

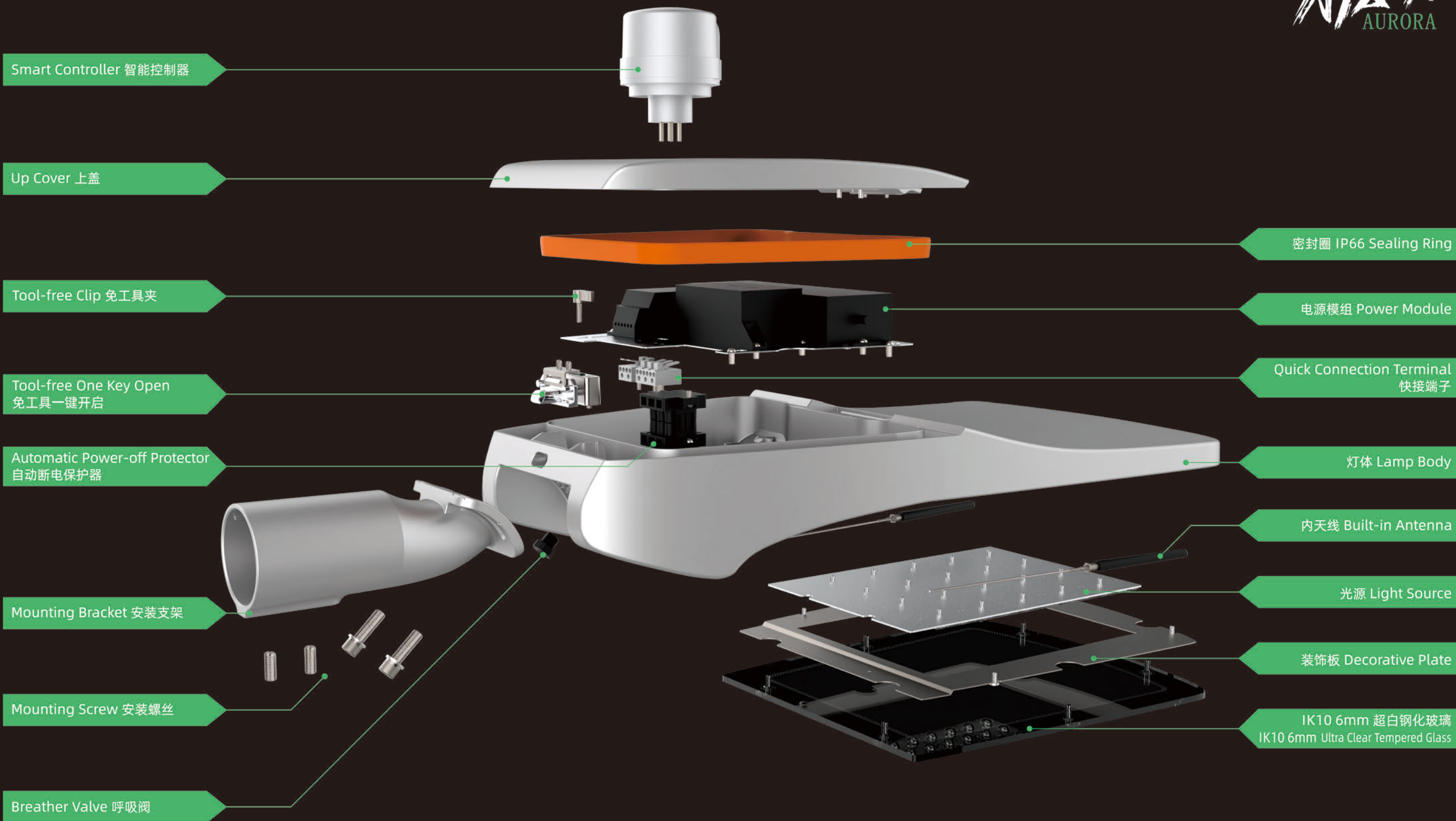
意科照明

**ECOLUMITECH**
LED STREET LIGHT

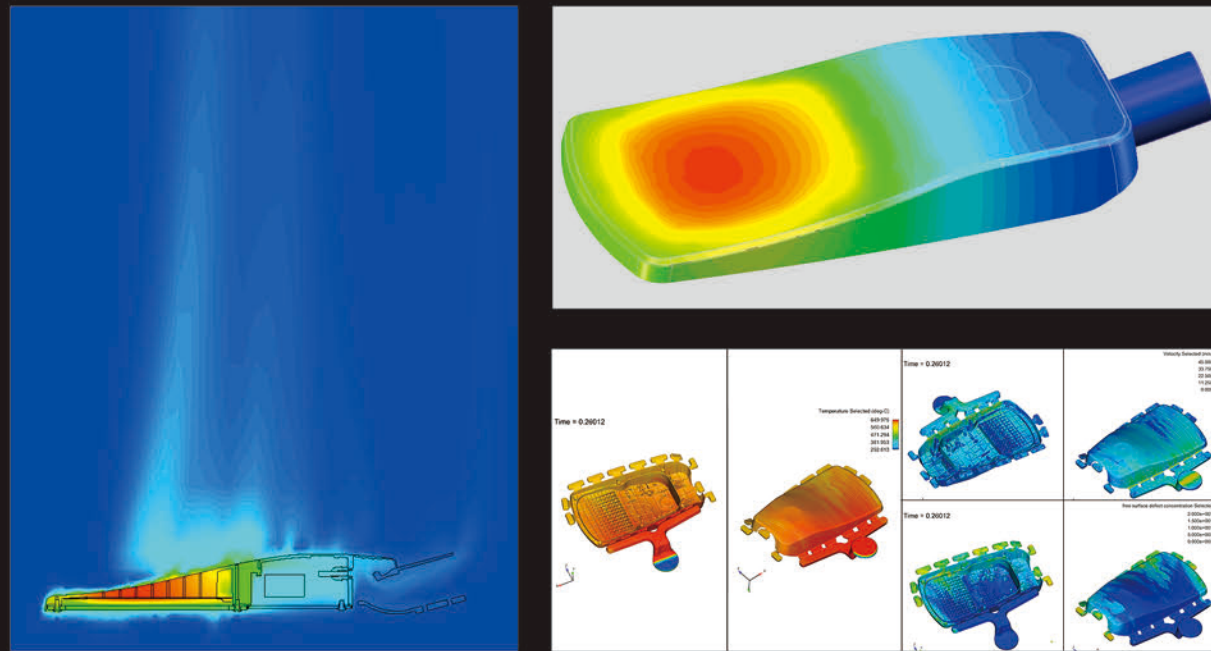


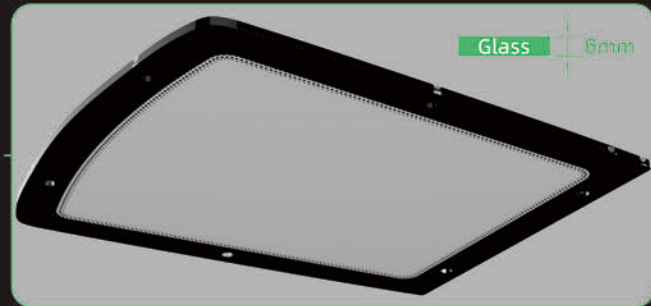
HUZHOU ECO LIGHTING TECHNOLOGY CO., LTD.
湖州意科照明科技有限公司

ADD: Building 44, DongYuan Intelligent Industrial Park
No.199 XinAn Road, WuXing District, Huzhou City, Zhejiang Province, China.
中国浙江省湖州市吴兴区欣安路199号东源智能产业园44号楼
TEL: 0086 0572 2966870
E-mail: info@ecolumitech.com
www.ecolumitech.com

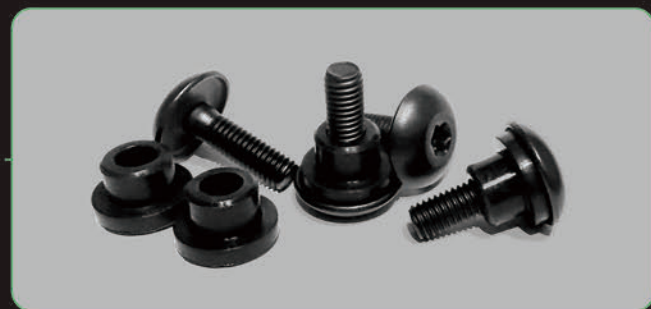


- 1.** 流线型设计, 简洁美观, "风道" 设计, 能更好的散热。
Streamlined design, simple and beautiful, "air duct" design, better for heat dissipation.
- 2.** 铝压铸件外壳, 超清钢化玻璃, 5个尺寸可供选择。
Die-cast aluminum body, Ultra clear tempered glass, 5 sizes optional.
- 3.** 高透光PC透镜, 搭载一线品牌LED芯片与电源, 保障超长使用寿命。
High transmittance PC lens, Equipped with first-class LED chip and power supply, ensure longer lifespan.
- 4.** 驱动有0-10V/ DALI / 编程电源选择, 可搭载20KV浪涌保护器。
Driver with 0-10V/ DALI/ Programmed be options, and can with surge protection up to 20KV.





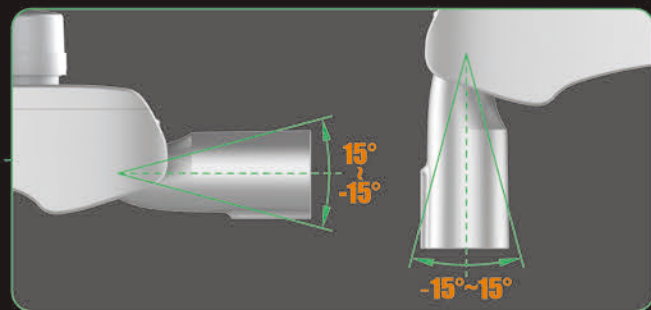
6mm厚度钢化玻璃，满足IK10高强度测试标准。
6mm thickness tempered glass, meet IK10 high strength test standard.



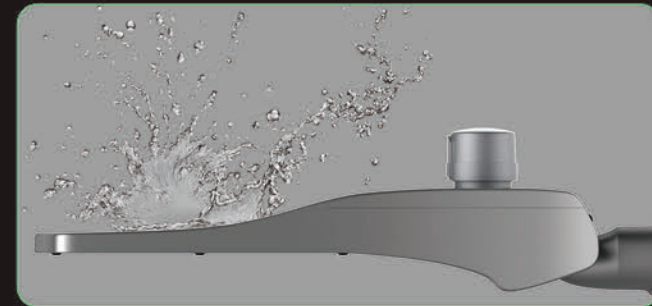
所有外部螺钉均为不锈钢304材质，耐腐蚀。
All external screw are in 304 stainless steel, for corrosion resistance.



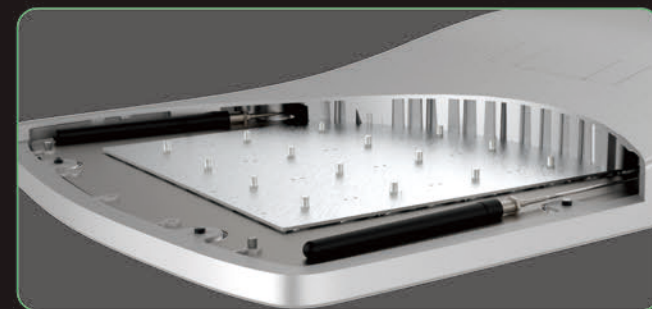
特殊电源散热设计，保障核心部件超长使用寿命。
Special power supply heat dissipation design, ensures long service life of core components.



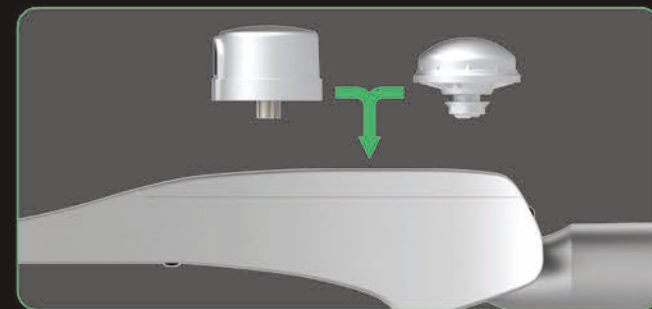
安装方向有横向、竖向两种方式，且支架角度可调 -15°~15° 度。
The installation direction has two ways: horizontal and vertical, and the bracket angle can be adjusted from -15° to 15°.



高精度防水设计，满足IP66高强度测试标准。
High-precision waterproof design, meet IP66 high strength test standard.



信号天线可内置化安装，外观更加整洁。
The Antenna can be internal installed, appearance looks more simple and beautiful.



顶部平面预留NEMA或ZHAGA端口。
Body top reserved a platform for NEMA or ZHAGA socket.



一键开启，无需工具，方便维护。
One Key press to open, tool-free for easy maintenance.

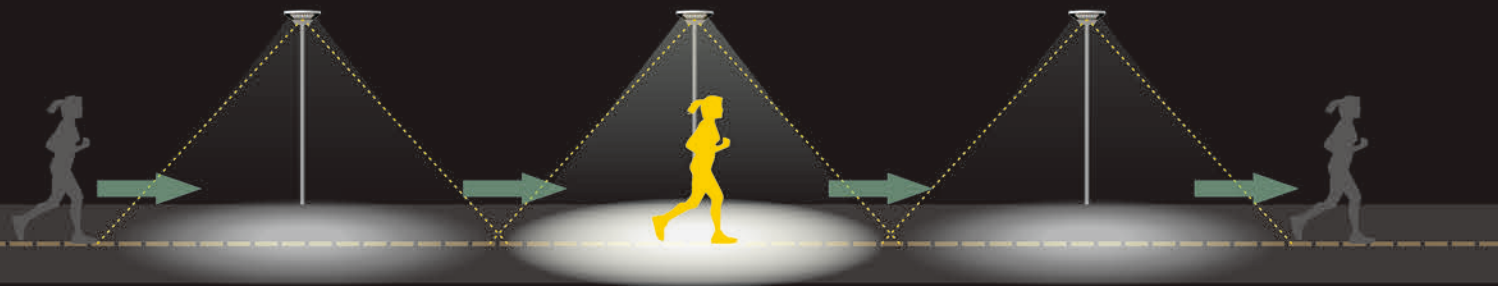
微波感应

Microwave induction

- a) 人靠近时功率上升, 人离开功率下降;
The power increases when people approach, and the power decreases when people leave.
- b) 可自定义感应生效时间。
The induction effective time can be customized.

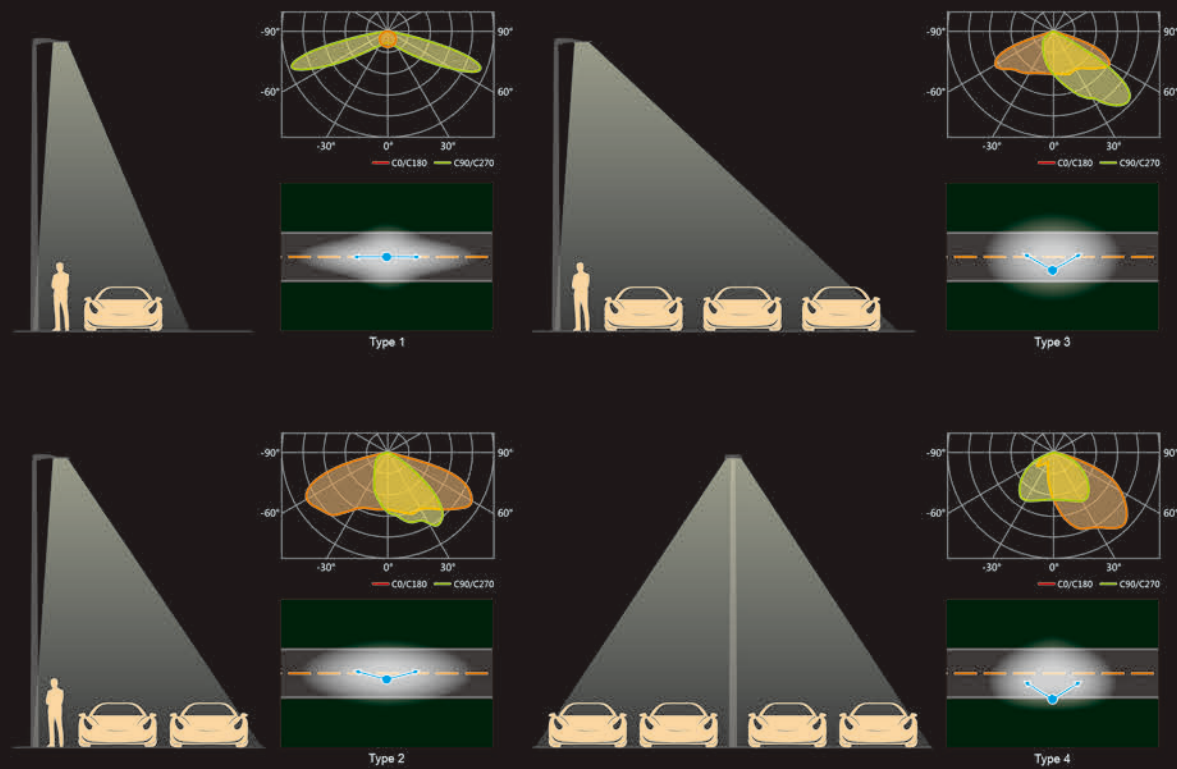


30% POWER 100% POWER 30% POWER



多种配光选择, 满足各种道路要求。

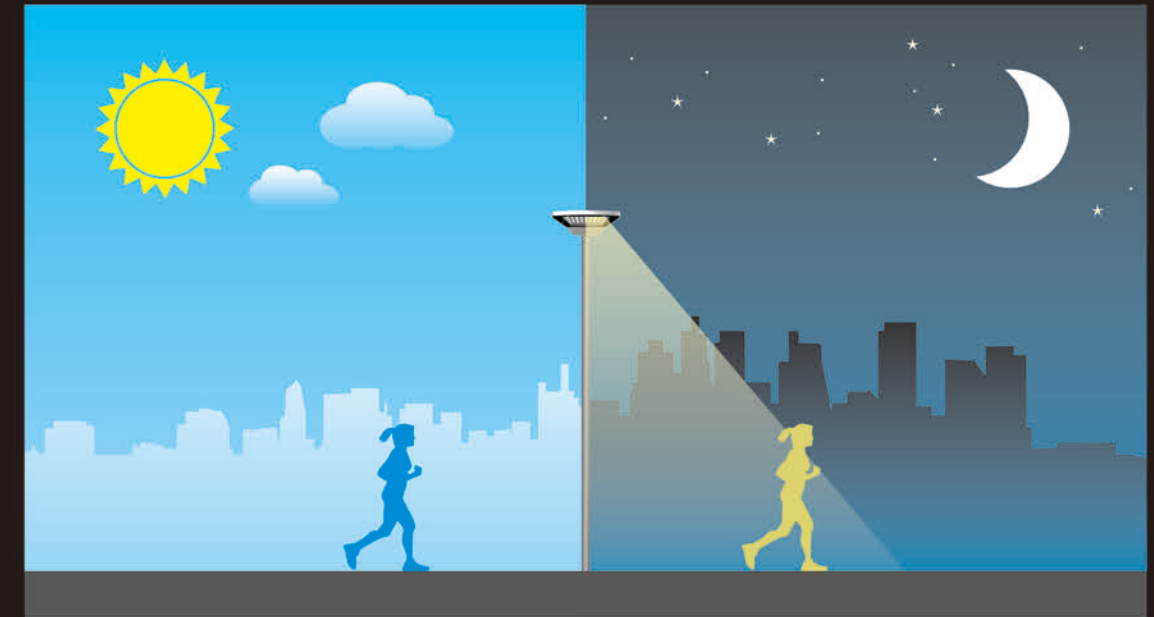
A variety of light distribution options to meet any kinds of road requirements.



光控感应 Photo Sensor

白天感应到光线整灯自动关闭, 夜晚无光线则自动打开

The electric will be cut-off automatically while sensing the light during the day, And will be power on during the night.



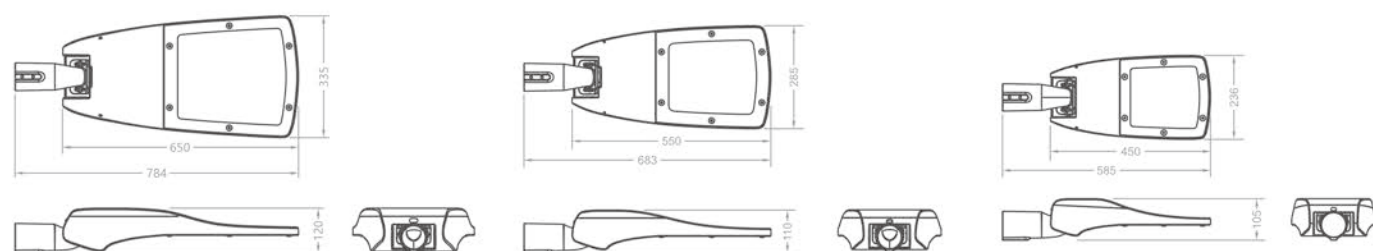
RS1-L



RS1-M



RS1-S



RS1-S/M/L LED Street Light Technical Data
RS1-S/M/L LED 路灯技术参数

Product Code 产品型号	RS1-S			RS1-M		RS1-L	
	RS1-S-016030	RS1-S-024060	RS1-S-024060	RS1-M-036100	RS1-M-048130	RS1-L-064150	RS1-L-080180
LED Quantity LED数量	12	24	36	36	48	64	80
Light Output (W) 灯具功率	30W	60W	90W	100W	130W	150W	180W
Luminaire Efficiency 灯具光效	>130 lm/w						
Input Voltage 输入电压	AC100-305V						
Frequency Range 频率	50/60HZ						
Color Temperature 色温	3000K/ 4000K/ 5000K						
Color Rendering Index 显色指数	CRI >70						
Optical Distribution 配光	T1/ T2/ T3/ T4/ T5						
Lifespan 寿命	100000H @L90B10 Tj=85°C						
Power Factor 功率因素	>0.95						
Surge Protection 浪涌保护	>6KV (10KV/20KV is Optional)						
IP Grade IP等级	IP66						
IK Grade IK等级	IK10 @6mm Ultra Clear Tempered Glass						
Insulation Class 绝缘等级	CLASS I (CLASS II is Optional)						
Function Selection 功能选择							
Intelligent Socket (Optional) 智能插座选配	NEMA (5PIN or 7PIN) / ZHAGA (4PIN)						
Automatic power-off Device (Optional) 自动断开装置选配	√	√	√	√	√	√	√
Dimming Mode (Optional) 调光方式选配	PWM/ 0-10V / 1-10V / DALI / DALI-2						
Photo Sensor (Optional) 光感应选配	√	√	√	√	√	√	√
Microwave Induction (Optional) 微波感应选配	√	√	√	√	√	√	√
Smart System Communication Protocol 智能系统通信协议选配 (Optional)	ZIGBEE/ LORA/ NB-IOT						
Mounting Recommendations 安装建议							
Top of Pole Diameter (mm) 灯杆顶部直径	60mm (48mm is Optional)						
Mounting Height (m) 安装高度	3-6m	6-8m	8-10m	10-12m			
Mounting Bracket Adjustable Angle 安装支架可调角度	-15°~15°						
Packing Parameters 包装参数							
Package Size (mm) 包装尺寸	600X285X165mm			700X335X170mm		800X385X180mm	
Gross Weight (KG) 毛重	5.2KG	5.4KG	5.6KG	8KG	8.2KG	10.2KG	10.5KG
Pcs/ 20GP Loaded 20尺柜装载数量	900PCS			620PCS		500PCS	
Pcs/ 40GP Loaded 40尺柜装载数量	1900PCS			1250PCS		1000PCS	
Environment Requirements 环境要求							
Ambient Temperature 环境温度	-35°C~50°C						
Ambient Humidity 环境湿度	10%~90%						

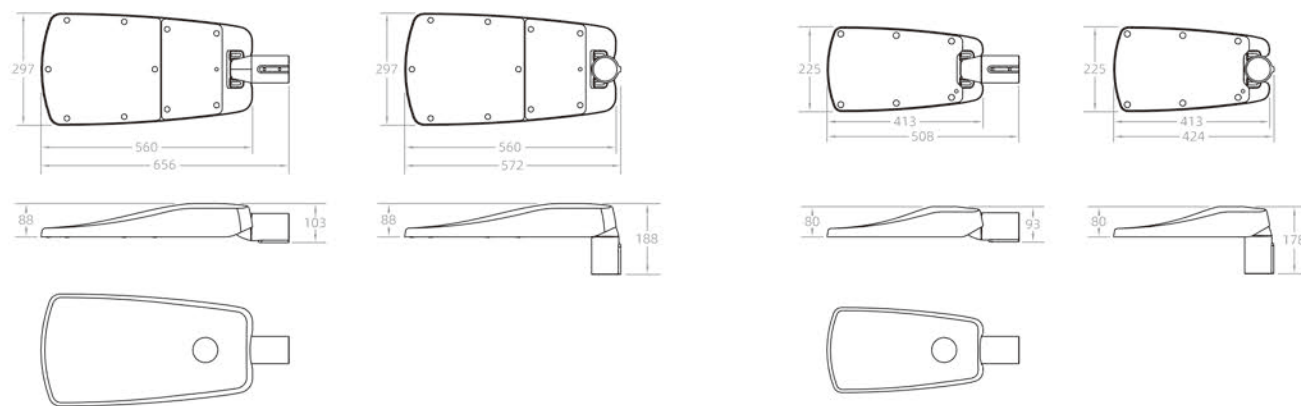
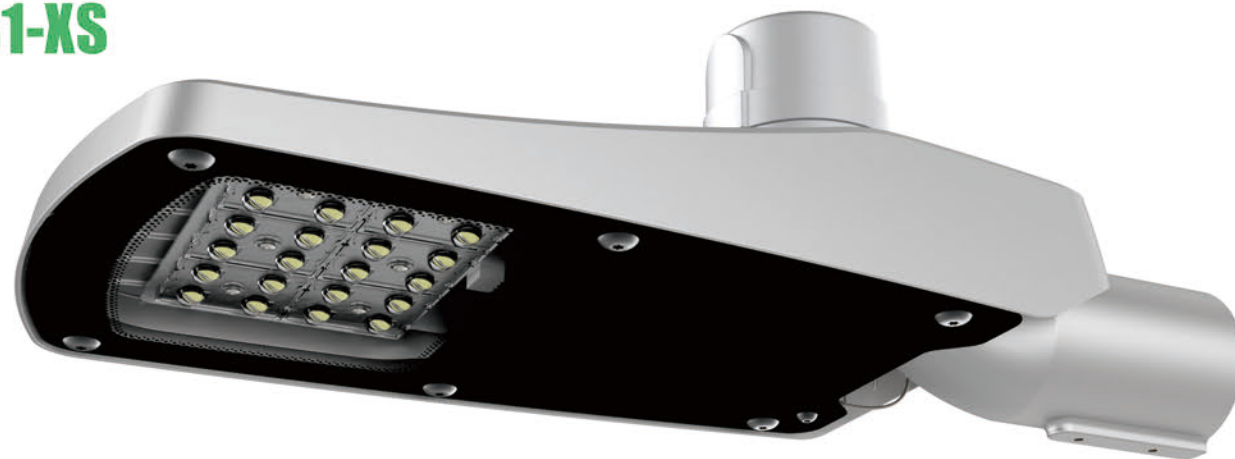


安全绳 Safety Rope

RS1-XM



RS1-XS



RS1-XS/XM LED Street Light Technical Data RS1-XS/XM LED 路灯技术参数				
Product Code 产品型号	RS1-XS		RS1-XM	
	RS1-XS-016030	RS1-XS-024060	RS1-XM-048090	RS1-XM-064120
LED Quantity LED数量	16	24	48	64
Light Output (W) 灯具功率	30W	60W	90W	120W
Luminaire Efficiency 灯具光效	>130 lm/w			
Input Voltage 输入电压	AC100-305V			
Frequency Range 频率	50/60HZ			
Color Temperature 色温	3000K/ 4000K/ 5000K			
Color Rendering Index 显色指数	CRI >70			
Optical Distribution 配光	T1/ T2/ T3/ T4/ T5			
Lifespan 寿命	100000H @L90B10 Tj=85°C			
Power Factor 功率因素	>0.95			
Surge Protection 浪涌保护	>6KV (10KV/20KV is Optional)			
IP Grade IP等级	IP66			
IK Grade IK等级	IK09 @5mm Ultra Clear Tempered Glass			
Insulation Class 绝缘等级	CLASS I (CLASS II is Optional)			
Function Selection 功能选择				
Intelligent Socket (Optional) 智能插座选配	NEMA (5PIN or 7PIN) / ZHAGA (4PIN)			
Dimming Mode (Optional) 调光方式选配	PWM/ 0-10V / 1-10V / DALI / DALI-2			
Photo Sensor (Optional) 光感应选配	√	√	√	√
Microwave Induction (Optional) 微波感应选配	√	√	√	√
Smart System Communication Protocol 智能系统通信协议选配 (Optional)	ZIGBEE/ LORA/ NB-IOT			
Mounting Recommendations 安装建议				
Top of Pole Diameter (mm) 灯杆顶部直径	60mm (48mm is Optional)			
Mounting Height (m) 安装高度	3-6m	6-8m		8-10m
Mounting Bracket Adjustable Angle 安装支架可调角度	-15°~15°			
Packing Parameters 包装参数				
Package Size (mm) 包装尺寸	575X270X140mm		700X350X140mm	
Grose Weight (KG) 毛重	3.9KG	4KG	5.6KG	6KG
Pcs/ 20GP Loaded 20尺柜运载数量	1400PCS		750PCS	
Pcs/ 40GP Loaded 40尺柜运载数量	2880PCS		1560PCS	
Environment Requirements 环境要求				
Ambient Temperature 环境温度	-35°C~50°C			
Ambient Humidity 环境湿度	10%~90%			



Novalume's Lumintell The control system we use is a state-of-the-art wireless Light Management System and Smart City platform. Lumintell It can help you to reduce your city's lighting energy and maintenance costs by up to 75%. Since its creation, Lumintell The systems have accumulated a total of 2 billion running hours and is installed in several municipalities worldwide.

Light Management System

The control system we used provides a reliable and efficient platform to remotely control and monitor an unlimited number of streetlights - individually or in groups. Each streetlight is connected wirelessly with the cloud and an online application. As well as accessing smart grouping applying dimming profiles, the Front End lets users manage alerts, live notifications, performance graphs and analytic tools.

Users with administrative privileges can access the Back End application make changes to the network and orchestrates maintenance. The Deployment Maintenance App facilitates communication between maintenance workers in the field and the Back End for a more efficient workflow.

Smart City IoT-ready network

City Light Management is just the beginning. The control system of IoT-ready network which make cities even smarter. Whether the priority is sustainability, energyefficiency, savings or improving the quality of life of citizens, we can design a network to your exact requirements using sensors provided by our partner ecosystem. Data from these sensors can ed easily accessed directly via your Smart City application.

Easy and fast deployment

Thanks to its completely ireless operation, plug-and-play network node and timesaving Maintenance and Deployment

Thanks to its completely wireless operation,plug-and-play network node and time saving Maintenance and Deployment App, deployment of control system is fast, costeffective and easily managed.

我们使用的控制系统是最先进的无线灯光管理系统和智能城市平台。它可以帮助您城市照明能源和维护成本降低75%。自创建以来，系统已累计运行20亿小时，并安装在全球多个城市。

灯光管理系统

我们使用的控制系统提供了一个可靠高效的平台，可以单独或成组远程控制和监控无限数量的路灯。每个路灯都与云和在线应用程序无线连接。除了访问应用调光配置文件的智能分组外，前端还允许用户管理警报、实时通知、性能图和分析工具。

具有管理权限的用户可以访问后端应用程序，对网络进行更改并协调维护。部署维护应用程序有助于现场维护人员与后端之间的通信，以实现更高效的工作流程。

智能城市本地网络

城市灯光管理只是一个开始。IoT就绪网络的控制系统使城市变得更加智能。无论优先事项是可持续性、能源效率、节约还是提高公民的生活质量，我们都可以使用我们合作伙伴生态系统提供的传感器，根据您的确切要求设计网络。来自这些传感器的数据可以通过您的智能城市应用程序轻松直接访问。

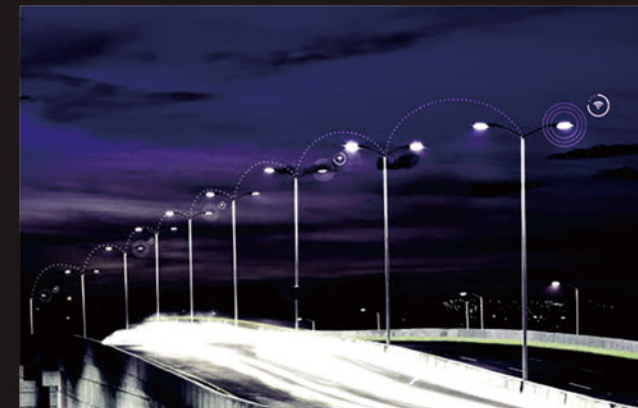
轻松快速的部署

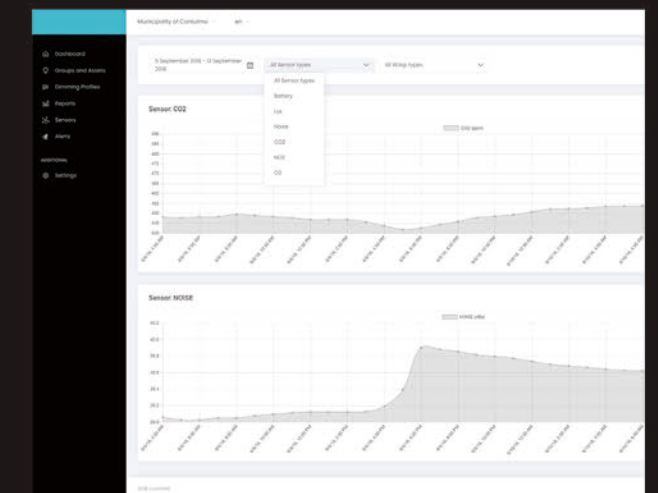
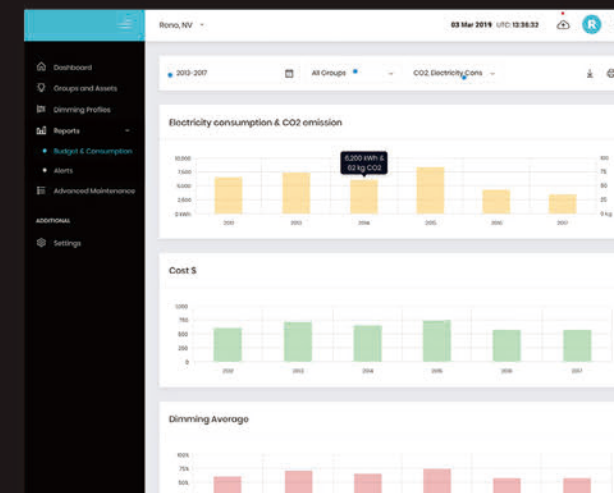
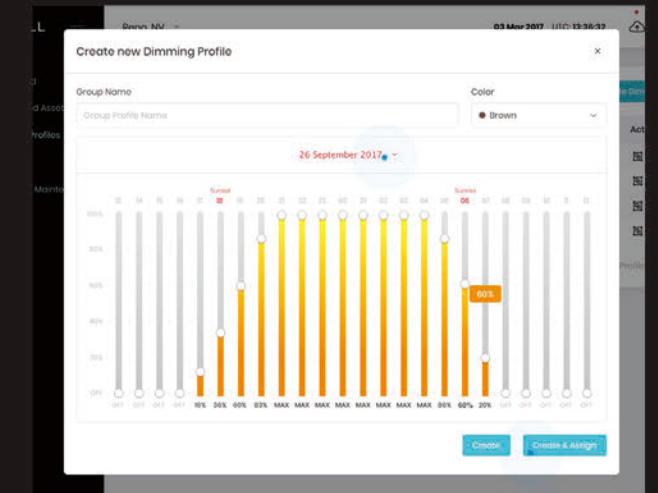
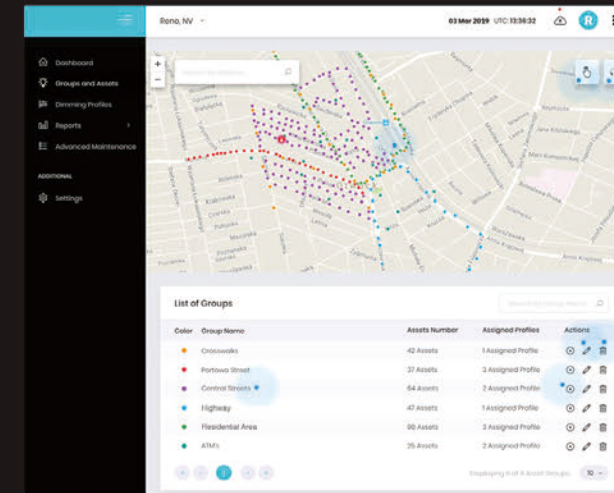
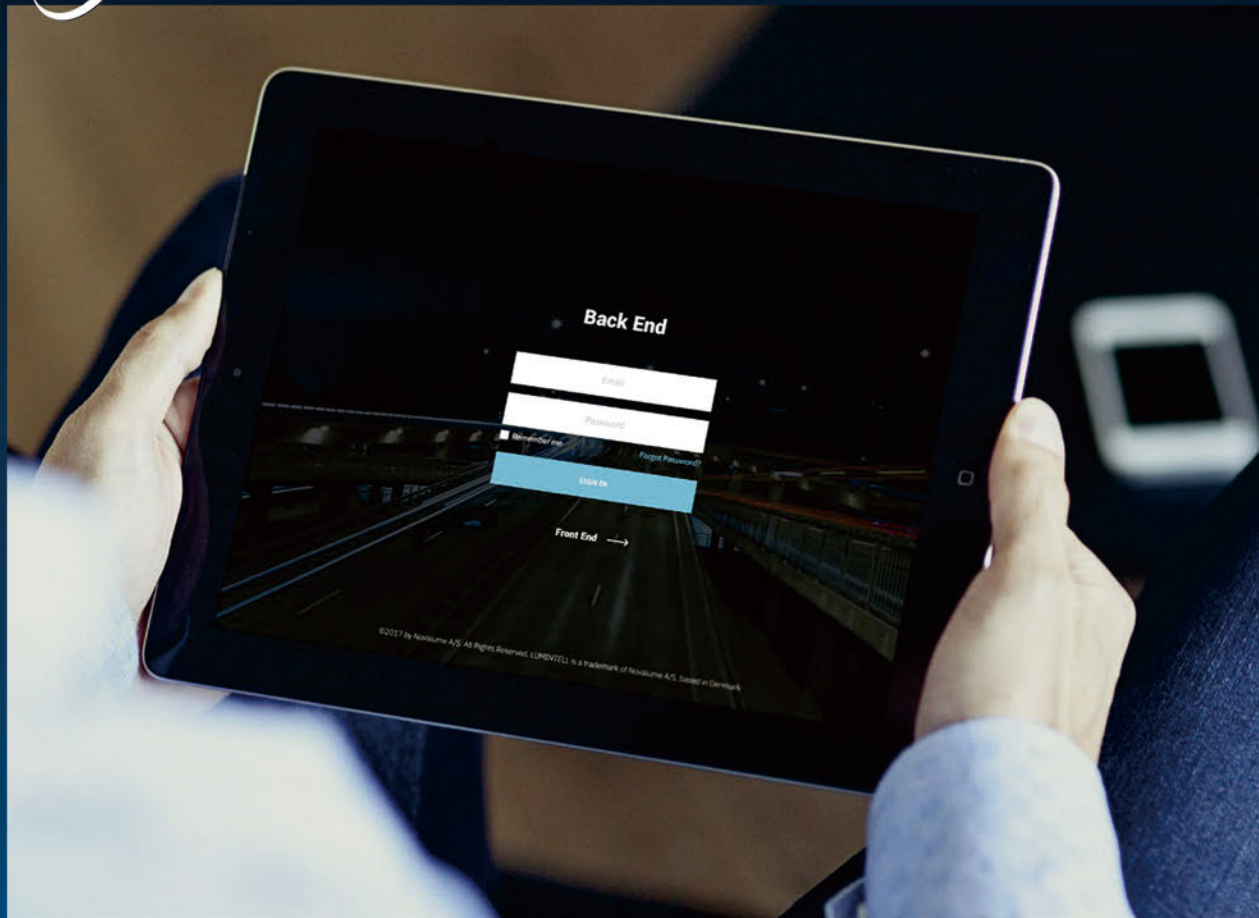
由于其完全无线操作，即插即用

网络节点与省时维护与拆卸

由于其完全无线操作，即插即用

网络节点和省时的维护和部署应用程序，控制系统的部署快速、经济高效且易于管理。





TWO INSTALLATION OPTIONS 两种安装选项

The LCU&CCU is easily and quickly plugged into a luminaire via a NEMA socket and connects automatically to the system. Each Node can be installed with two types of installation: on the lamp or on the pole.

LCU和CCU可通过NEMA插座轻松地插入灯具，并自动连接到系统。每个节点可以安装两种类型：在灯上或在杆上。



NEMA "Plug-and-play" installation on the lamp



NEMA socket installation directly on the pole with the Lumintell™ Node Pole Adaptor

GENERAL SPECIFICATIONS 一般规范

- Cost-effective "plug-and-play" NEMA socket with two installation options
 - Significant additional energy savings thanks to the system - up to 20% on top of the savings from switching to LED lighting
 - The system Node comes as an LCU and a CCU. No need for additional base stations, cabinets or Ethernet connection
 - Fast deployment with easier and quicker gateways planning
 - Wireless technologies: LoRa® (under development), Zigbee® 3/4G and 5G (2020)
 - Automatically connects to the network, reducing commissioning time
 - Built-in GPS auto-positioning
 - Real-time data synchronization and notification
 - Wide range of electrical parameter monitoring (V, W, A, VAR, Wh, VARh, PF and frequency)
 - NFC for easy programming, keys transfer and local configuration
 - The system Network collects and presents sensor data in the system application
 - Scenario scheduling and live remote control of each luminaire or groups of luminaires
 - Enables individual remote management of streetlights with electronic driver up to 400w
 - Autonomous operation based on predefined schedules, profiles and adaptative lighting
 - Withstands voltage up to 305 V
 - Electricity metering equipment (EN50470)
 - CISPR-11 Compliant
- 具有两种安装选项的经济高效的“即插即用”NEMA插座；
 - 由于该系统，大大节省了额外的能源-在切换到LED照明的节省基础上，最多可节省20%；
 - 系统节点作为一个LCU和一个CCU。不需要额外的基站，机柜或以太网连接；
 - 通过更简单、更快的网关规划实现快速部署；
 - 无线技术：LoRa®（正在开发中）、Zigbee®3/4G和5G（2020）；
 - 自动连接到网络，减少调试时间；
 - 内置GPS自动定位；
 - 实时数据同步和通知；
 - 广泛的电气参数监测（V、W、A、VAR、Wh、VARh、PF和频率）；
 - NFC，便于编程、密钥传输和本地配置；
 - 系统网络在系统应用程序中收集并呈现传感器数据；
 - 场景调度和每个灯具或每组灯具的实时远程控制；
 - 使用高达400w的电子驱动器实现对路灯的单独远程管理
 - 基于预先确定的时间表、配置文件和自适应照明的自主操作；
 - 耐受电压高达 305 V
 - 电力计量设备（EN50470）
 - 符合CISPR-11

LCU & CCU SPECIFICATIONS



Figure 2a: LCU Node



Figure 2b: CCU Node

ZIGBEE NETWORK

Standard/标准	IEEE 802.15.4
Frequency/频率	2,4 GHz
Bandwidth/频宽	250 kbps
Range/范围	Up to 250 meters between each node
Maximum LCU's per CCU 每个CCU最多搭载LCU数量	250
Firmware update/固件升级	OTA
Antenna/天线	Internal

GSM NETWORK MODEM

Standard/标准	IEEE 802.21
Frequency/频率	850 / 900 / 1800 / 1900 MHz
Bandwidth/频宽	250 kbps
Range/范围	Up to 250 meters between each node
Maximum LCU's per CCU 每个CCU最多搭载LCU数量	250
Firmware update/固件升级	OTA
Antenna/天线	Internal

Please refer to latest Lumintell™ Node datasheet for more technical details.

Communication protocol: ZIGBEE, NB-IOT and LORA

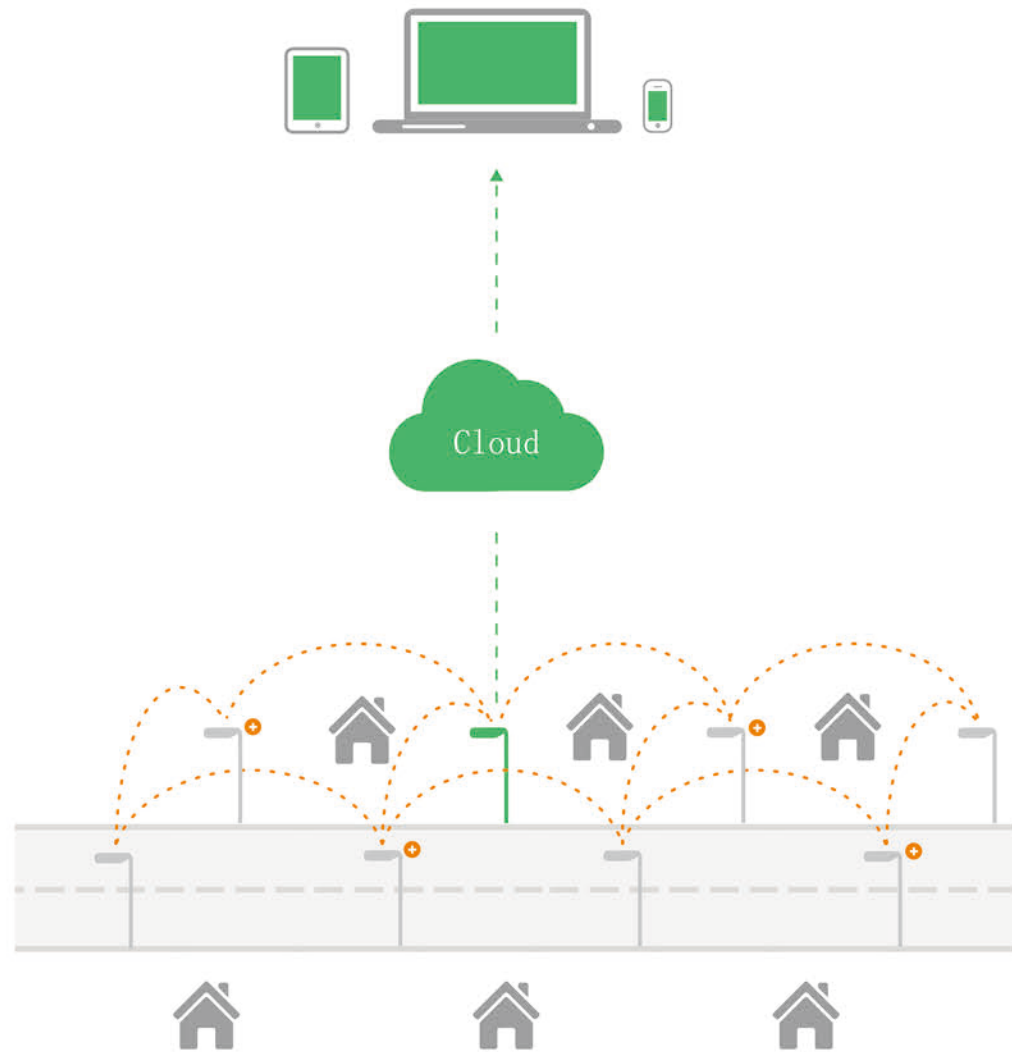
In the below two pictures, you will know about the light control system and the main component. They have two different communication protocol: Zigbee LoRa and NB-IOL

通信协议: ZIGBEE、NB-IOT和LORA

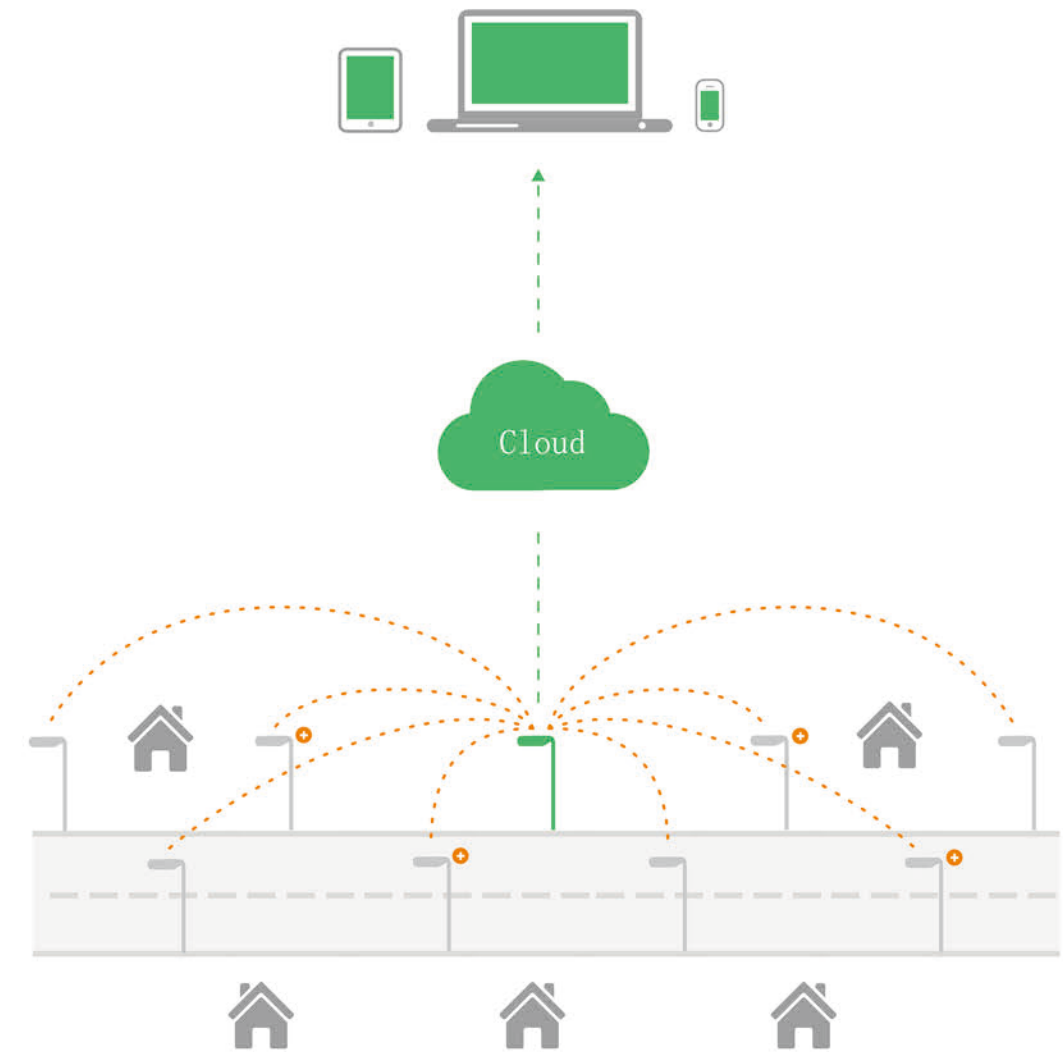
在下面的两张图片中，您将了解灯光控制系统和主要部件。它们有两种不同的通信协议：Zigbee LoRa和NB-IOL

Zigbee®

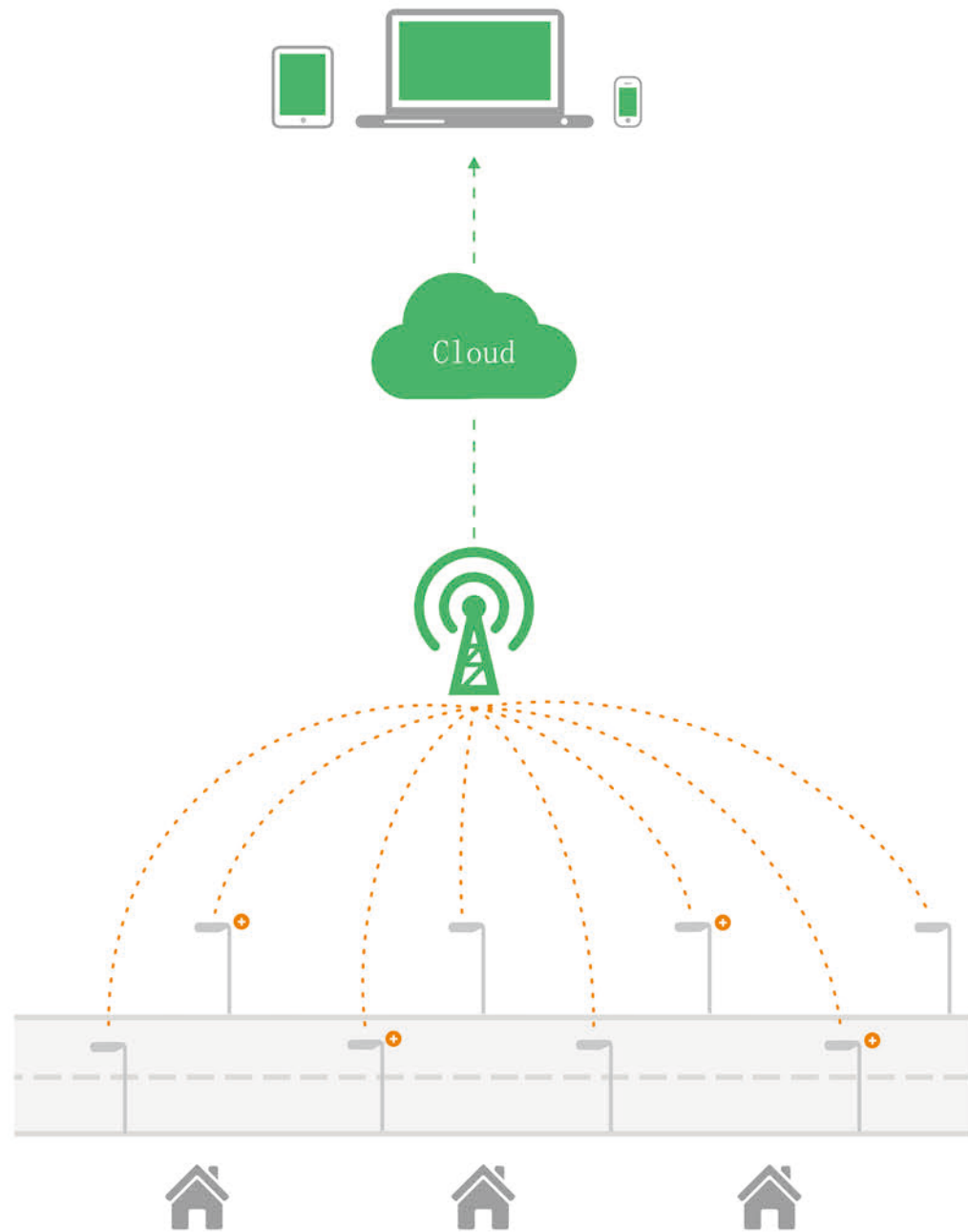
LoRa®



- CONTROL UNIT(CCU)
Zigbee Radio Gateway,
Power Metering, Control Unit
非流明簇
控制单元 (CCU)
Zigbee无线电网关,
功率计量、控制单元
- IoT & SENSORS
Sensors for air quality & pollution monitoring,
security, license plate recognition, noise nuisance,
weather situations, road conditions, and other on demand city services
IoT和传感器
空气质量和污染监测传感器,
安全、车牌识别、噪音干扰,
天气状况、道路状况和其他按需应变的城市服务
- Wireless GSM Connection
无线GSM连接
- ZIGBEE'S Wireless Communication Protocol
ZIGBEE 无线通信协议
- CONTROL UNIT(LCU)
Zigbee Radio, Power Metering,
control unit
控制单元(LCU)
Zigbee无线电、功率计量、控制单元



- CONTROL UNIT(CCU)
Zigbee Radio Gateway,
Power Metering, Control Unit
非流明簇
控制单元 (CCU)
Zigbee无线电网关,
功率计量、控制单元
- IoT & SENSORS
Sensors for air quality & pollution monitoring,
security, license plate recognition, noise nuisance,
weather situations, road conditions, and other on demand city services
IoT和传感器
空气质量和污染监测传感器,
安全、车牌识别、噪音干扰,
天气状况、道路状况和其他按需应变的城市服务
- Wireless GSM Connection
无线GSM连接
- LORA Long Range Wireless Communication Protocol
LORA 远程无线通信协议
- CONTROL UNIT(LCU)
Zigbee Radio, Power Metering,
control unit
控制单元(LCU)
Zigbee无线电、功率计量、控制单元



2G Telecom Base Station
2G电信基站

IoT & SENSORS
Sensors for air quality & pollution monitoring, security, license plate recognition, noise nuisance, weather situations, road conditions, and other on-demand city services
定位仪和传感器
空气质量及污染监测传感器, 安全、车牌识别、噪音滋扰、天气状况、道路状况和其他按需城市服务

NOVALUME LIGHT CONTROL UNIT (LCU)
2G signal, Power metering, Control unit
NOVALUME灯控制单元
2G信号、功率计量、控制单元

Wireless GSM Connection
无线GSM连接

