyang, Chungbuk

Jeongseok Solar Power Plant

Danyang Wastewater Treatment Plant

Intercity Hotel, Magok District

Gwangil Solar Power Plant

Sobaeksan Natural Recreation Forest

NH Nonghyup, Cheongju, Chungbuk

Cheonwangsan, Goseong, Gyeongnam

Hyundai, Sangju, Gyeongbuk

Hoam Gymnasium, Cheongju, Chungbuk

⊙ Government Distribution Projects and Local Government Support Project Installation Cases

Residential Solar Support Project
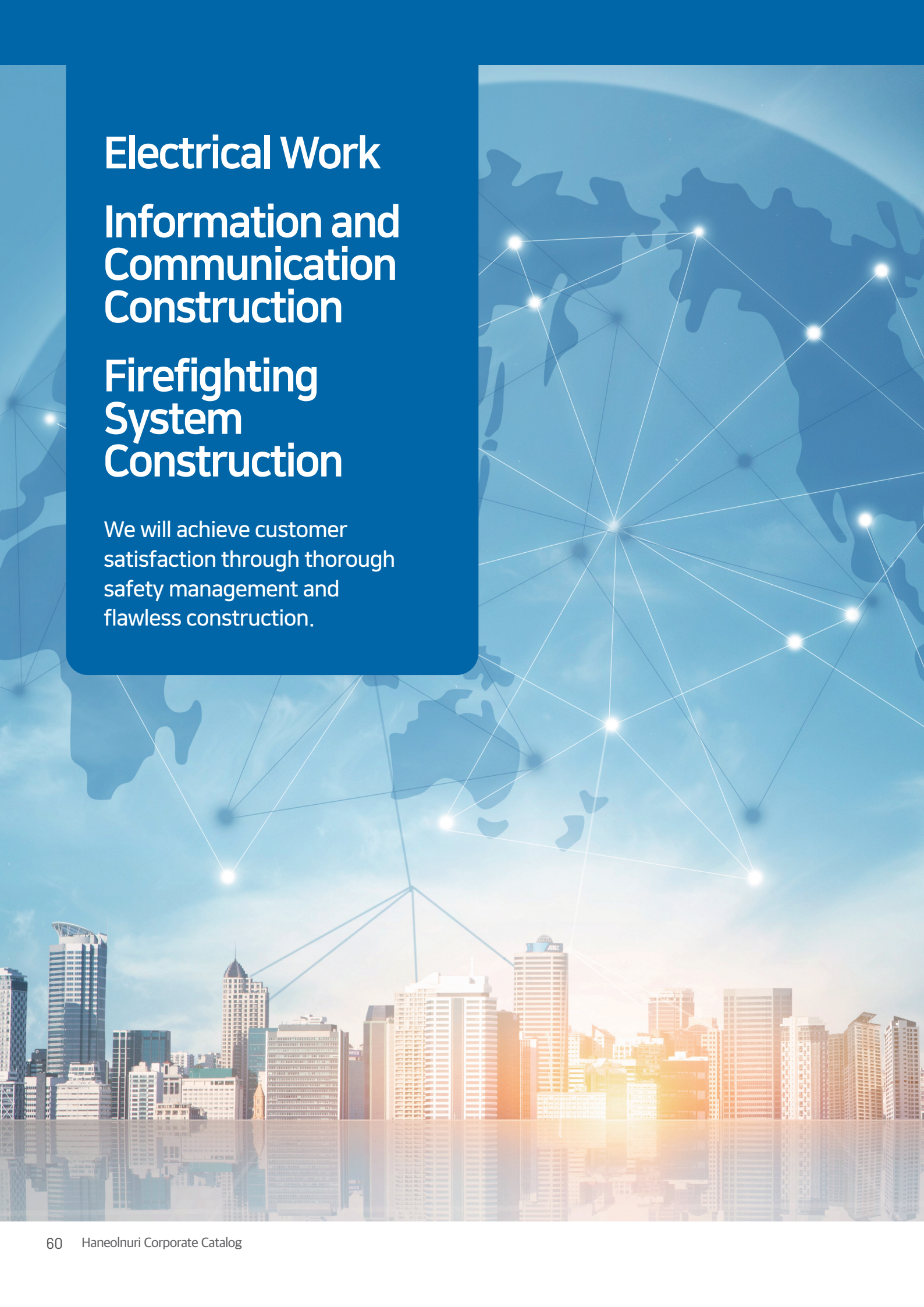
Senior Center Solar Support Project

Building Solar Support Project

Electrical Work

Information and Communication Construction

Firefighting System Construction

We will achieve customer satisfaction through thorough safety management and flawless construction.

Electrical Work

Power Receiving Equipment

Distribution Works

Railway Electrical & Signal Systems

Building Construction

Electrical Interior Works

Electrical Interior Works

Apartment Construction

Plant Construction

University Construction
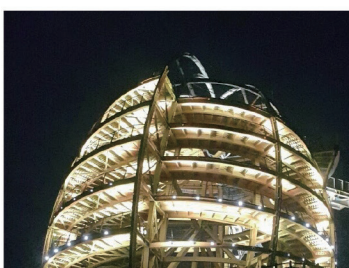
Landscape Lighting

LED Landscape Lighting

Plant Lighting

Road Lighting

Interior Lighting

General Lighting

Information and Communication Construction
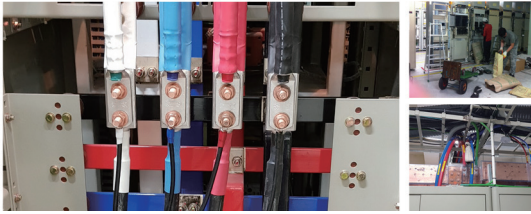
DC Construction Project

Replacement and expansion of DC equipment exceeding its service life(Rectifiers, DC urban systems, DC distribution panels, converters, air conditioners, etc.)

AC Construction Project

Replacement and expansion of power distribution/UPS facilities exceeding their service life(Power distribution facilities, uninterruptible power supplies, STS facilities)

Storage Battery Construction Project

Replacement and maintenance of batteries exceeding their service life and defective batteries(Battery replacement projects, replacement of cells with defective voltage and impedance)

High-Speed Internet Project

Support for mobile generator cars to stabilize power facilities(BBS, BBC, BBH, BBP, etc.)

Generator Construction Project

Replacement and maintenance of generators exceeding their service life and defective facilities (Replacement and maintenance of generators from 10kW to 6,000kW)

Grounding Construction Project

Construction and enhancement of grounding facilities for information and communication facilities(Communication, security, lightning protection work)

High-Altitude Relay Station Maintenance and Construction Project

Management of grounding facilities and maintenance work to stabilize power facilities for lightning protection

Firefighting System Construction

Fire Extinguishing Systems

Firefighting MCC Panels

Alarm Systems

Detectors

Simplified Sprinklers

Firefighting Hydrant Systems

Firefighting Piping Systems

Firefighting MCC Panels

Firefighting Hydrant Systems

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With superior design and cutting-edge technology,
we transcend spatial limitations and boldly pursue a clean future,
driven by the valuable dreams of tomorrow.

Haneolnuri Creates

Bright and Healthy Future

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Haneolnuri
Company Profile

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Haneolnuri Co., Ltd.