(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/10/2025

(21) Application No.202511100758 A

(43) Publication Date : 05/12/2025

(54) Title of the invention : AN IoT-BASED SYSTEM FOR AUTOMATED STREETLIGHT ENERGY MANAGEMENT

(51) International classification	:H05B47/11, H05B47/115, H05B47/19, H05B47/155, G16Y10/35, G16Y40/30
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)NOIDA INSTITUTE OF ENGINEERING & TECHNOLOGY
Address of Applicant :19, Knowledge Park-II, Institutional Area, Greater Noida – 201306, Uttar Pradesh, India. Uttar Pradesh India
(72)**Name of Inventor :**
1)SAVITA YADAV
2)MAYANK DEEP KHARE

(57) Abstract :
The invention relates to an IoT-based system for automated streetlight energy management integrating a streetlight unit (101), sensor module (102), wireless communication module (103), central controller (104), cloud analytics platform (105), and maintenance alert system (106). The system dynamically adjusts brightness based on ambient light and motion, enables real-time monitoring, and provides predictive fault detection. Experimental validation shows significant energy savings and reduced downtime. The invention offers a scalable, reliable, and efficient solution for smart city streetlight infrastructure, improving sustainability and operational performance.

No. of Pages : 15 No. of Claims : 6