

TATA COMMUNICATIONS

APL International (Pvt) Ltd



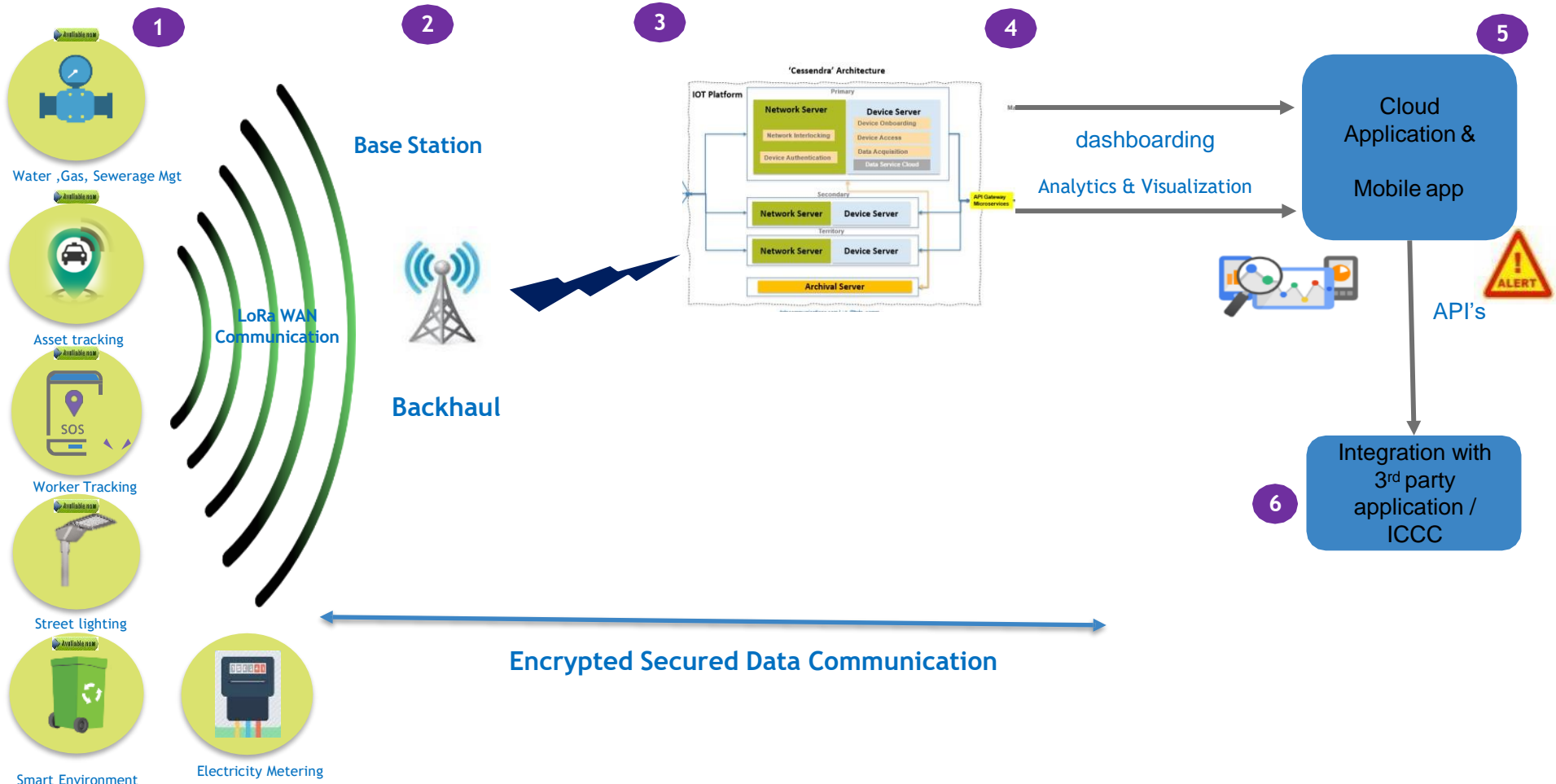
ACCELERATING THE INTERNET OF THINGS

Smart Street Lighting System

- A largest IOT based Street lights Automation Systems provider company in India



Tata Communications LoRa Network - The IoT Network Of India





INDIA IOT SOLUTIONS -

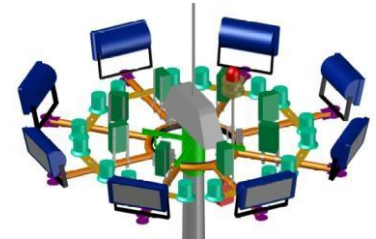
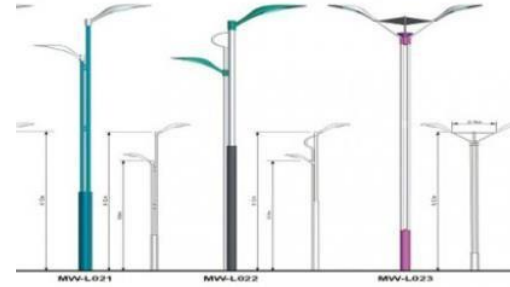
SMART STREET LIGHTING

CITY & HIGHWAY LIGHTING

- Single Arm pole
- Double arm poles
- Differential arm dual arm poles
- Flood lights / High masks - upto 600 W

- ❖ Noida (Delhi NCR)
- ❖ Ahmedabad
- ❖ Nasik
- ❖ Calcutta
- ❖ Jaipur

- ❖ Hampi Highway ~ 2500
- ❖ Udaipur Highway ~ 2700
- ❖ A'bad: Outer Ring road & CG Road
- ❖ Noida Expressway
- ❖ Delhi Mathura Highway



Dedicated network provided for these projects

ELEMENTS OF OUR IOT SOLUTION

4 + 1 KEY COMPONENTS OF OUR SOLUTION



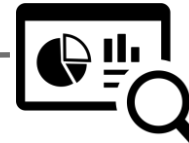
THE PLATFORM

Highly customisable, adaptable for a variety of use cases



IoT EVICES/SENSORS/BEACONS

Field Data Capture, two-way communications



ANALYTICS MODULE

Custom made / easy to use data analysis as desired using BI tools



THE APPLICATION

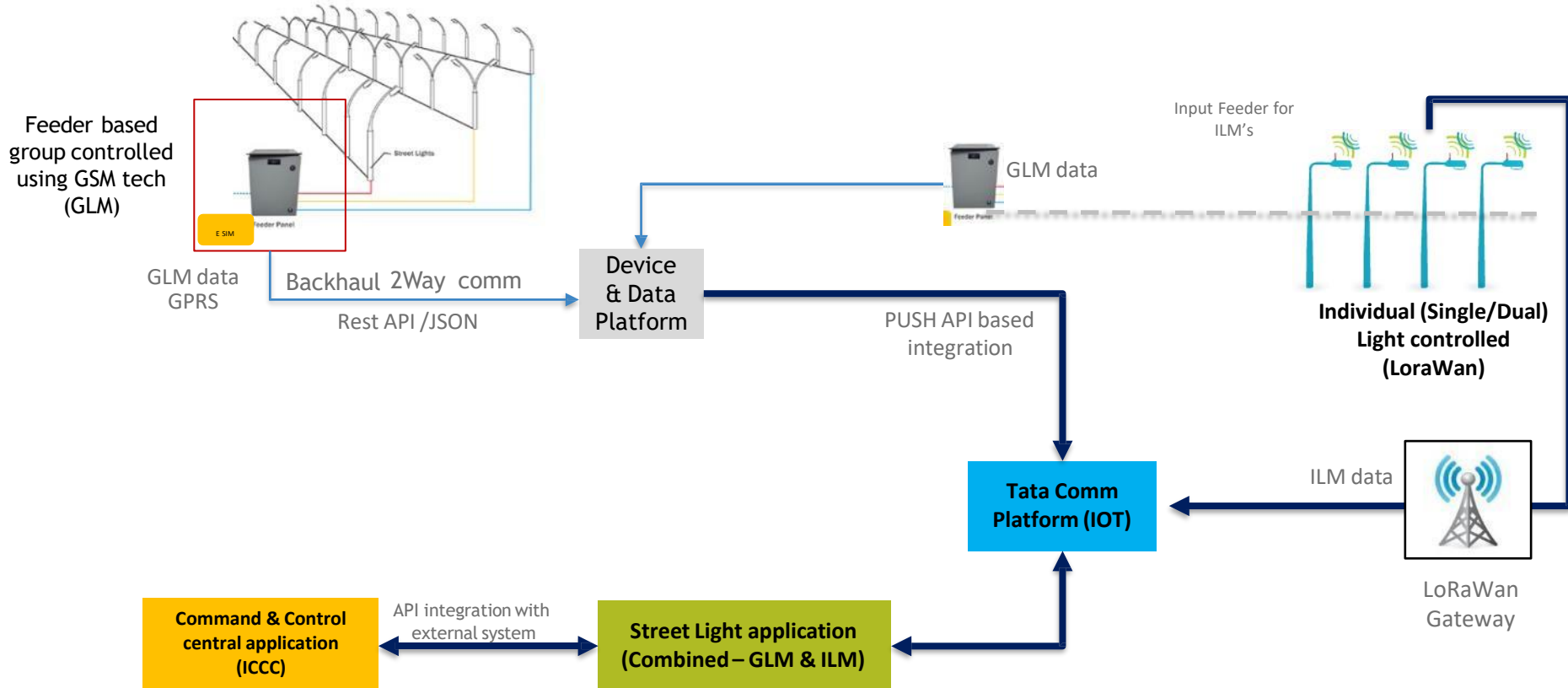
Simple, easy to use interface, packed with intelligence and insights



THE NETWORK

LPWA Network powered by LoRa, long range and low power consumption

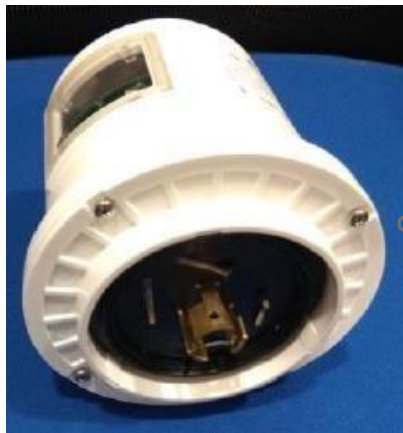
FULL STACK SMART LIGHTING : ILM & GLM





1. Smart feeder with every 30 min reporting , metering data & real time power theft alert
2. Metal housing with Lock , IP , Dust , Corrosions protection with Incomer Breaker, MCB and Outgoing breaker MCBs and by-pass switch/isolator.
3. Feeder with 63 amp at incoming MCB & 40 amp at outing 3 units of 4 pole MCB. 40kA, 440V surge protection.
4. GSM based smart controller with automatic phase selectors (APS) with smps
5. Operations Mode : Astro, Lux, Schedule (Calendar)
6. Alerts provided at ICCC & field staff as configured for below
 - Full / partial load failure (Group failure of lights) Faults, Overload on phase.
 - No output supply
 - Power Failure (power trip)
 - Earth leakage (Alert for Leakage to ground)

NEMA Greenfield Projects



ILM-Standard

On/Off/Faults/Dimming with Metering



QR Code for serial No.

Red LED

Blue LED



SLC-Lite

On/Off/Faults only
No Dimming No Metering

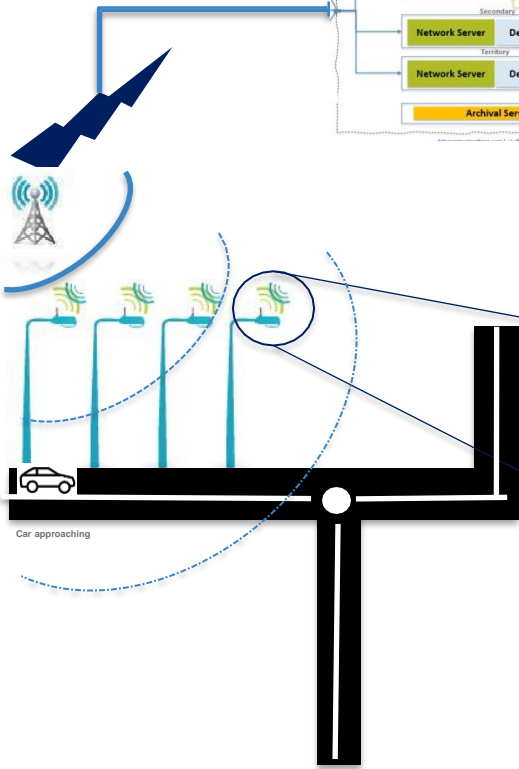
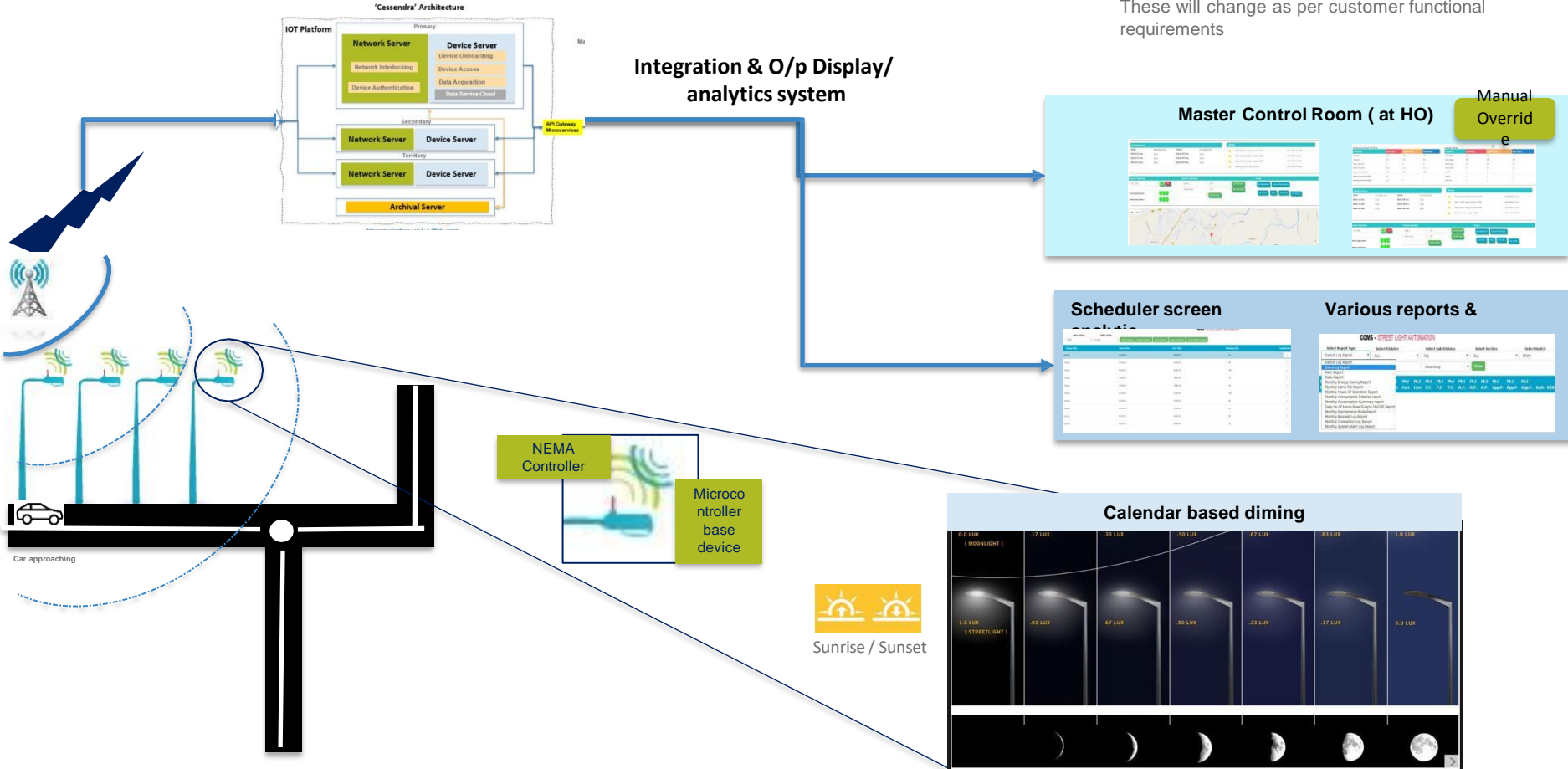


Non-NEMA (Retrofit Projects)



SMART STREET LIGHTING (ILM-NEMA)

Dashboard : for illustration only.
These will change as per customer functional requirements



Master Control Room (at HO)

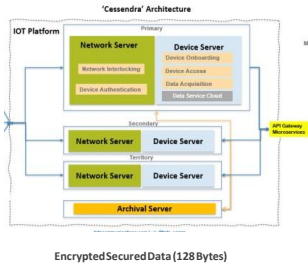
Manual Override

Scheduler screen

Various reports & analytics

Calendar based dimming

SINGLE & DUAL : NON NEMA - MOUNTING OPTIONS



(Admin screen)

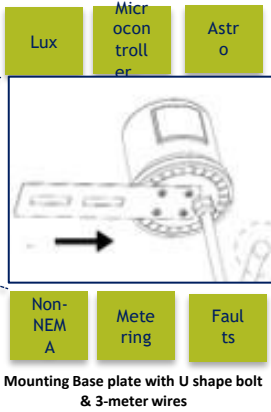
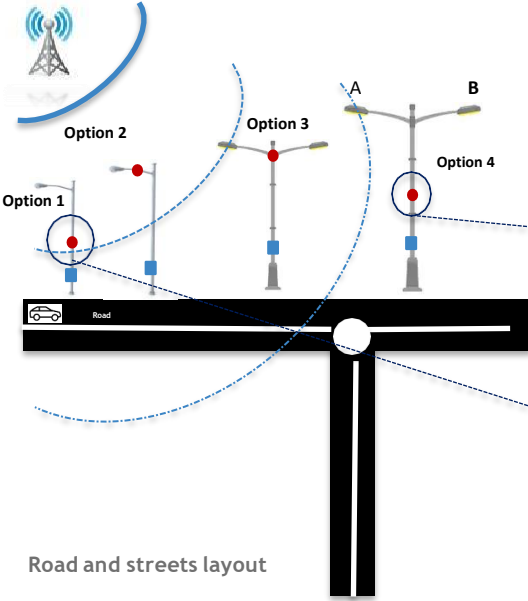
Touch Screen: Location site office

Master Control Room (at HO)

Analytics: Energy consumption

Road wise street light zone status

O On **F** Off **D** Dim

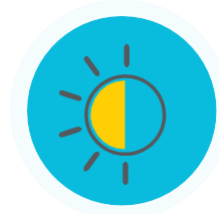


BENEFITS OF SMART LIGHTING SOLUTION



LAMP ON/OFF

- **Feature** - Automated controls, no human intervention. Define policy for individual lamp luminosity
- **Benefit** - Reduced electricity consumption



LAMP DIMMING

- **Feature** - Regulate dimming between 0%, 50%, 70%, 80% and 100% intensity
- **Benefit** - Control luminosity and reduce electricity consumption



FAULTS MONITORING

- Load failure
- Input failure
- **Benefit** - reduced O&M cost and optimise manpower



ELECTRICITY THEFT

- **Feature** - Individual and feeder level metering to identify electricity theft location
- **Benefit** - Stop electricity theft



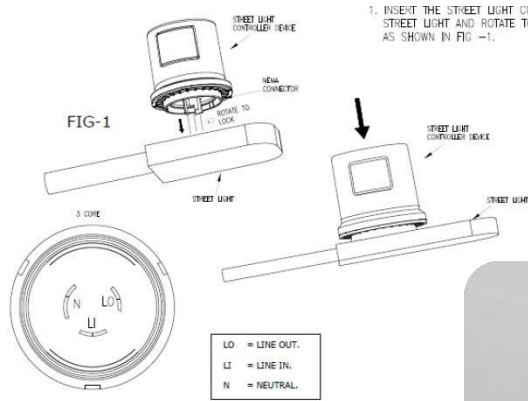
LED LAMP METERING

- **Feature** - Measure energy consumption per luminaire / Pole

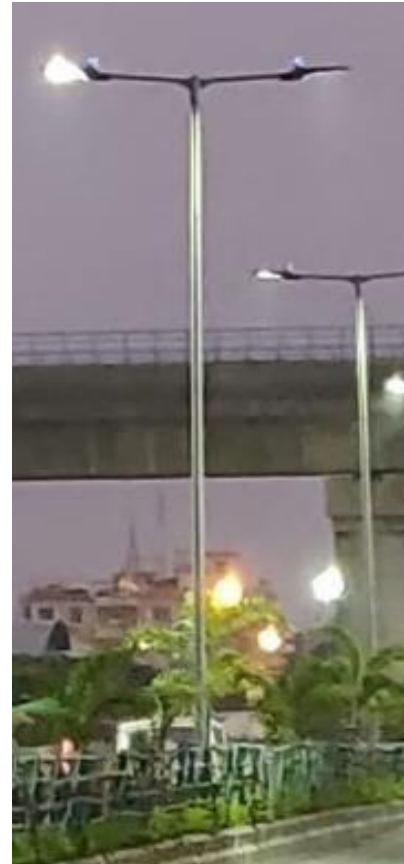


DAY TIME ELECTRICITY CONSUMPTION

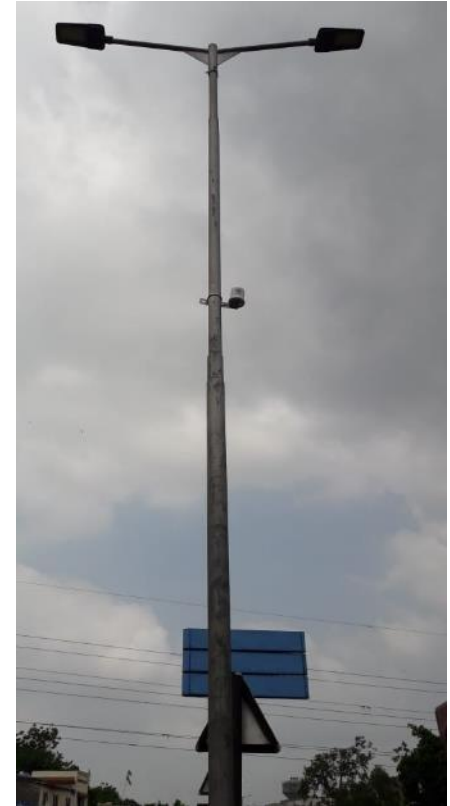
- **Feature** - Individual lighting control to avoid day time lamp burning for maintenance
- **Benefit** - Reduce day-time electricity usage



NEMA



Non - NEMA



<p>TATA COMMUNICATIONS</p>	
<p>Product Name: Lampts Controller Product Sr.No: SL-KN-V001-XXXXXX Manufacturing Date: XXXXXXXX Made in India</p>	<p>Product Specifications: I/P Voltage: 90-440V AC O/P Voltage: 180-270V AC O/P Current: 0-3 Amp</p>
<p>Product Sr. No: SL-KN-V001-XXXXXX</p>	<p>FOR QR CODE</p>

- Dashboard
- Device Trends
- Alerts Device Trends
- User Management
- Users
- Roles & Permissions
- User Activity Tracking
- Configuration Settings
- Project Configuration
- One Step Onboarding
- Hierarchy +
- Alert Configuration
- Device Profile +
- Device Onboarding
- Poles Management

Status

- 7695
- 2659
- 2825

Alerts

172

2498

1384

300

2525

Mode of Operation

1240
Lux Mode

10832
Astro-Calendar Mode

31
Manual Mode

1074
Factory Mode

Status

- 1875
- 187
- 39

Alerts

115

108

525

601

55

9

56

1333

229

10

29

Mode of Operation

1
Continuous ON

0
Continuous OFF

0
Pure Nature Switch Mode

0
Nature Switch Astro Mode

0
Single Time Cycle

0
Double Time Cycle

ILM List View
GLM List View
Map

Export
Search

Controller #	Pole #	Lamp ...	Last Status Change Ti...	Wattage	Mode of O...	Status	Metering Value	Message Received
L-0000004297	S28/0605B	● ● 100%	28-Sep-2022, 06:17 PM	60 W	Astro-Calendar...	NORMAL	213.01 V 0.28 A 58.60 W 65...	28-Sep-2022, 09:10 PM
L-0000009302	MMV/0306	● ● 100%	28-Sep-2022, 07:10 PM	35 W	Astro-Calendar...	NORMAL	240.58 V 0.15 A 34.80 W 0...	28-Sep-2022, 09:10 PM
L-0000012765	BRV/2206	● ● 100%	28-Sep-2022, 06:25 PM	45 W	Astro-Calendar...	NORMAL	220.63 V 0.20 A 45.00 W 0...	28-Sep-2022, 09:09 PM
L-0000051011	MT/0125	● ● 100%	28-Sep-2022, 07:06 PM	35 W	Lux Mode	NORMAL	251.22 V 0.14 A 32.90 W 11...	28-Sep-2022, 09:09 PM



Burning Ratio

