**Solar Powered Auto Intensity Control of Street Lights**

White Light Emitting Diodes (LED) are becoming popular in street lighting applications for less power consumption and high intensity. An Arduino board is used to control the intensity by developing pulse width modulated signals that drives a MOSFET to switch the LEDs according to achieve desired operation.

A cluster of LEDs are used to form a street light. The Arduino board contains programmable instructions which controls the intensity of lights based on the PWM (Pulse width modulation) signals generated. The LDR sensor senses natural light and we get corresponding voltage output which is given to microcontroller through it’s in built ADC channel. The light intensity is measured and displayed on 16X2 LCD display. Thus it can be monitored easily at remote end. We are here using solar panel to charge the rechargeable battery and utilize energy for LEDs.

**Software Tools:**

* ARDUINO IDE
* EMBDDED CPP CODE
* PROTEUS SIMULATOR

**Hardware :**

1. ATMEGA328 Microcontroller
2. LDR Sensor
3. MOSFET IRFZ44 Driver
4. 16\*2 LCD DISPLAY
5. Regulated Power Supply

**BLOCK DIAGRAM :**

 **ATMEGA328**

**MCU**

16\*2 LCD DISPLAY

LDR SENSOR

White LEDs

MOSFET IRFZ44 DRIVER

Regulated Power Supply

Solar Panel

12V 5W

12V Rechargeable Battery