

## SMART STREET LIGHT WITH LDR AND IR

### **AIM:**

Design and Development of Smart street light with LDR and IR.

### **PURPOSE:**

There are so many power saving techniques for reduction of power consumption. Street lights consume lot of power throughout high way lines. But they always in ON condition irrespective of vehicle presence. Here we want to develop Smart Street light which is based on day and night condition with vehicle presence. If light will be in dim condition then it consumes less power. Here project title is smart street light with LDR and IR.

### **DESCRIPTION:**

This project includes LDR and IR which are connected to digital pins of Arduino. Street light LED connected to arduino with PWM driver.

### **WORKING:**

In this project IR sensor can detect vehicle presence and LDR can detect day and night condition. If LDR detects light condition then LED light will be OFF irrespective of vehicle presence. Because in day time Light not required. In night time (LDR-Dark condition) if vehicle presented then LED light will be ON in bright mode. Also if vehicle not presented in night time then LED light will be ON in dim mode. All this information displaying on 16X2 LCD display.

## TECHNICAL SPECIFICATIONS:

### HARDWARE:

Microcontroller	:	Arduino Uno
Crystal	:	16 MHz
LCD	:	16X2 LCD
LED	:	10mm DC 5V
LED driver	:	BC547
Vehicle Detection Sensor	:	IR Sensor
Light Sensor	:	LDR
Power Source	:	12v 2 amp Adaptor

### SOFTWARE:

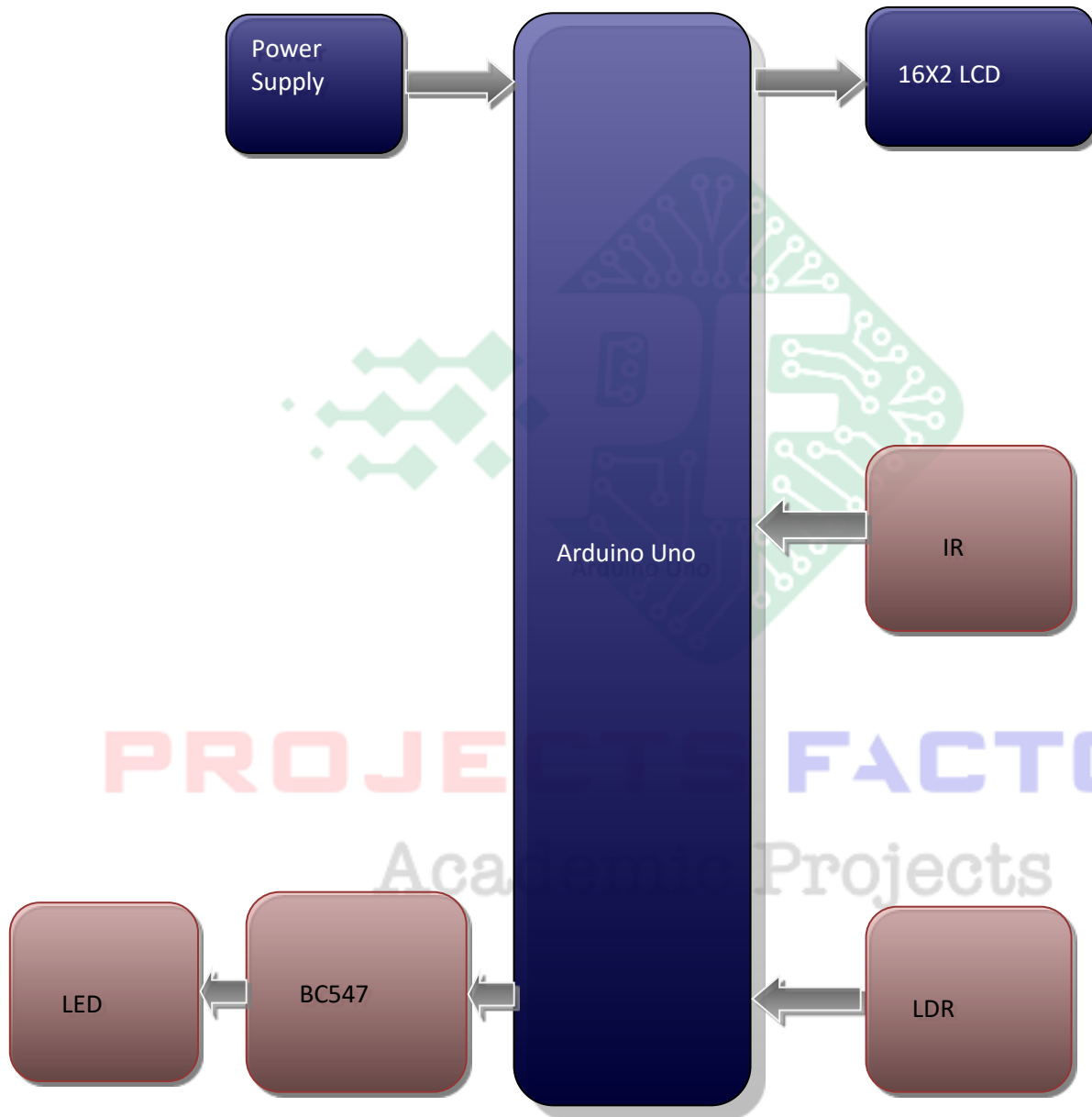
Arduino IDE  
Proteus based circuit diagram

### APPLICATIONS:

- Street Light Application
- Power management Applications

**PROJECTS FACTORY**  
Academic Projects

**BLOCK DIAGRAM:**



## POWER SUPPLY BLOCKDIAGRAM:



## INTERFACES COVERED:

- We have covered IR and LDR interface
- LED light PWM brightness control driver interface

**PROJECTS FACTORY**  
Academic Projects