

Light sensor module using 51 microcontroller



Overview

AT89S51 performs the function of turning on/off the lighting unit by receiving the signals from PIR sensor as well as lighting intensity sensor. This article uses the STC 89C52 single-chip microcomputer as the core. By combining active. In respect of automatic control technology, this paper segregates the central control unit into five modules: automatic control module, PIR detection module, lighting intensity detection module, modes switching module, and LCD 1602 display module. This system is expertly designed to activate the LED strip upon detecting human presence, making it versatile and well-suited for a variety of applications. In the previous tutorial, we have interfaced the Bluetooth module with PIC16F877A. If you know already, please go further. Illuminance is a measure of how much an incident light lightens up a given surface.



Article Content

How to detect light using an Arduino

Using an Arduino board, we can easily interface with various sensors and components to detect light. One of the most commonly used

Arduino with BH1750 Ambient Light Sensor

The BH1750 is a 16-bit ambient light sensor. Learn how to use the BH1750 ambient light sensor with the Arduino board using Arduino IDE. The

IR Sensor Module #arduinoprojects #eazytronic #arduinoideas

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Smart Automatic Control Lighting System (SACLS) Using Microcontroller

AT89S51 performs the function of turning on/off the lighting unit by receiving the signals from PIR sensor as well as lighting intensity sensor. This paper covers the hardware design together

LDR Module

Learn how a LDR light sensor module works, how to connect the LDR light sensor module to ESP32, how to program ESP32 to detect the light. The detail

How to Build an IoT Light Detector with ESP32

November 6, 2024 ESP32 Tutorial Updated: November 6, 2024 The ESP32 is a powerful microcontroller that offers a wide range of applications in the realm of

LDR Sensor Interfacing with PIC16F877A * EmbeTronicX

Hence, we can utilize the light sensor circuit for automatic switch OFF the loads based on daylight's intensity by employing a light sensor. This article

Automatic Street Light Control Using 8051 Microcontroller

This project demonstrates the use of the 8051 microcontroller to create an automatic street light control system. By integrating an LDR sensor and a relay module, the system can automatically switch

How to Use Sensor FC-51 IR: Examples, Pinouts, and Specs

Learn how to use the Sensor FC-51 IR with detailed documentation, including pinouts, usage guides, and example projects. Perfect for students, hobbyists, and developers integrating the Sensor FC-51

Arduino

Learn: how light sensor works, how to connect light sensor to Arduino, how to code for light sensor, how to program Arduino step by step. The detail instruction,

Arduino Light Sensor – Circuit and Code Example

This is a quickstart guide to the Arduino light sensor circuit. You'll learn how to connect the circuit on a breadboard and the needed code.

Light Sensor

Learn: how light sensor works, how to connect light sensor to ESP32, how to code for light sensor, how to program ESP32 step by step. The detail instruction,

Interfacing / Programming Light Sensor BH1750 using Arduino

Deskripsi In this article we will discuss the BH1750 light sensor along with examples of its program using Arduino. BH1750FVI is an IC sensor that is used to measure the intensity of ambient

ESP32: 36 Free Guides for Sensors and Modules

There is a wide variety of sensors, modules, and peripherals compatible with the ESP32 boards. We have tutorials for the most popular components. This article

Arduino Light Sensor Circuit using LDR

In this project we are making a Light Sensor using LDR with Arduino to control a light bulb/CFL as per light condition of the room or outside area.

(PDF) Design and Implementation of an Intelligent

This paper proposes the design and implementation of an intelligent ultrasonic system based on a 51 microcontroller, integrating ultrasonic sensors,

ShivamAralikatti/Automatic-Room-Lighting-System

This project utilizes an 8051 Microcontroller and Infrared (IR) sensors to create an Automatic Room Lighting System with a Bidirectional Visitor Counter. The

Low Light detector mini project

Resistance of LDR varies as per the intensity of light which falls on the sensor. LDR is interfaced to the microcontroller using a comparator. The comparator output is

Interfacing TSL2591 Ambient Light Level Sensor with

This Arduino tutorial shows how to interface the TSL2591 sensor with Arduino board where light intensity is printed on LCD and Serial Monitor.

How to Use BH1750 Ambient Light Sensor with Arduino

In this tutorial, we will use one such sensor BH1750 Light Sensor Module and interface it with Arduino and show the Lux value over 16x2 LCD.

Using the BH1750 (GY-30) Sensor with Arduino

The BH1750 is a light-intensity sensor that interfaces with a microcontroller through the I2C bus. It can directly provide lux values without further processing, unlike CdS cells or photodiodes.

Light Intensity Data Collector Based on 51 Single Chip Microcomputer

In this design, a light sensor is used to detect the illumination of the environment. The collected data is read by a single chip microcomputer and displayed through the display screen. The

ESP32 MicroPython Light Sensor | ESP32 MicroPython

Learn how to connect and use an LDR light sensor with a ESP32 and MicroPython, how to write MicroPython code for ESP32 to read from the LDR sensor. Find out

Intelligent lighting control system based on 51 single chip ...

The intelligent lighting control system consists of a single-chip microcomputer minimum system, a human body sensing module, a light intensity module, a light control module, a power module and a

Automatic Room Lighting System using Microcontroller

Never forget to turn off the lights again! Build your own automatic room lighting system with a microcontroller. Step-by-step guide with parts list

Automatic-Room-Lighting-System-using-8051-Microcontroller ...

This 8051 Microcontroller-based project uses Infrared sensors to create an energy-efficient room lighting system. It detects human movement, automatically turning lights on or off.

Interfacing BH1750 Light Intensity Sensor with ESP32

Updated: January 15, 2025 The BH1750 is a digital light intensity sensor capable of measuring light in lux (lumens per square meter). Its high resolution and ease of use make it an excellent choice for

Light Magic: Using LM393 and Arduino UNO

Automatic light control using a photosensitive LDR sensor module and Arduino. Find this and other hardware projects on Hackster.io.

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