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Catalog 2019

Sternberg

Multi-Media Luminaire and Post Top Module (PTM)

The core component of Intellistreets at the pole level is the ECM (Electronic Control Module). The ECM sound system and notification LEDs are integrated into a variety of luminaires. The PTM is a separate housing that includes the same features but allows for controlling virtually any LED luminaire without modification.

Integrated within LED luminaire

All lighting control multi-media components are concealed within the LED luminaire

Integrated within Post Top Module (PTM) with separate LED luminaires

All lighting control multi-media components are concealed within the PTM

Intellistreets - Glossary of Terms

- **Standard System Features**

Lighting Control
With patented wireless technology to communicate to individual luminaires, streetlights are able to save up to 70% in energy consumption and extend life to 10 years and beyond. The system provides unique flexibility in dimming and on-demand adjustability. Available in multi-media and on-off dim (OOD) formats.

Wireless Mesh Transceiver
With a centralized interface and wireless transceivers on each pole, the system allows for bidirectional communication between streetlights and other integral sensors. The mesh topology also provides self-healing for the network should one or more light poles become disabled. Available in multi-media and on-off dim (OOD) formats.

RGBA Notification
Visible 24 hours a day, with four selectable colors, the LED indicator provides customized indication for egress routes, notifications and managing traffic conditions. Standard for multi-media format.

Concealed Placement Speaker (CPS)
A fully integrated speaker within each multi-media luminaire provides audio at the street level for ambient music, pre-recorded announcements, dial-up mass notification and advertising. Standard for multi-media format.

Controlled Ground Fault Receptacle
Relay output trigger for controlled receptacle. Programmed through the user interface. Great for holiday lighting and vendor carts.

- **Optional System Features (Multi-Media Format)**

Digital Signage
The digital banner is a 2-sided LED display that provides street level visual communication. Custom graphics can be used for advertising, community announcements and real-time alert notifications. Additionally, digital street-signs allow for better traffic management.

Dynamic Lighting
Wireless control of white or color changing lights facilitates the transformation of an ordinary space for a special event without additional equipment.

“Push Blue” Emergency Call Station
The Push Blue emergency notification button is a communication device designed for the public to easily call for help. Available as a stand alone unit or mounted to a pole, utilizing the Intellistreets audio notifications and LED indicator lights.

Image Sensors
180 degree image sensors, often placed back to back for 360 degree view. They are concealed and offer a unique method of gauging pedestrian traffic, providing accurate data by the minute, hour or day. This is a powerful tool for tenants, landlords and public safety officials.

Environmental Sensors
Environmental sensors can detect and report the presence of Wind, Water Level, Temperature, Humidity, Barometric Pressure, Pedestrian Sensors, Pedestrian counters.

Post Top Module (PTM)
The PTM is designed to be mounted on new or existing pole. The PTM utilizes the Intellistreets Electronic Control Module (ECM). Core features include the ability to control lighting, connect LED way-finding devices and DMX color controlled lighting, connect audio devices for background music, message playback and paging capabilities, and input connections for a variety of environment sensing devices.

Wi-Fi System (Wi-Hide)
(4) Concealed WiFi antennas to provide public WiFi.

Integrated Multi-Media Luminaire: Full Feature

- **(Luminaire shown by Sternberg)**

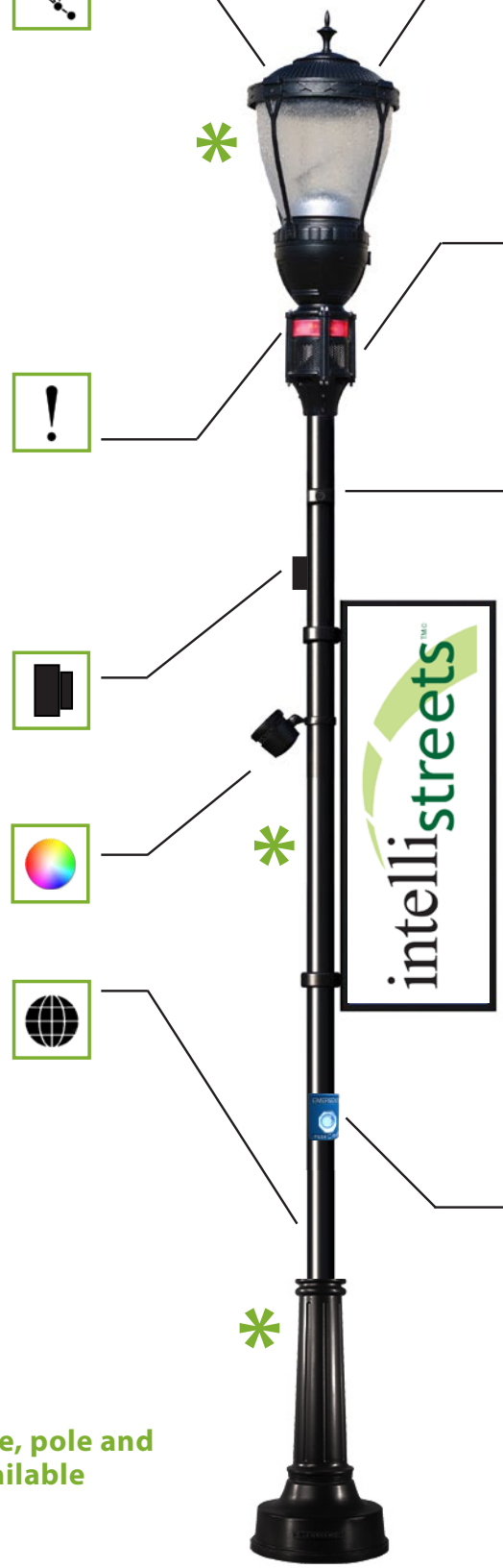
Wireless Mesh Transceiver
- App Based Wireless Control
- Dual 2.4 GHZS

RGBA Notification
- Indicator Light
- Red, Green, Blue, Amber

Controlled Receptacle
- Relay Trigger
- Holiday Lighting
- Vendor Carts

Dynamic Lighting
- Color changing

Environmental Sensors
- Wind Detection
- Water Level Detection
- Temperature
- Humidity
- Barometric Pressure
- Pedestrian Sensors
- Pedestrian counters



Lighting Control
- Photocell Control
- 0-100% Dimming
- On-Demand Light Levels

Concealed Placement Speaker (CPS)
- Music
- Alerts
- Announcements

Image Sensor
- 360° View Cameras
- Proximity Sensors
- Pedestrian Counter
- Homeland Security

Digital Signage
- Way finding
- Traffic direction
- Alert notification
- Civic information
- Revenue generation (via advertising)

Push Blue
Emergency Call Station (Optional)

Many luminaire, pole and base styles available

Integrated Multi-Media Luminaire: Core Product

- **(Luminaire shown by Sternberg)**

Wireless Mesh Transceiver

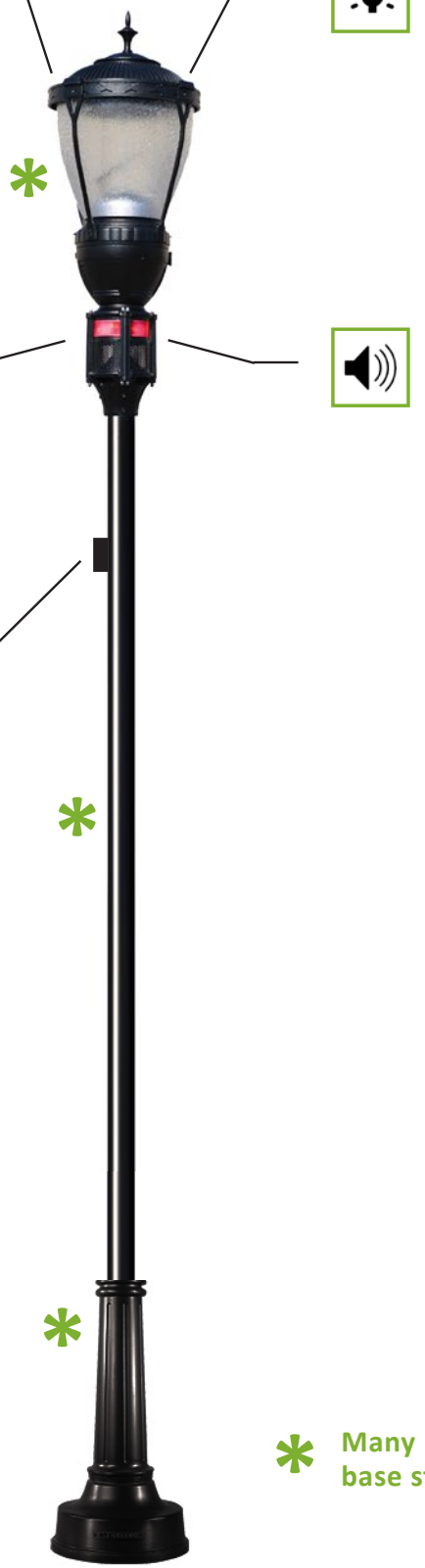
- App Based Wireless Control
- Dual 2.4 GHzs

RGBA Notification

- Indicator Light
- Red, Green, Blue, Amber

Controlled Receptacle

- Relay Trigger
- Holiday Lighting
- Vendor Carts



Lighting Control

- Photocell Control
- 0-100% Dimming
- On-Demand Light Levels

Concealed Placement Speaker (CPS)

- Music
- Alerts
- Announcements

* Many luminaire, pole and base styles available

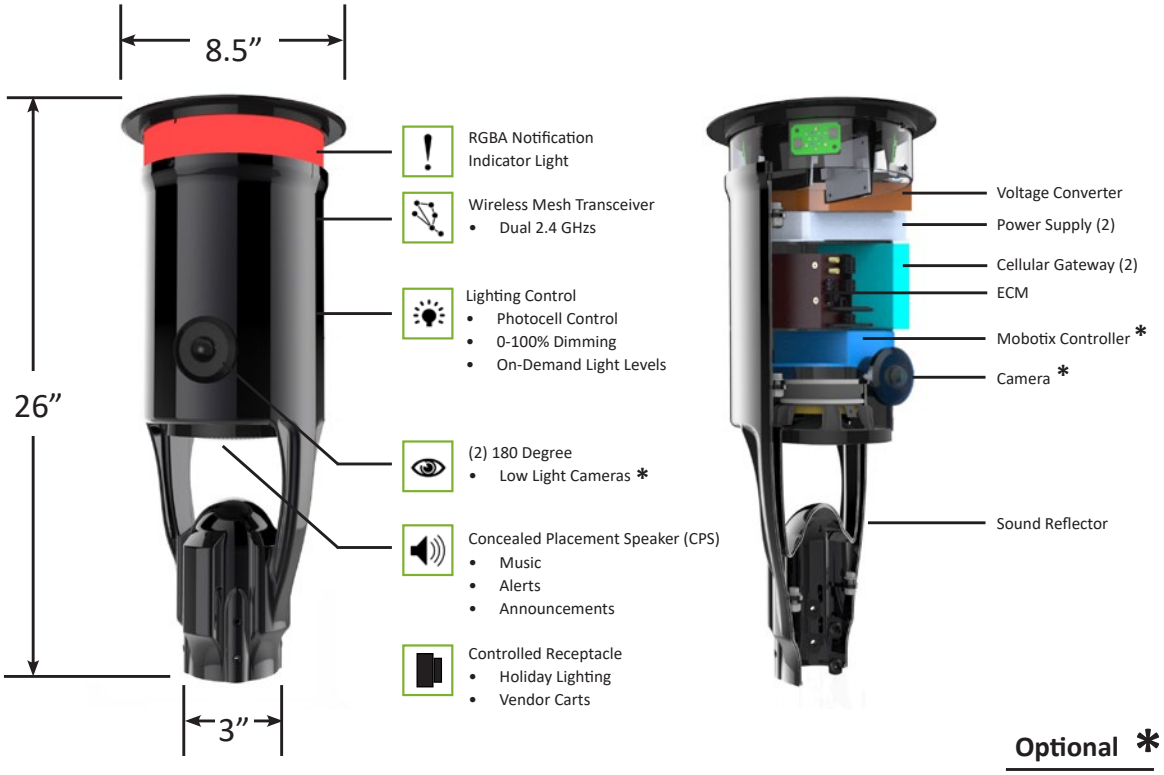
Post Top Module (PTM) - Features

The PTM is designed to be mounted on a new or existing pole. Initial design is for use with LED luminaires, but can be adapted to other light sources with some limitations. The PTM utilizes the Intellistreets Electronic Control Module (ECM). The ECM is a compact wireless device that provides a full set of lighting control, monitoring, and multimedia options for operation of LED luminaires.

Core Features Include:

- Ability to control lighting (patented energy management and LED optimizing software)
- Connect LED way-finding devices and DMX controlled lighting
- Connect audio devices for background music
- Message playback and paging capabilities
- Input connections for a variety of environment sensing devices

A cloud based web interface and content storage system are standard allowing a secure yet robust portal for accessing all the features of the system. Secure access to the module is only available through the Intellistreets Virtual Command Center portal.



Integrated Multi-Media: Post Top Module (PTM)

- **(Luminaires by Sternberg)**

Post Top Module (PTM)

Wireless Mesh Transceiver
- App Based Wireless Control
- Dual 2.4 GHZS

Lighting Control
- Photocell Control
- 0-100% Dimming
- On-Demand Light Levels

RGBA Notification
- Indicator Light
- Red, Green, Blue, Amber

Image Sensor
- Proximity Sensors
- Pedestrian Counter
- Homeland Security

Concealed Placement Speaker (CPS)
- Music
- Alerts
- Announcements

Controlled Receptacle
- Holiday Lighting
- Vendor Carts

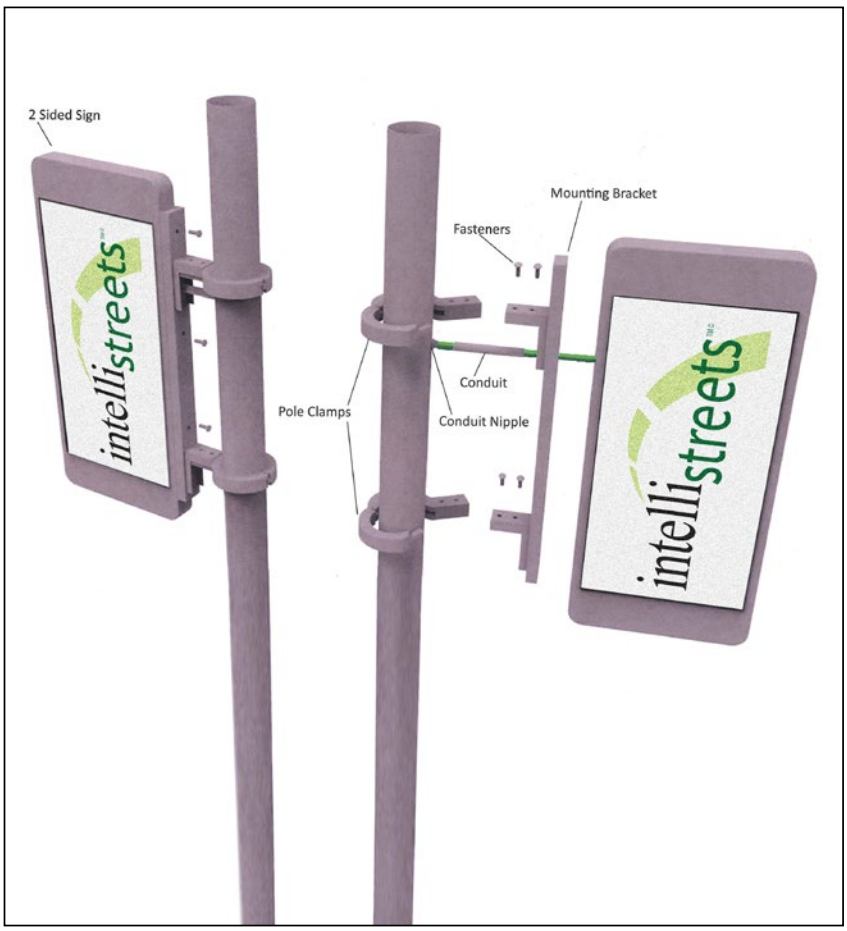
Push Blue
Emergency Call Station (Optional)

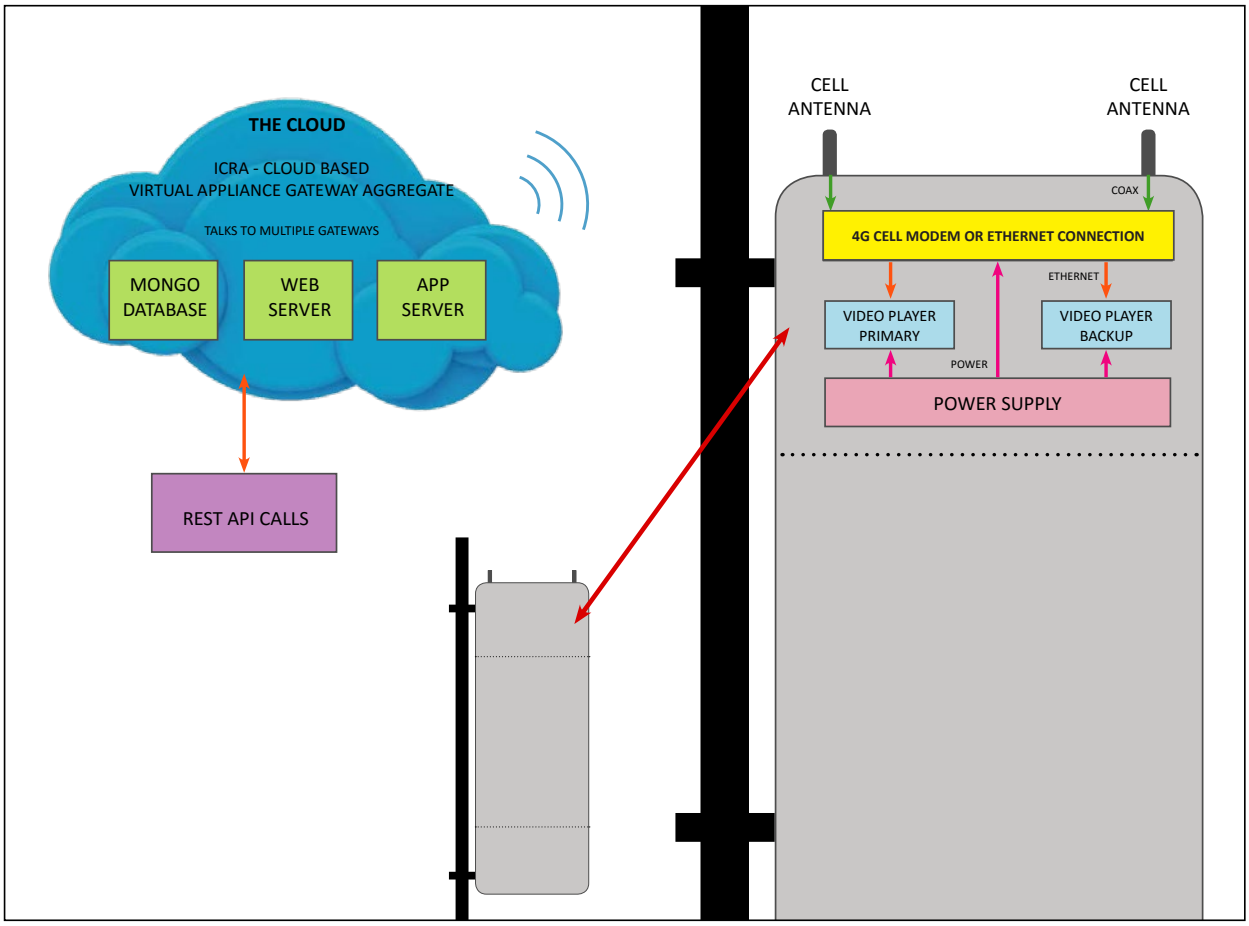
- **PTM (Side Mount Luminaire)**

* **Many luminaire, pole and base styles available**

Digital LED Banner - Features

The Intellistreets Digital Banner is a rugged, IP65 rated LED display delivering excellent brightness and contrast levels even in direct sunlight. Designed to resemble a typical double-sided vinyl banner the display system includes all components necessary to deliver on-demand messaging to the typical street corner. Key components of this system include the 4mm pitch LED display, Video Playback Module mounted internal to the display, and access to the Intellistreets web-based Virtual Communication, allowing easy upload and scheduling of all content.




THE CLOUD
ICRA - CLOUD BASED
VIRTUAL APPLIANCE GATEWAY AGGREGATE
TALKS TO MULTIPLE GATEWAYS
MONGO DATABASE
WEB SERVER
APP SERVER
REST API CALLS
CELL ANTENNA
CELL ANTENNA
COAX
4G CELL MODEM OR ETHERNET CONNECTION
ETHERNET
VIDEO PLAYER PRIMARY
VIDEO PLAYER BACKUP
POWER
POWER SUPPLY

The Intellistreets Gateway module provides a secure connection from the Luminaire installed wireless controller units to the Intellistreets cloud-based Virtual Command Center (VCC). The Gateway is provided with the same high power radio unit placed in each luminaire and then programmed with Intellistreets proprietary compressed data-throughput software delivering the most secure and robust connections possible.

The Gateway module comes in 2 versions:

- Power/Over Ethernet Version (PoE) that can be mounted externally to a surface, structure or pole, and connected to the customer's existing internet connection.
- Verizon M2M 4G-LTE cellular version that can be mounted anywhere.

Gateway Key Features - Standard

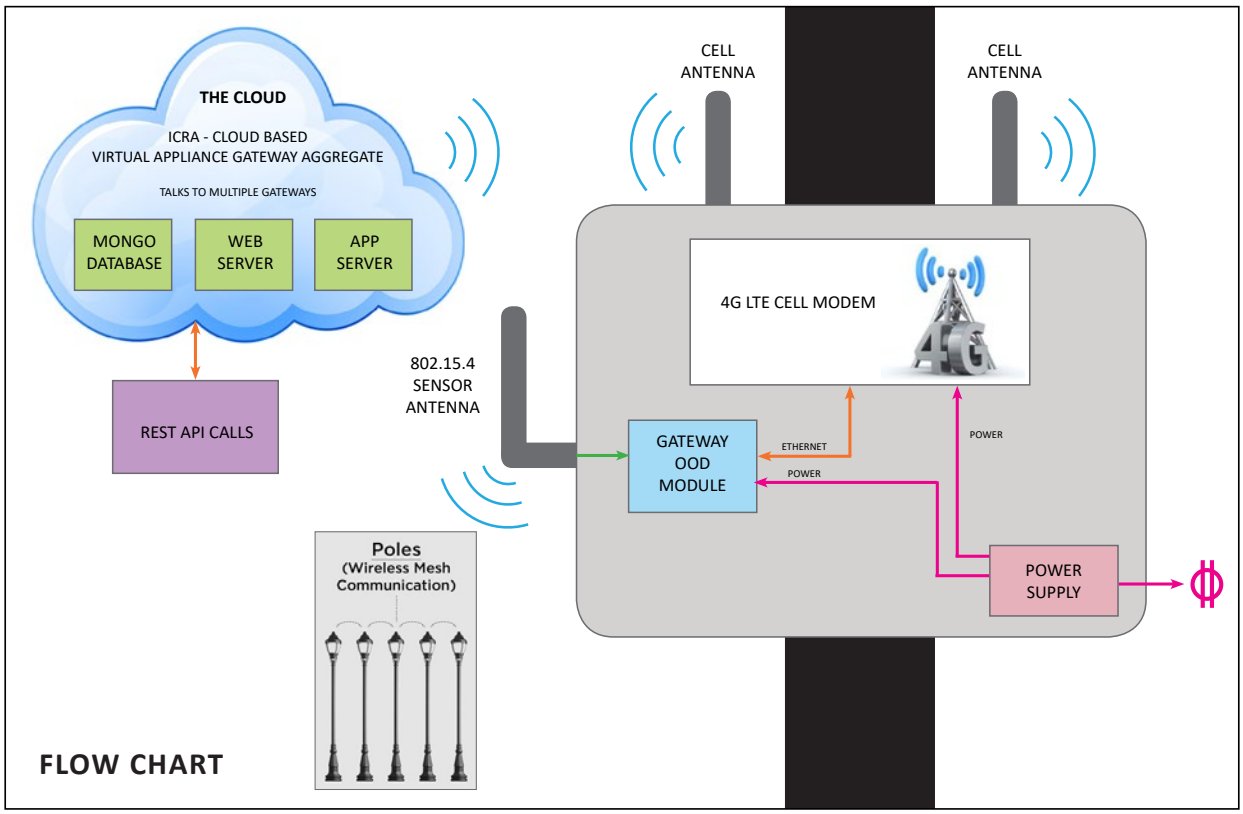
- Small Lightweight Weatherproof Enclosure
- Up to 5,000 feet to first node (Line of Sight)
- Low Power Consumption
- Compressed Data-Throughput Strategy

Power/Over Ethernet (PoE) - Option

- Power & Communications over CAT5 network cable
- Gateway must be installed within 100 meters of network switch

Cellular Unit

- Provided with 4G Cellular CDMA or EVDO Modem



The Intellistreets Gateway module provides a secure connection from the luminaire installed multi-media units to the Intellistreets Cloud based Virtual Command Center (VCC). The Gateway is provided with the same high power dual radio ECM core as the units placed in each luminaire and then programmed with Intellistreets proprietary compressed data-throughput software delivering the most secure and robust connections possible.

The Gateway module comes in 2 versions:

- Power/Over Ethernet Version (PoE) that can be mounted externally to a surface, structure or pole, and connected to the customer's existing internet connection.
- Verizon M2M 4G-LTE cellular version that can be mounted anywhere.

Gateway Key Features - Standard

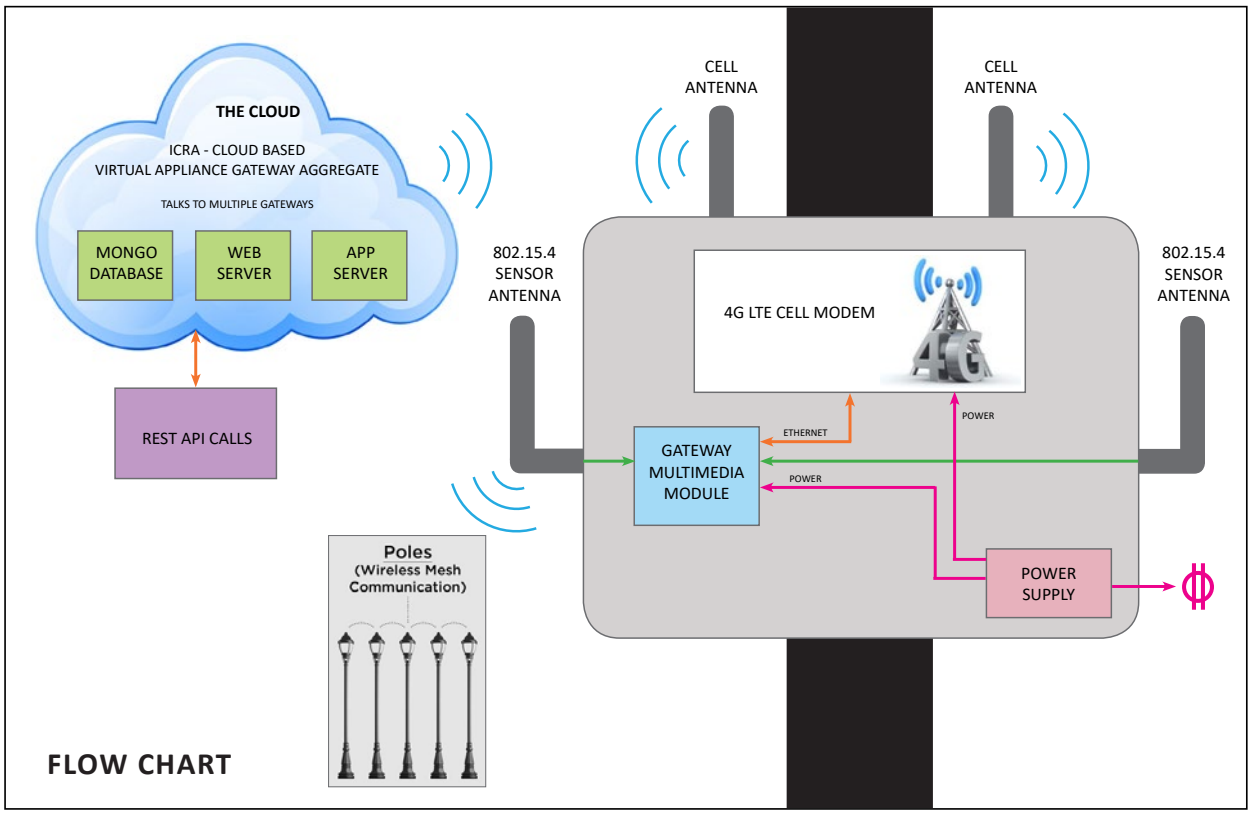
- Small Lightweight Weatherproof Enclosure
- Up to 500 feet to first node (Line of Sight)
- Low Power Consumption
- Compressed Data-Throughput Strategy

Power/Over Ethernet (PoE) - Option

- Power & Communications over CAT5 network cable
- Gateway must be installed within 100 meters of network switch

Cellular Unit

- Provided with 4G Cellular CDMA or EVDO Modem



The Intellistreets Gateway module provides a secure connection from the Luminaire installed ECM units to the Intellistreets Cloud based Virtual Command Center (VCC). The Gateway is provided with the same high power dual radio ECM core as the units placed in each luminaire and then programmed with Intellistreets proprietary compressed data-throughput software delivering the most secure and robust connections possible. An additional OOD module is included and connects via the same 4G LTE modem.

The Gateway module comes in 2 versions:

- Power/Over Ethernet Version (PoE) that can be mounted externally to a surface, structure or pole, and connected to the customer's existing internet connection.
- Verizon M2M 4G-LTE cellular version that can be mounted anywhere.

Gateway Key Features - Standard

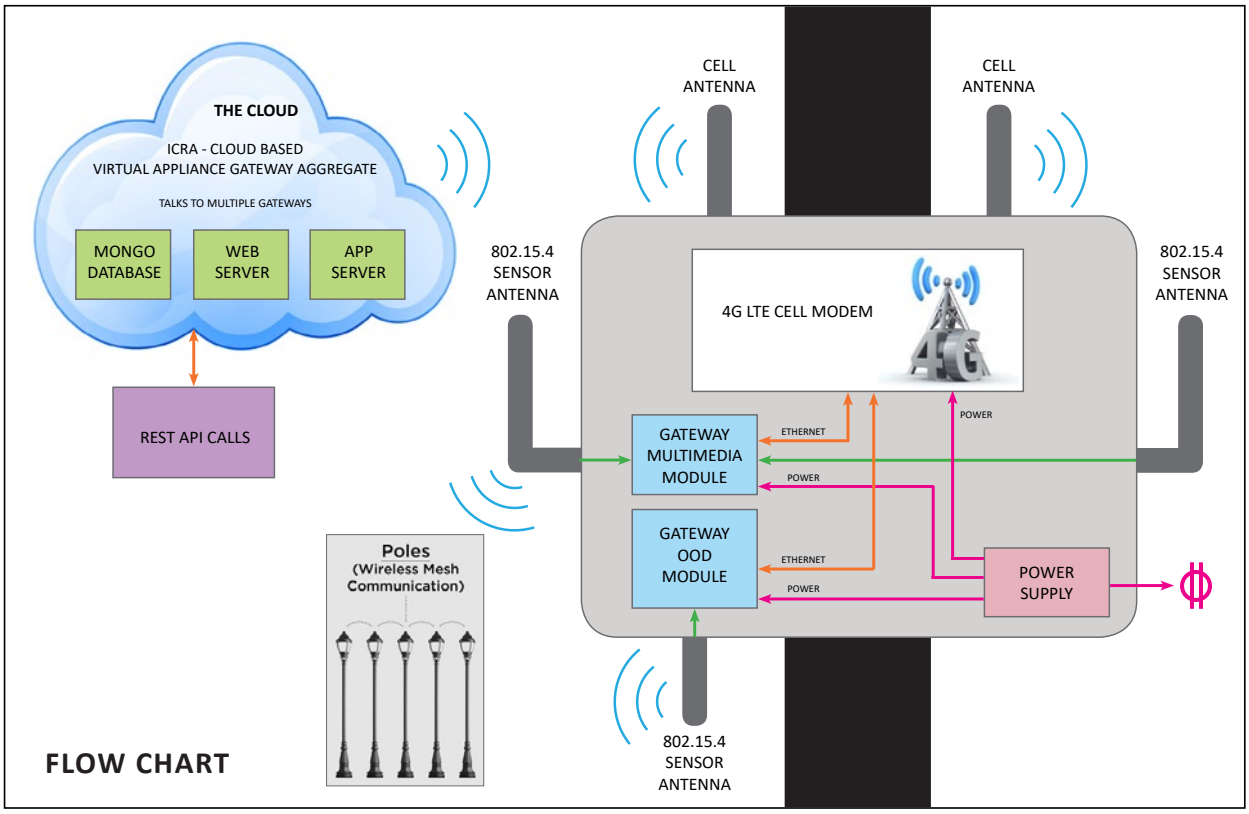
- Small Lightweight Weatherproof Enclosure
- Up to 5,000 feet to first node (Line of Sight)
- Low Power Consumption
- Compressed Data-Throughput Strategy

Power/Over Ethernet (PoE) - Option

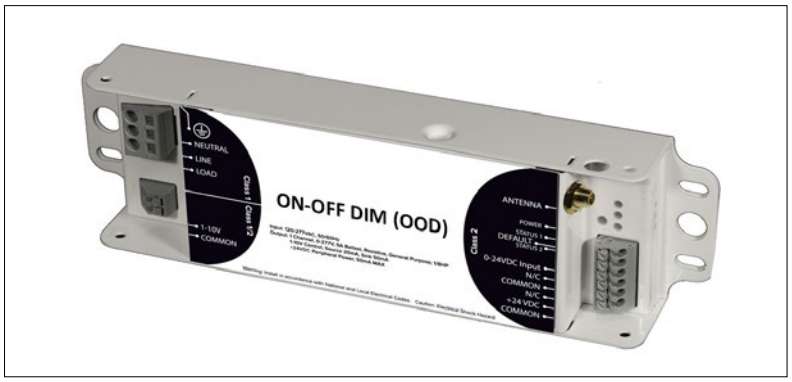
- Power & Communications over CAT5 network cable
- Gateway must be installed within 100 meters of network switch

Cellular Unit

- Provided with 4G Cellular CDMA or EVDO Modem



On-Off Dim (OOD) Module - Embedded In A Luminaire Or Pole - Features



Dimensions

- 8.2” L x 2.3” W x 1.3” H

Features

- Utility Grade Power Monitoring
- Up to 80% Savings through smart dimming
- True On/Off functionality via switched relay
- Self-healing SNAP Mesh Networking
- Seamlessly integrates into the Intellistreets lighting control solution
- Relay closes on power loss
- Supports a wide range of LED drivers and fixtures
- Class 1/Class 2; 0-10V Dimming Control
- Direct Connect to 24V Occupancy Sensors and
- Photocells (consult sales for compatible list)
- Secure, over-the-air upgrades to support future enhancements
- Excellent RF Range - 1 mile Line of Sight (LoS) between controllers
- Available in a metal-cased version with quick connect terminal blocks
- Lights default to “on” for safety

Revenue Grade Energy Metering: Current, Voltage, Frequency, Power Factor, kW and kWh, and offer revenue grade metering accuracy for accurate consumption data and billing.

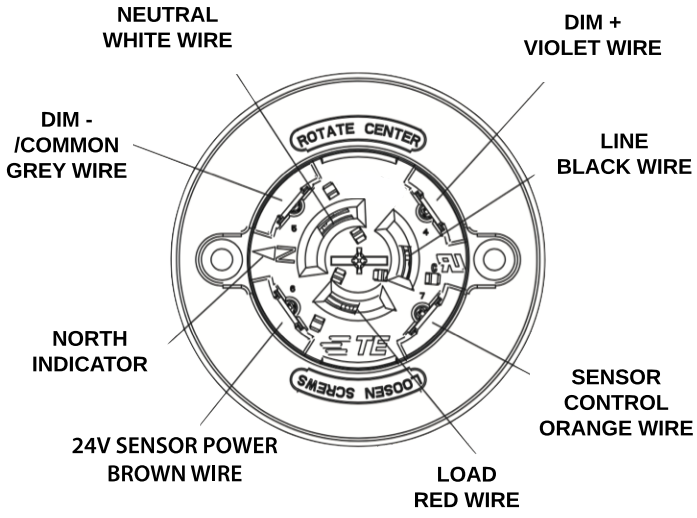
Fault Tolerance: This device utilizes the latest developments in self-organizing, self-healing, wireless technologies. Proper operation and execution of a light’s schedule is not dependent on network communications.

Remote Control and Scheduling: Multiple lamp control modes such as user configurable ON/OFF/DIM schedules programmed on a daily/monthly/special events basis, local ad-hoc control, photocell and astronomical clock scheduling, and mixed mode scheduling incorporating sensor inputs.

Flexible Dimming Control: Dimming through 0-10 VDC, PWM or DALI interfaces.

Fault Monitoring: Extensive fault monitoring to report on day burners, burnouts, lamp cycling, ballast failures, over/under voltage, abnormal power consumption, low power factors, communication failures and more. Cloud-based management system for alarm routing, visualization and fault correction. Alerts can be sent directly to relevant users via email or text messages when they occur. Alerts are time stamped and contain key parameters associated with the fault/alarm.

On-Off Dim (OOD) Report - Twist Lock Lighting Controller



Dimensions	3.5” W x 3.86” H (88.6 mm W x 98 mm H)
Input Power	110-277VAC +/- 10% (Max 305V), 60Hz
Operating Environment	-40°C to +70°C; 0% to 90% RH non-condensing; IP66
Switched Output	Default ON
Load Rating	5A @ 110-277VAC (+/- 10%)
Surge Rating	6kV
Dimming Control	0-10 V with short circuit protection
Dimming Output	0-10V, 20mA
Radio	SNAP 2.4GHz; 802.15.4 +20dBm Transmit power -104dBm Receive Sensitivity
Sensor Input	0-24V Digital Input
Sensor Power	24V, 20mA
Power Monitoring	Utility Grade - 2% Accuracy
Power Readings	Voltage, Watts
Certifications*	FCC, IC, cULus, DLC
Warranty	5 Years

Features

- Integrated Photocell
- NEMA/ANSI C136.41 7-pin Dimming Receptacle Support
- Utility grade power monitoring
- Remote control and scheduling
- Flexible Dimming Controls
- Secure, over-the-air upgrades to support future enhancements
- Seamless integration into the lighting control system
- Digital sensor input for motion sensing
- 24V DC Power for Motion Sensors

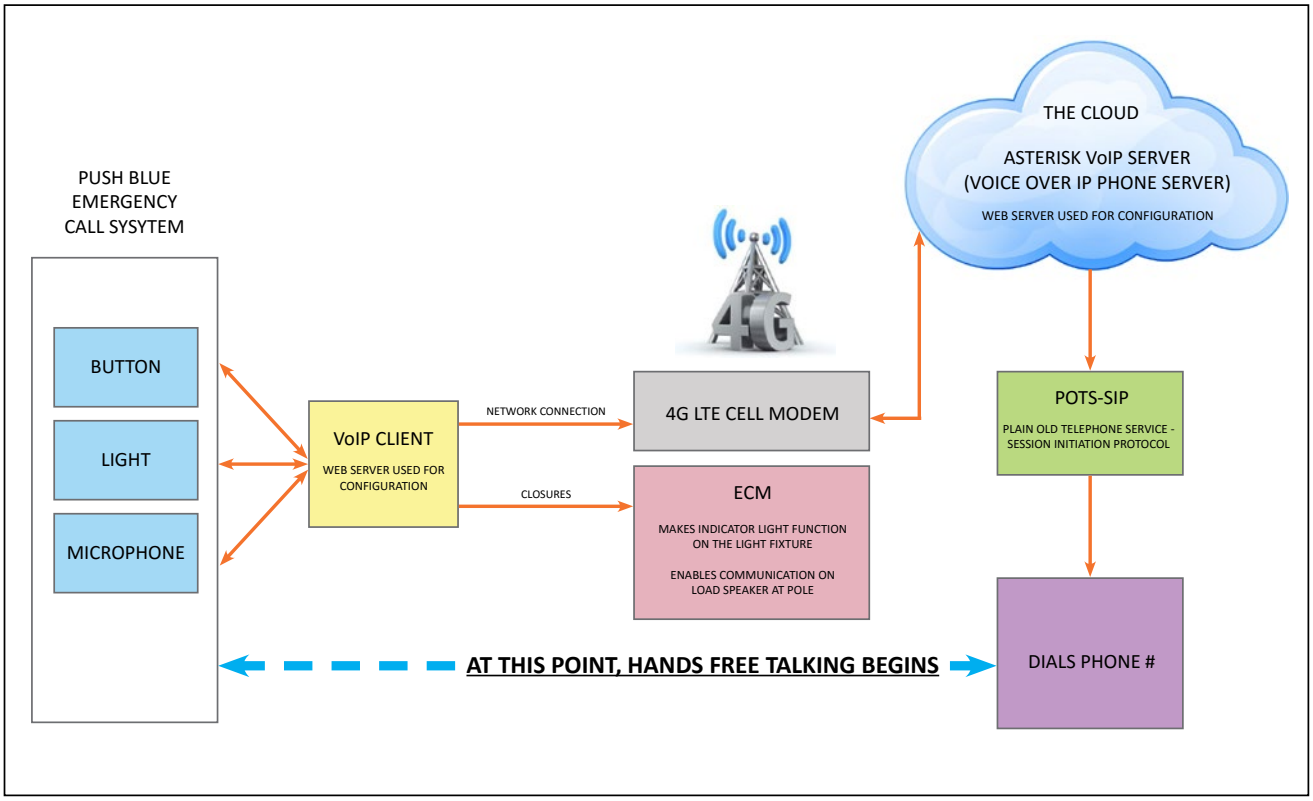
Push Blue Emergency Call Station - Multimedia Luminaire - How It Works

1. User pushes illuminated button
2. Pre-recorded announcement is heard over the speaker in the multimedia luminaire
3. Call is made to a defined and secure phone (Callers Voice Heard)
4. The Multimedia Luminiare's notification light flashes blue & the sound system plays a pre-stored message
5. The first responder answers and their voice is heard over the loudspeaker
6. The caller speaks hands free
7. Call terminates when first responder disconnects

Push Blue Emergency Call Station - PTM Stand Alone - How It Works

1. User pushes illuminated button
2. Pre-recorded announcement is heard over the speaker in the PTM
3. Call is made to a defined and secure phone (Callers Voice Heard)
4. The PTM's notification light flashes blue & the sound system plays a pre-stored message
5. The first responder answers and their voice is heard over the loudspeaker
6. The caller speaks hands free
7. Call terminates when first responder disconnects

Push Blue Emergency Call Station - End To End Flow Chart



Integrated Luminaire Examples

- **(Luminaires by Sternberg)**

910 LED Boulevard Luminaire

910 LED Old Town Luminaire

910 LED Ripon Luminaire

910 LED Town Square Luminaire

910 LED Yale Luminaire

Solana LED Luminaire

Non-Integrated Decorative Luminaire Examples

- **(Luminaires by Sternberg)**

For use with On-Off Dim (OOD) and PTM Options

A840 Old Town LED Luminaire
**** use with PTM***

1910 LED Reno
**** use with PTM***

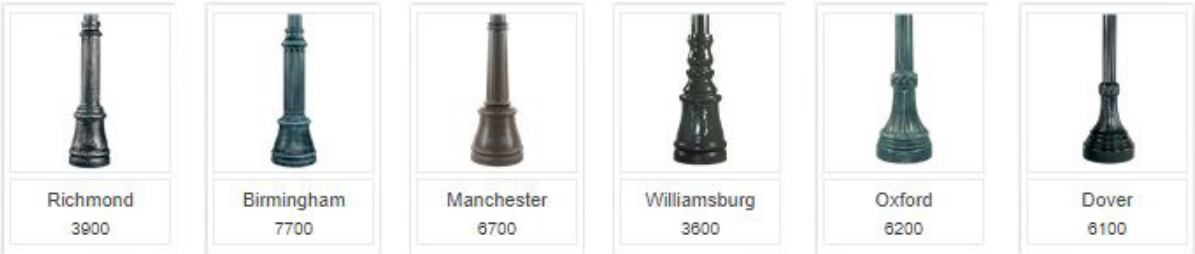
E350 LED Euro Luminaire
**** use with PTM***

1914 LED Libertyville Luminaire
**** use with PTM***

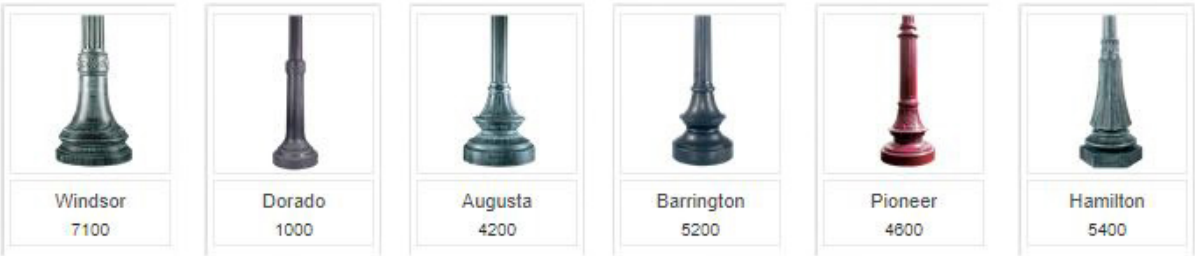
1970 Gallery LED Luminaire
**** use with PTM***

1527 Omega LED Luminaire
**** use with PTM***

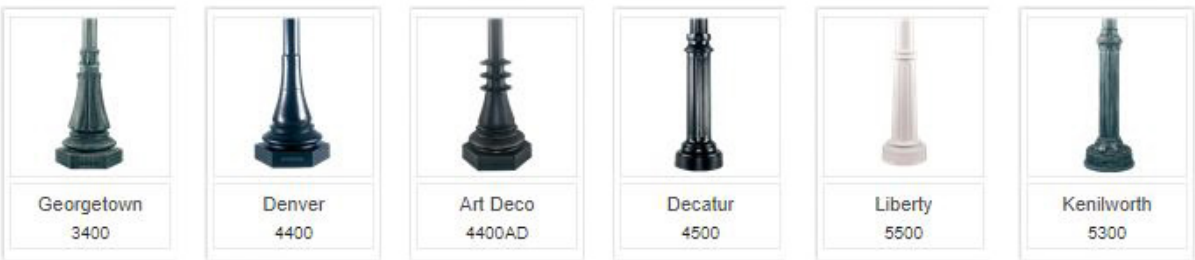
Pole Examples



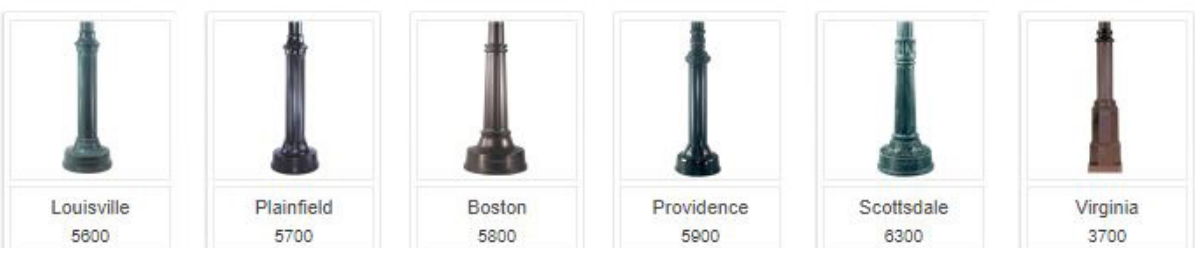
Richmond 3900 | Birmingham 7700 | Manchester 6700 | Williamsburg 3600 | Oxford 6200 | Dover 6100



Windsor 7100 | Dorado 1000 | Augusta 4200 | Barrington 5200 | Pioneer 4600 | Hamilton 5400



Georgetown 3400 | Denver 4400 | Art Deco 4400AD | Decatur 4500 | Liberty 5500 | Kenilworth 5300

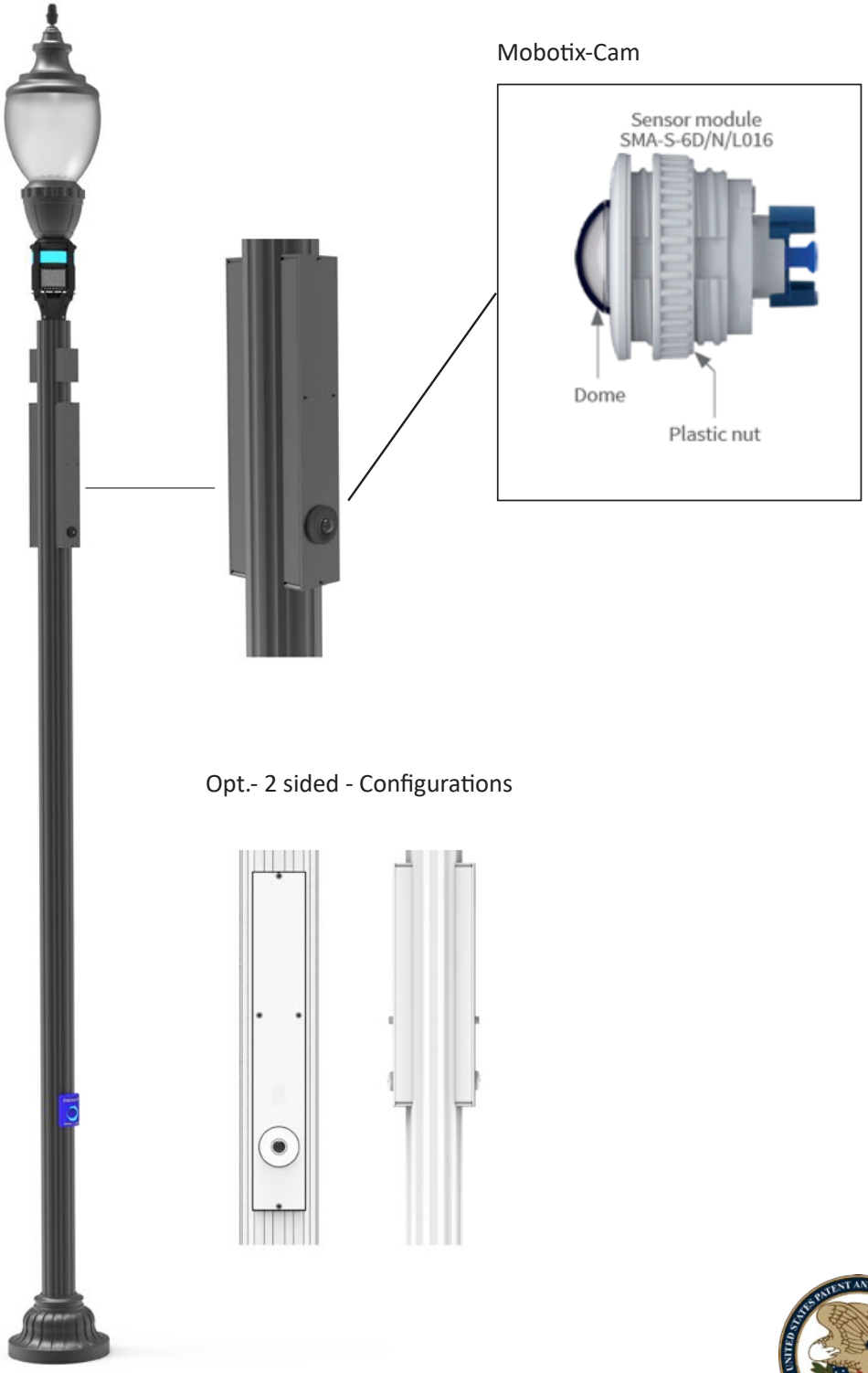


Louisville 5600 | Plainfield 5700 | Boston 5800 | Providence 5900 | Scottsdale 6300 | Virginia 3700

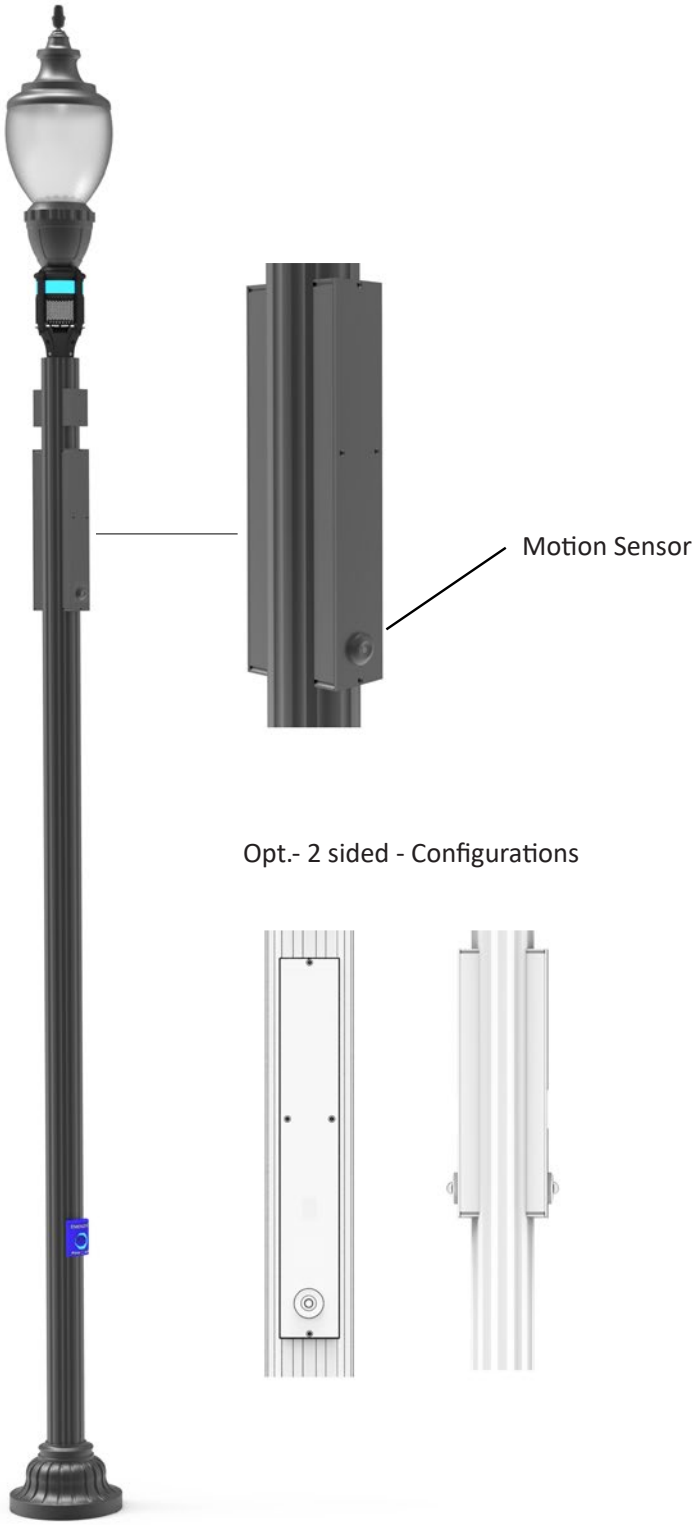
4SQ, 5SQ, 6SQ SQUARE POLE | 550 550 - Concord | 2800 Concourse | 2900 Concourse | 3200 3200 - Gateway | 3300 3300 - Gateway

450 450 - Lexington | Urban Line Round Straight Aluminum Pole RSA | Urban Line Round Straight Steel Pole RSS | Urban Line Round Tapered Aluminum Pole RTA | Urban Line Round Tapered Steel Pole RTS | Urban Line Square Straight Aluminum Pole SSA

Pole Features / i-Slot Camera

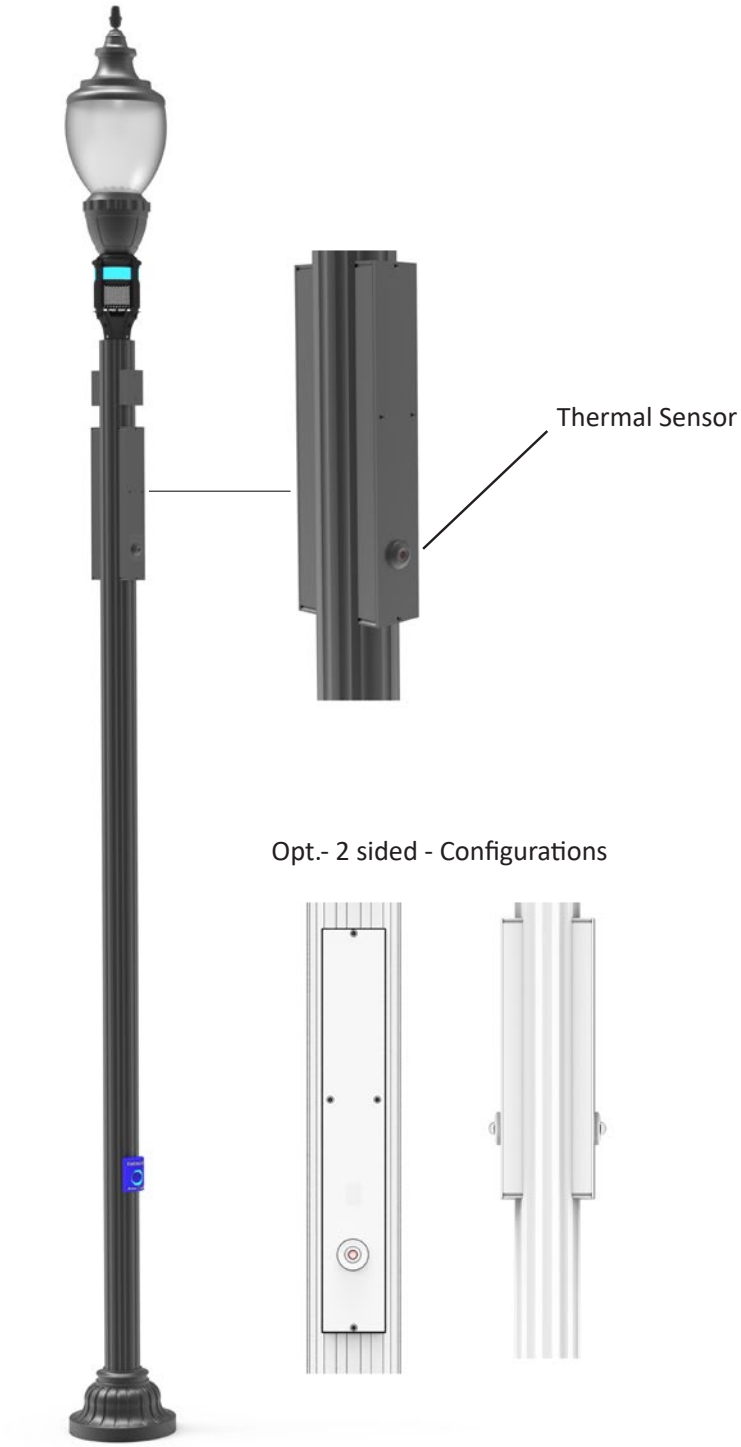


Pole Features / i-Slot Occupancy Sensor



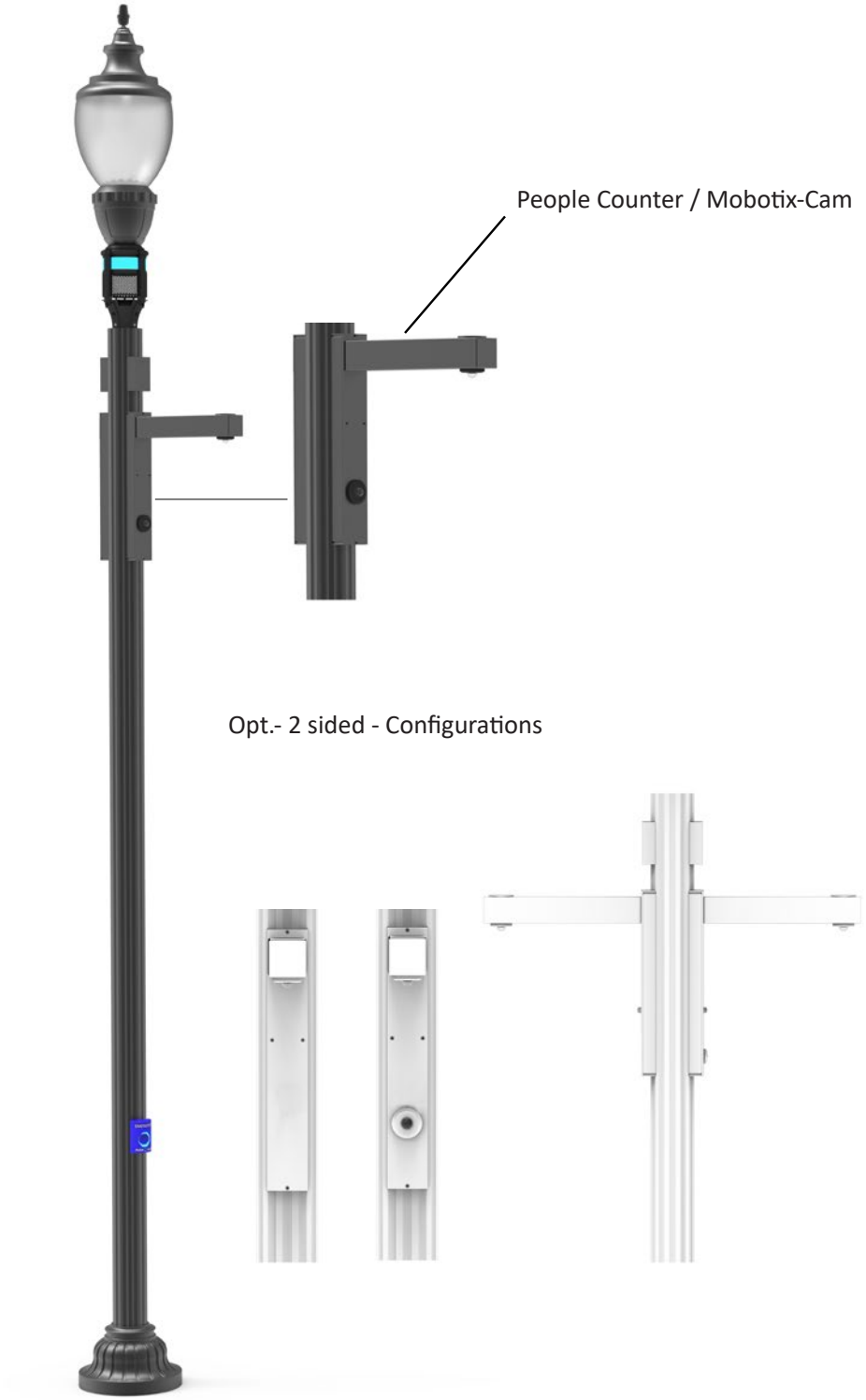
Opt.- 2 sided - Configurations

Pole Features / i-Slot Thermal Sensor



Opt.- 2 sided - Configurations

Pole Features / i-Slot People Counter

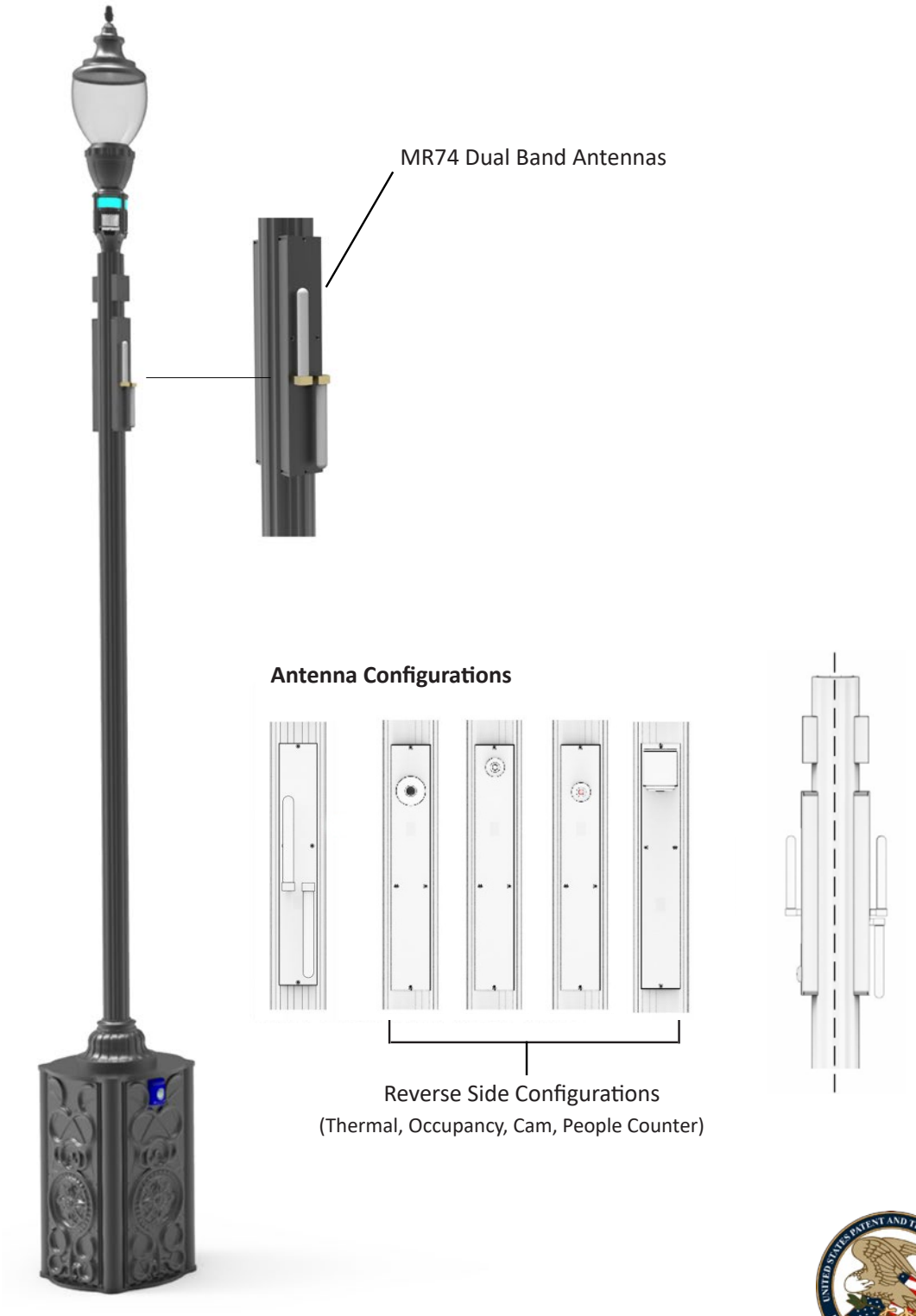


Opt.- 2 sided - Configurations

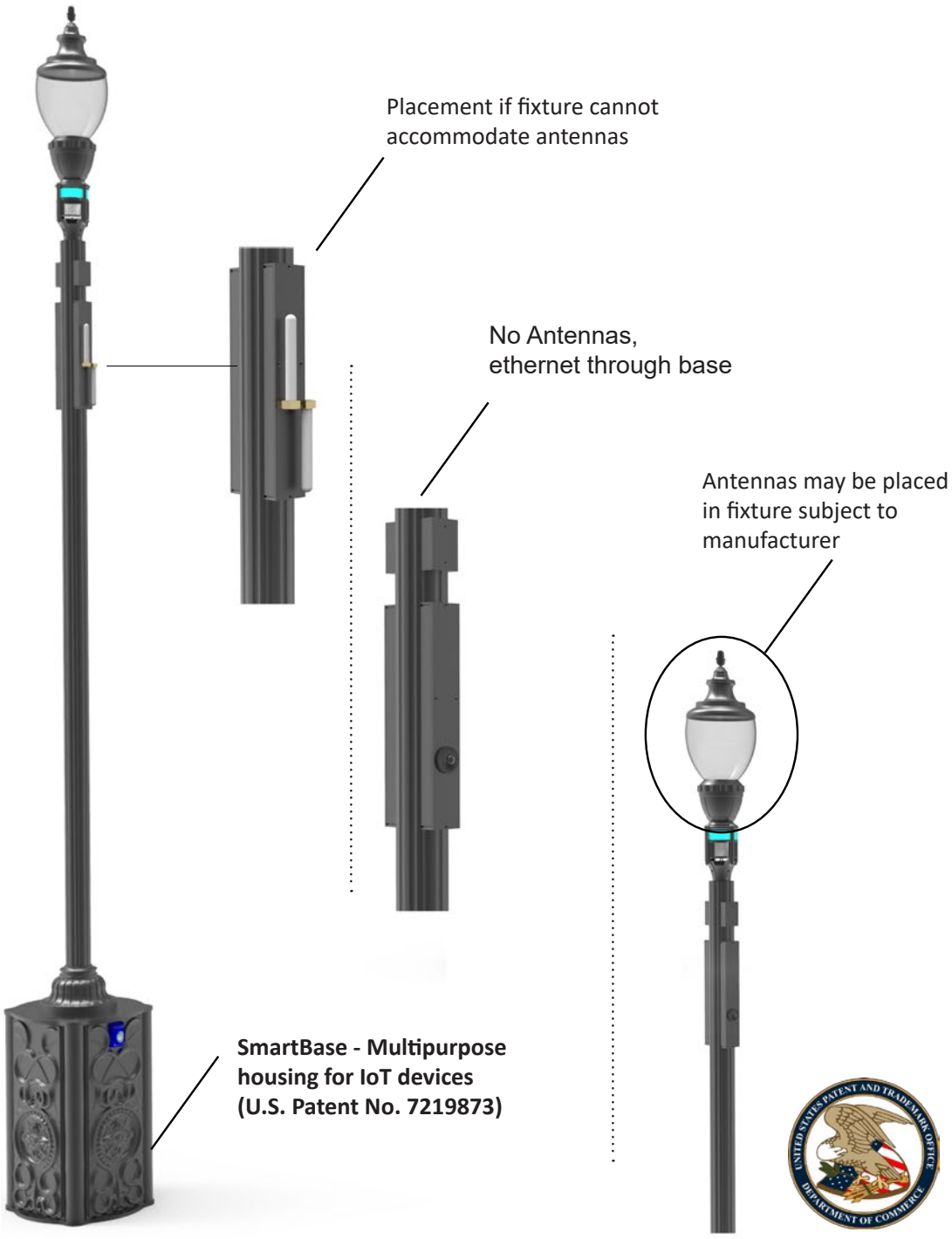
Smyrna, DE

Dynamic Lighting

Pole Features - iSlot-WiFi

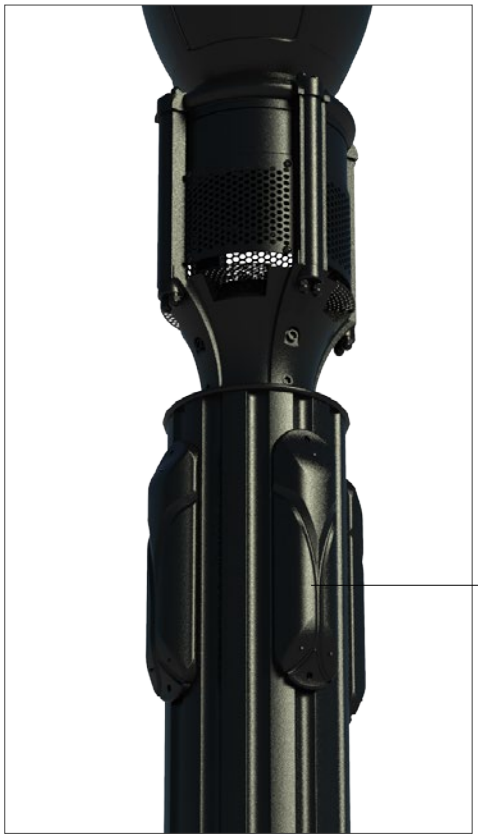


Pole Features - i-Slot Antenna Accommodations



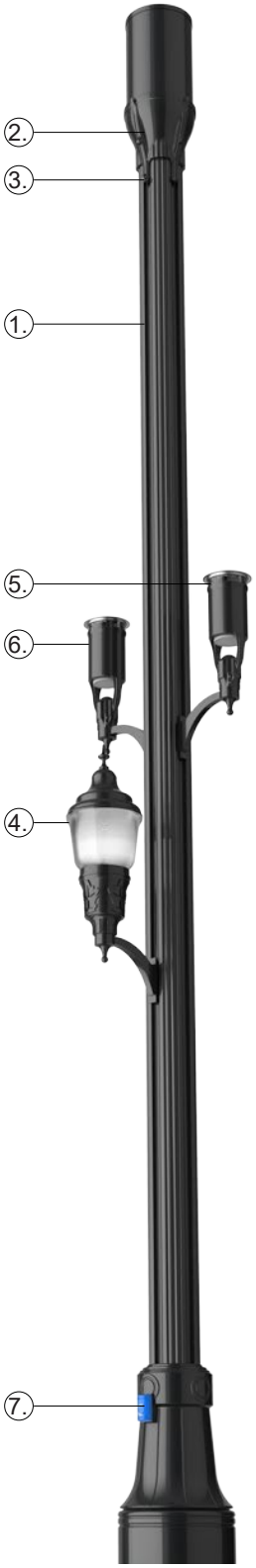
*The base of the pole is RF transparent providing an effective location for placement of antennas for IoT devices.

Pole Features - Integrated Public Wi-Fi Antenna



Quad Wi-Fi Antenna Array

Pole Features - Integrated 5G Small Cell Antenna



Safety First - Multimedia Smart Pole With Integrated Small Cell Antenna Mount

1. 25ft Painted Aluminum Pole With Hand Holes Black Finish

2. Small Cells Antenna To Pole Transition Cover

3. Integrated Small Cell Antenna Mount

4. LED Luminaire

5. PTM And Arm Mount

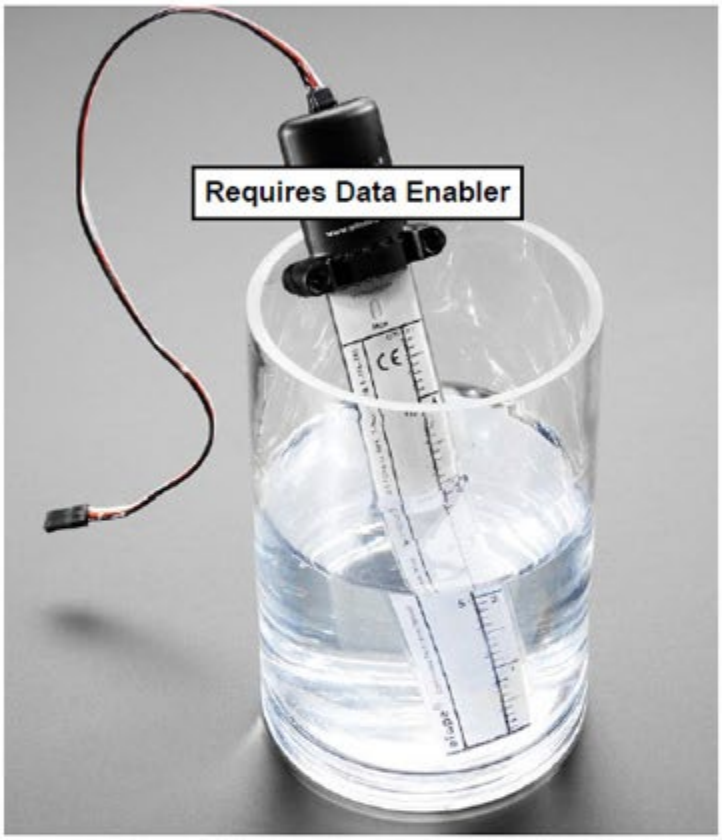
6. PTM Wireless Gateway And Arm Mount

7. Push Blue Emergency Call System

Weather Station

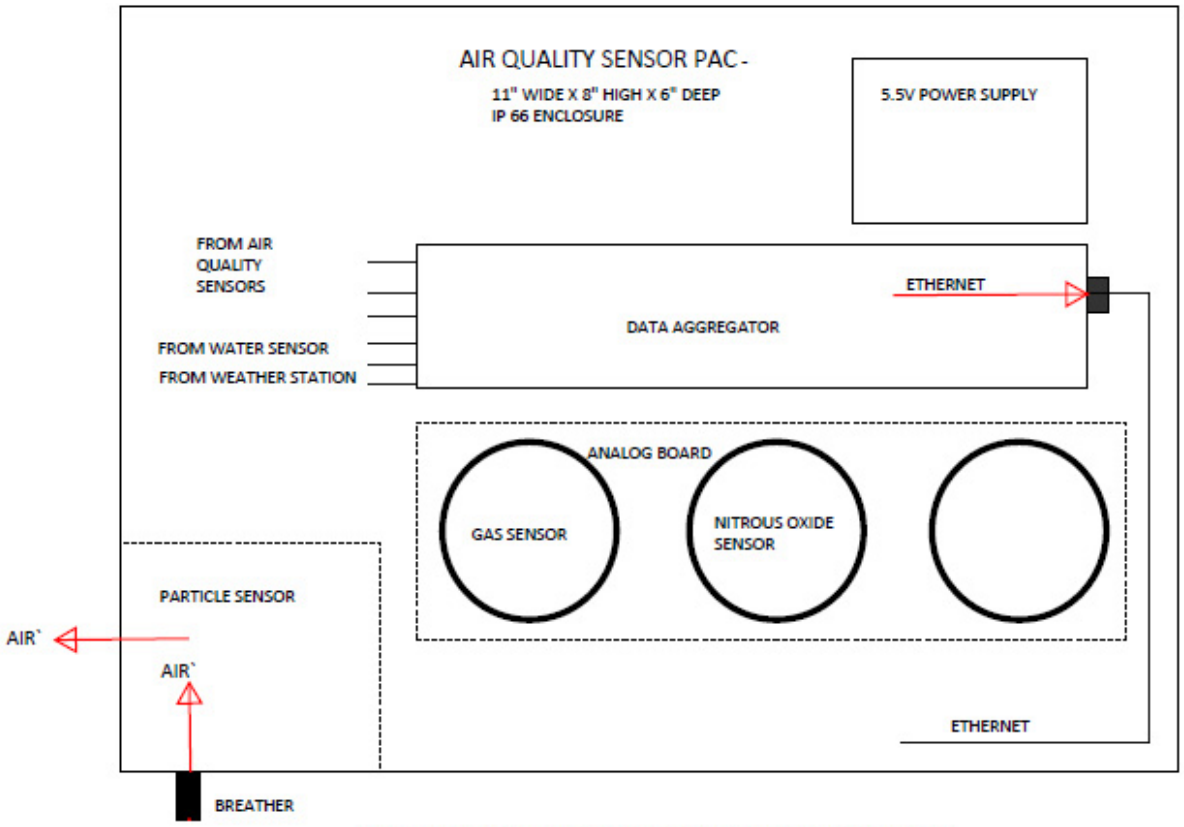
Parameters measured:	Temperature, relative humidity, precipitation intensity, precipitation type, precipitation quantity, air pressure, wind direction, wind speed, radiation
Measurement technology:	Ultrasonic/Wind, NTC/T, Capacitive/RH, MEMS capacitive/Pressure, Thermopile/Radiation, Radar/Precipitation
Product highlights:	Compact all-in-one weather sensor, low power, heater, aspirated radiation shield, maintenance-free operation, open communication protocol
Interfaces:	RS485 with supported protocols UMB-Binary, UMB-ASCII, Modbus-RTU, Modbus-ASCII, XDR and SDI-12

Water Level Sensor



TECHNICAL DETAILS

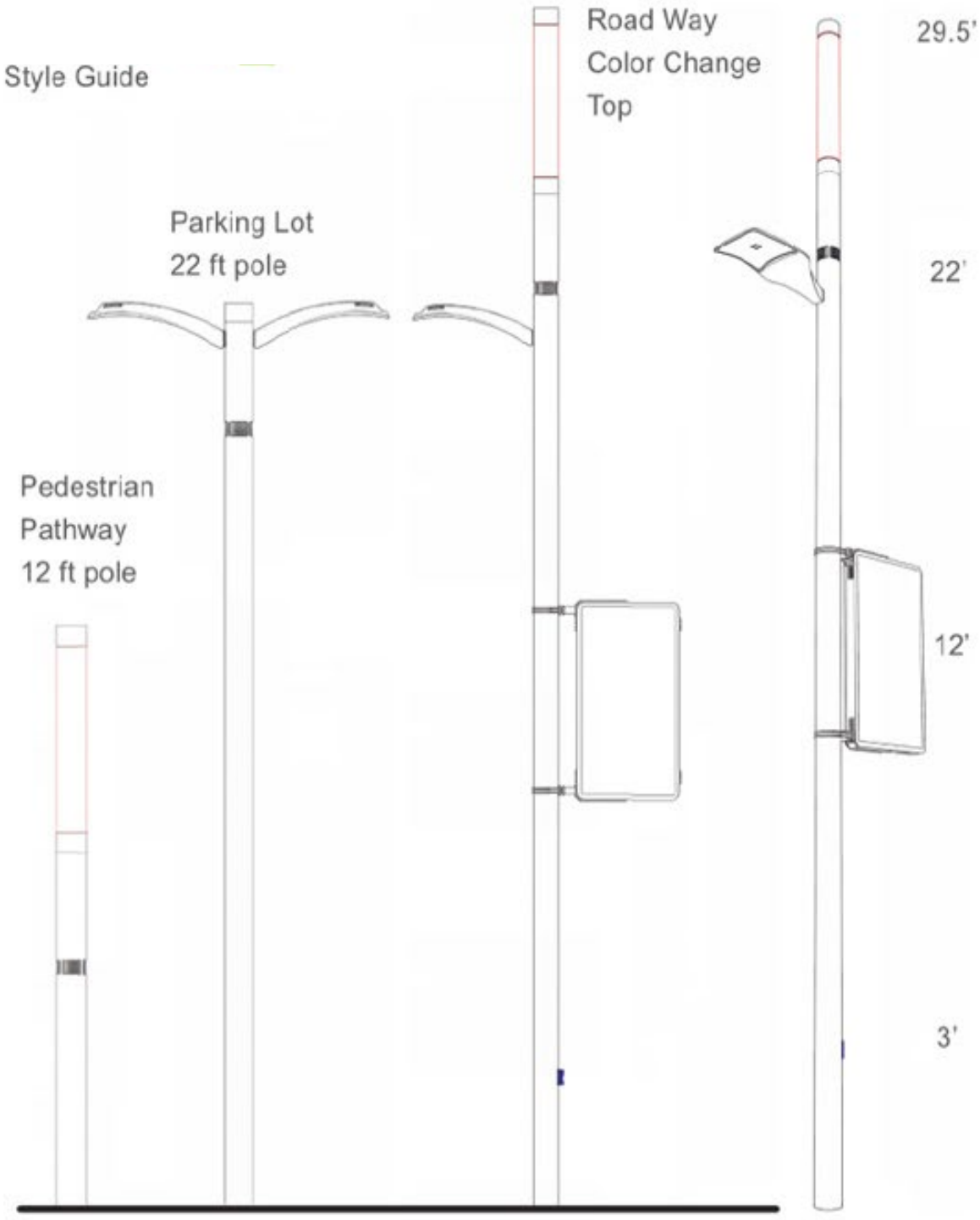
- Sensor Length: 4.8" / 124mm
- JST Wire Length: 11.4" / 290mm
- Width: 1.1" (28.2mm)
- Thickness: 0.015" / 0.381mm)
- Resistance Gradient: 150Ω/inch (60 ohms/cm)
- Active Sensor Length: 8.4" (213mm)
- Substrate: Polyethylene Terephthalate (PET)
- Actuation Depth: Nominal 1" (25.4mm)
- Resolution: < 0.01" (0.25 mm)
- Temperature Range: 15°F - 150°F (-9°C - 65°C)



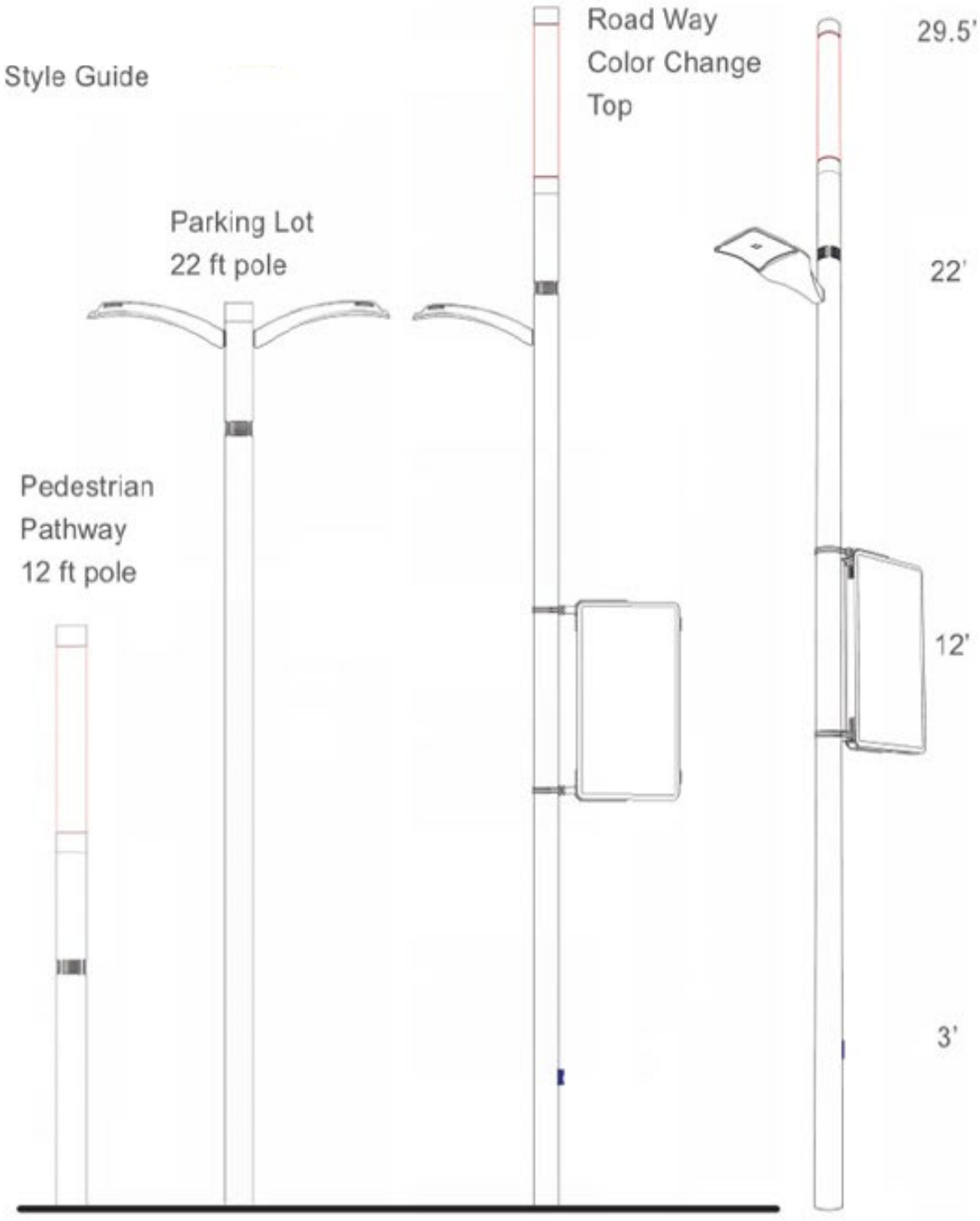
INSIDE NEMA III ENCLOSURE IS A BOARD WITH THREE SOCKETS AND SENSORS MOUNTED TO COVER OF NEMA ENCLOSURE. PARTICLE SENSOR BREATHES AS SHOWN.

CENTRAL DATA AGGREGATOR

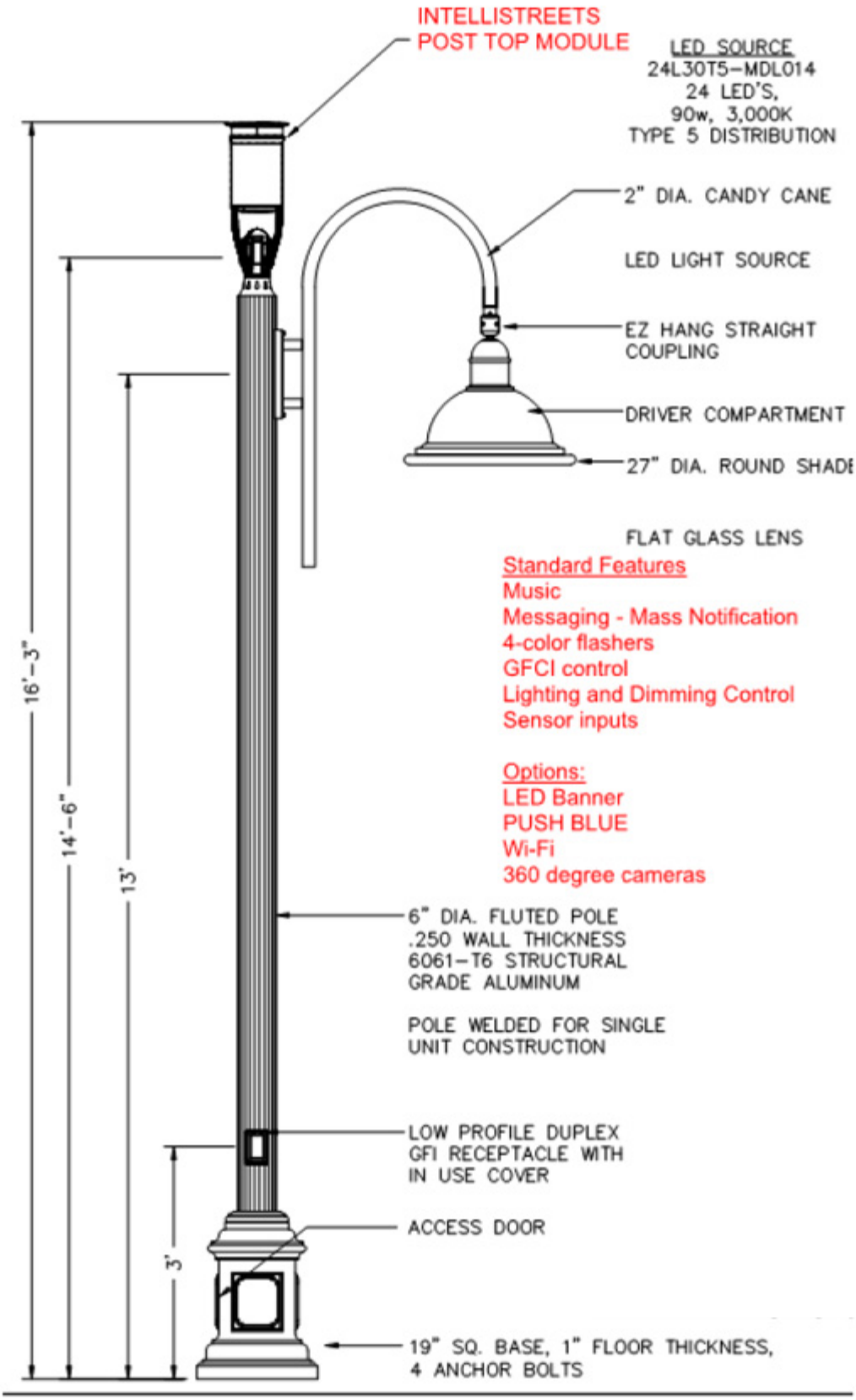
Contemporary Style Guide with Sternberg Millenia Luminaires



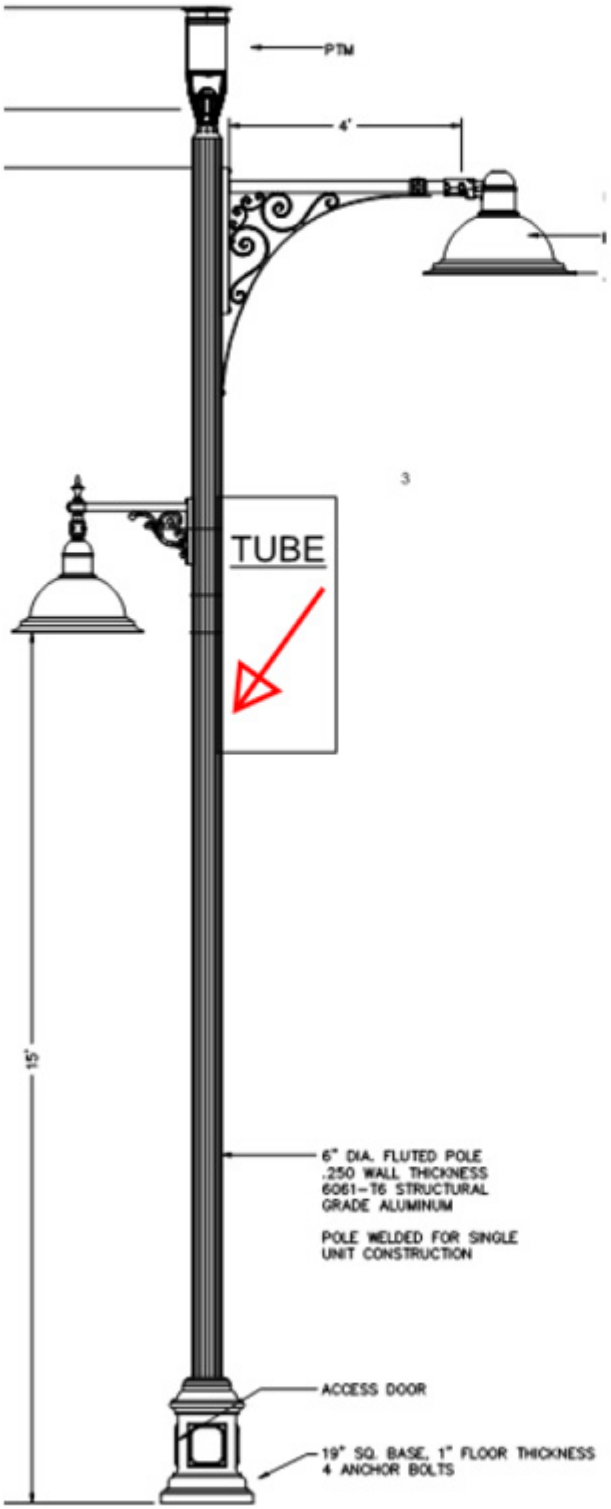
Contemporary Style Guide with Sternberg Millenia Luminaires



Contemporary Style Guide with Sternberg Omega Luminaire



Regent Street, London Style Guide with Sternberg Omega Luminaires



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