CHANZON 100F5T-YT-RGB-CC

CHANZON 5mm RGB Multicolor LED Diode Lights User Manual

Model: 100F5T-YT-RGB-CC

1. PRODUCT OVERVIEW

The CHANZON 5mm RGB Multicolor LED Diode Lights are high-brightness, 4-pin, common cathode light-emitting diodes designed for various electronic projects. This package contains 100 pieces of clear, round, transparent LEDs capable of displaying Red, Green, and Blue colors, which can be mixed to create a wide spectrum of hues.

Image 1.1: Overview of the CHANZON 5mm RGB LED Diode, showing its clear lens and the three primary colors it can emit.

2. SAFETY INFORMATION

Please read and understand the following safety precautions before handling or using the LED diodes:

- **Electrical Safety:** Ensure power is disconnected before making any connections. Incorrect wiring can damage the LEDs or other components.
- **Voltage and Current:** Do not exceed the specified voltage and current ratings (DC 2V-2.2V for Red, 3V-3.2V for Green/Blue, 20 mA). Over-current will significantly reduce the lifespan of the LEDs or cause immediate failure. Always use appropriate current-limiting resistors.
- **Handling:** Handle LEDs by their leads to avoid touching the lens, which can affect light output or introduce contaminants.
- **Heat:** While LEDs are energy-efficient, prolonged operation at maximum current can generate heat. Ensure adequate ventilation if used in enclosed spaces.
- **Eye Protection:** Avoid direct prolonged exposure to the emitted light, especially at high brightness, as it can be intense.

- **Small Parts:** These LEDs are small components. Keep them out of reach of children to prevent accidental ingestion.

3. PRODUCT SPECIFICATIONS

Detailed technical specifications for the CHANZON 5mm RGB LED Diodes:

Feature	Specification
LED Type	5mm Round Top, Clear Transparent Lens
Color Output	Tricolor Red (R), Green (G), Blue (B)
Configuration	Common Cathode (CC), 4-pin
Wavelength (Red)	620nm-625nm
Wavelength (Green)	515nm-520nm
Wavelength (Blue)	450nm-455nm
Luminous Intensity (Red)	2000-3000mcd
Luminous Intensity (Green)	15000-18000mcd
Luminous Intensity (Blue)	7000-8000mcd
Forward Voltage (Red)	DC 2V-2.2V
Forward Voltage (Green/Blue)	DC 3V-3.2V
Forward Current	20 mA (per color)
Viewing Angle	30 Degrees
Operating Temperature	(Standard LED operating range, typically -20°C to +80°C, not specified in input, so omit specific values)
Dimensions (approx.)	5mm Diameter, 4-pin leads
Power Source	Corded Electric (requires external power supply)
Indoor/Outdoor Usage	Indoor

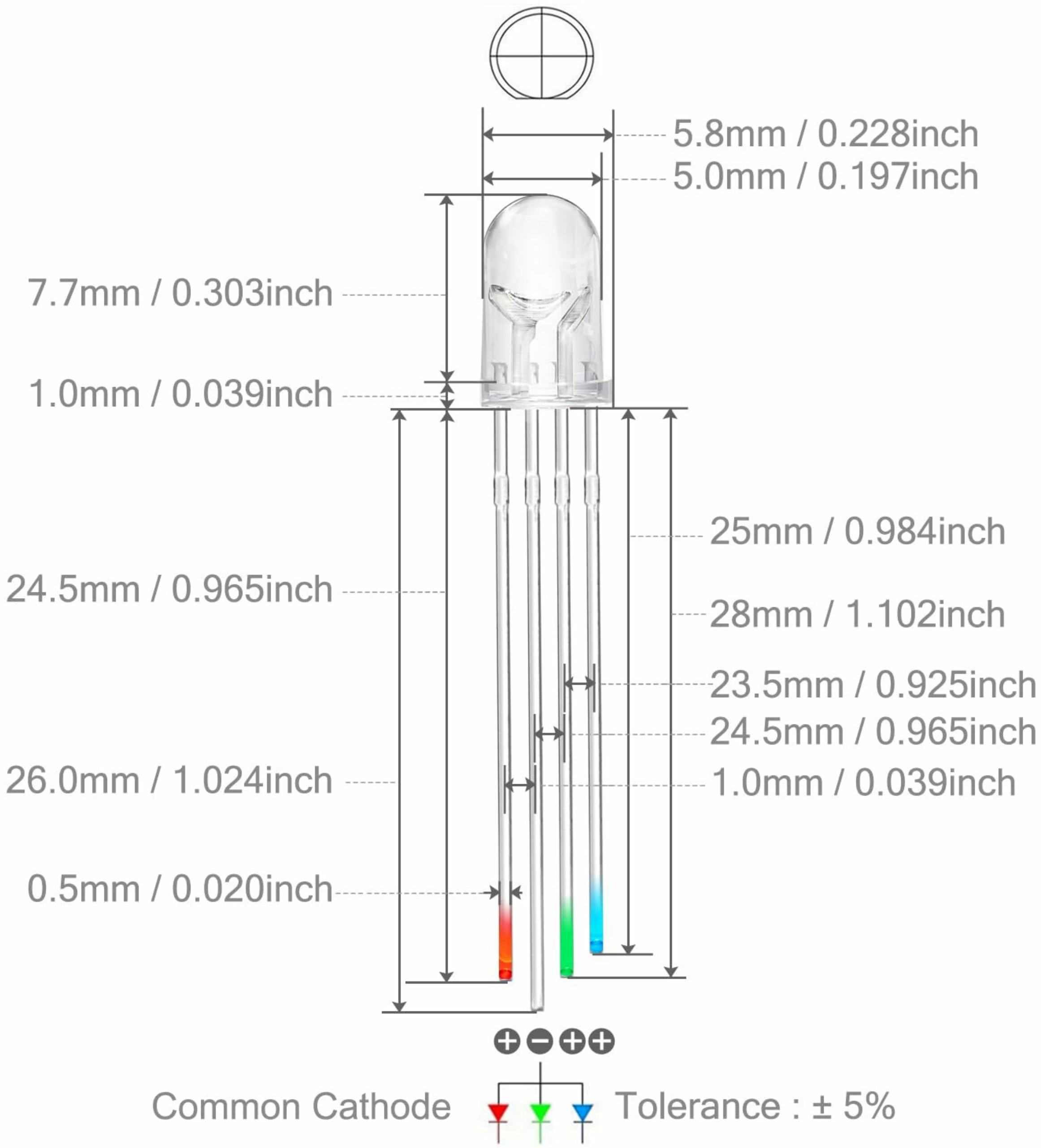


Image 3.1: Detailed dimensions of the 5mm RGB LED Diode, including pin lengths and lens diameter.

4. Setup and Installation

These RGB LEDs are designed for integration into various electronic circuits, including DIY PCB boards, Arduino, Raspberry Pi projects, and breadboard experiments. Follow these steps for proper setup:

4.1 Pin Identification (Common Cathode)

The CHANZON 5mm RGB LEDs are **Common Cathode (CC)** type. This means all three color anodes (Red, Green, Blue) share a common negative (cathode) pin. The pins are typically arranged as follows when viewed from the top, with the longest pin being the common cathode:

Pin 1 (Shortest): Red Anode (+)

Pin 2 (Longest): Common Cathode (-)

Pin 3: Green Anode (+)

Pin 4: Blue Anode (+)

Always verify pinout with a multimeter or by checking the physical length of the leads, as the longest leg is typically the common cathode.

Image 4.1: A single 5mm RGB LED diode, illustrating its four pins. The longest pin is the common cathode.

4.2 Wiring Diagram (Example)

To illuminate a single color, connect the corresponding anode pin to a positive voltage source (via a current-limiting resistor) and the common cathode pin to ground. To mix colors, apply voltage to multiple anode pins simultaneously.
Important: A current-limiting resistor is essential for each anode pin to prevent damage to the LED. The resistor value can be calculated using Ohm's Law: R = (Vs - Vf) / I, where Vs is the supply voltage, Vf is the LED's forward voltage, and I is the desired forward current (e.g., 20mA or 0.02A).

- For Red: Use a resistor suitable for 2.0-2.2V forward voltage.
- For Green/Blue: Use a resistor suitable for 3.0-3.2V forward voltage.

Example: For a 5V supply and a Green LED (Vf = 3.2V, I = 20mA): R = (5V - 3.2V) / 0.02A = 1.8V / 0.02A = 90 Ohms. A standard 100 Ohm resistor would be a suitable choice.

Image 4.2: Examples of individual Red, Green, and Blue light output from the LEDs.

5. OPERATING INSTRUCTIONS

Once properly wired with appropriate current-limiting resistors, the CHANZON RGB LEDs can be operated by applying voltage to their anode pins. Since they are common cathode, the common pin should always be connected to the negative terminal (ground) of your power supply.

- **Single Color Operation:** Apply the specified forward voltage (via resistor) to the desired Red, Green, or Blue anode pin.
- **Color Mixing:** To achieve mixed colors (e.g., yellow, cyan, magenta, white), apply voltage to two or three

anode pins simultaneously. The intensity of each color can be controlled using Pulse Width Modulation (PWM) from microcontrollers like Arduino or Raspberry Pi, allowing for a vast range of colors.
- **Power Consumption:** These LEDs are designed for low voltage and low power consumption, making them suitable for battery-powered projects.

Image 5.1: A bulk quantity of CHANZON 5mm RGB LED Diodes, as supplied in the package.

6. MAINTENANCE

CHANZON RGB LEDs are robust and require minimal maintenance. Follow these guidelines to ensure long-term performance:

- **Cleanliness:** Keep the LED lenses clean and free from dust or debris. Use a soft, dry cloth for cleaning if necessary. Avoid abrasive materials or harsh chemicals.
- **Storage:** Store unused LEDs in a dry, cool environment, preferably in their original packaging or an anti-static bag, to prevent damage from moisture or static discharge.
- **Physical Stress:** Avoid bending the leads repeatedly or applying excessive force to the LED body, which can damage internal connections.

7. TROUBLESHOOTING

If you encounter issues with your CHANZON RGB LEDs, consider the following troubleshooting steps:

Problem	Possible Cause	Solution
LED does not light up.	Incorrect polarity, insufficient voltage, missing/incorrect resistor, faulty connection, damaged LED.	Verify common cathode (longest pin) is connected to ground. Check supply voltage. Ensure resistor is present and correctly calculated. Inspect connections for shorts or breaks. Test LED with a known good circuit.

Problem	Possible Cause	Solution
LED is dim.	Too high resistor value, insufficient current, low supply voltage.	Recalculate resistor value for desired brightness. Check supply voltage.
Only one or two colors light up.	Incorrect wiring for specific color anode, damaged anode.	Double-check connections for each anode pin. Ensure each anode has its own current-limiting resistor.
LED flickers or behaves erratically.	Unstable power supply, loose connections, excessive current.	Use a stable power supply. Secure all connections. Verify current is within limits.

8. Product Video

Watch the official product video for a visual demonstration of the CHANZON LED diodes, showcasing different sizes and lens types.

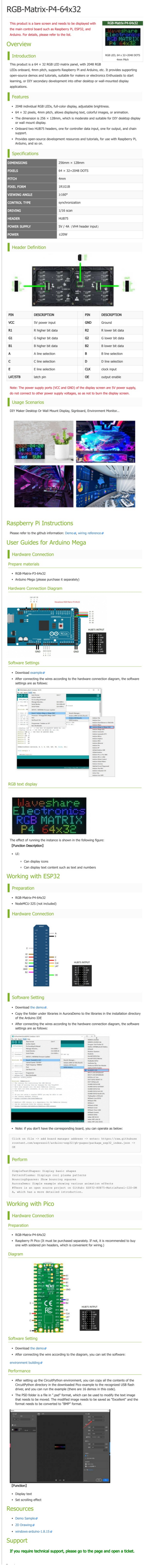
Your browser does not support the video tag.

Video 8.1: An official video from CHANZON demonstrating various LED diode types, including 3mm and 5mm, with clear and diffused lenses. This video helps visualize the physical appearance and light output of different LED configurations.

9. Warranty and Support

CHANZON products are manufactured to high quality standards. For any questions regarding product functionality, technical support, or warranty claims, please contact CHANZON customer service through the retailer's platform or visit the official CHANZON store page.
For more information, visit the CHANZON Store.

Related Documents - 100F5T-YT-RGB-CC



RGB-Matrix-P4-64x32

This product is a bare screen and needs to be displayed with the main control board such as Raspberry Pi, ESP32, and Arduino. For details, please refer to the list.

RGB-Matrix-P4-64x32

RGB LED, 64 x 32=2048 DOTS
4mm Pitch

Overview

Introduction

This product is a 64 × 32 RGB LED matrix panel, with 2048 RGB LEDs onboard, 4mm pitch, supports Raspberry Pi and Arduino, etc. It provides supporting open-source demos and tutorials, suitable for makers or electronics Enthusiasts to start learning, or DIY secondary development into other desktop or wall-mounted display applications.

Features

- 2048 individual RGB LEDs, full-color display, adjustable brightness.
- 64 × 32 pixels, 4mm pitch, allows displaying text, colorful images, or animation.
- The dimension is 256 × 128mm, which is moderate and suitable for DIY desktop display or wall mount display.
- Onboard two HUB75 headers, one for controller data input, one for output, and chain support.
- Provides open-source development resources and tutorials, for use with Raspberry Pi, Arduino, and so on.

Specifications

DIMENSIONS	256mm × 128mm
PIXELS	64 × 32=2048 DOTS
PITCH	4mm
PIXEL FORM	1R1G1B
VIEWING ANGLE	≥160°
CONTROL TYPE	synchronization
DRIVING	1/16 scan
HEADER	HUB75
POWER SUPPLY	5V / 4A（VH4 header input）
POWER	≤20W

Header Definition

PIN	DESCRIPTION		PIN	DESCRIPTION
VCC	5V power input		GND	Ground
R1	R higher bit data		R2	R lower bit data
G1	G higher bit data		G2	G lower bit data
B1	B higher bit data		B2	B lower bit data
A	A line selection		B	B line selection
C	C line selection		D	D line selection
E	E line selection		CLK	clock input
LAT/STB	latch pin		OE	output enable

Note: The power supply ports (VCC and GND) of the display screen are 5V power supply, do not connect to other power supply voltages, so as not to burn the display screen.

Usage Scenarios

DIY Maker Desktop Or Wall Mount Display, Signboard, Environment Monitor...

Raspberry Pi Instructions

Please refer to the github information: Demo, wiring reference

User Guides for Arduino Mega

Hardware Connection

Prepare materials

- RGB-Matrix-P3-64x32
- Arduino Mega (please purchase it separately)

Hardware Connection Diagram

Software Settings

- Download example
- After connecting the wires according to the hardware connection diagram, the software settings are as follows:

RGB text display

The effect of running the instance is shown in the following figure:

【Function Description】

- UI:
    - Can display icons
    - Can display text content such as text and numbers

Working with ESP32

Preparation

- RGB-Matrix-P4-64x32
- NodeMCU-32S (not included)

Hardware Connection

Software Setting

- Download the demo.
- Copy the folder under libraries in AuroraDemo to the libraries in the installation directory of the Arduino IDE
- After connecting the wires according to the hardware connection diagram, the software settings are as follows:
- Note: if you don't have the corresponding board, you can operate as below:

```
Click on file -> add board manager address -> enter: https://raw.githubuse
rcontent.com/espressif/arduino-esp32/gh-pages/package_esp32_index.json ->
OK
```

Perform

```
SimpleTestShapes: Display basic shapes
PatternPlasma: Displays cool plasma patterns
BouncingSquares: Show bouncing squares
AuroraDemo: Simple example showing various animation effects
#There is an open source project on GitHub: ESP32-HUB75-MatrixPanel-I2S-DM
A, which has a more detailed introduction.
```

Working with Pico

Hardware Connection

Preparation

- RGB-Matrix-P4-64x32
- Raspberry Pi Pico (It must be purchased separately. If not, it is recommended to buy one with soldered pin headers, which is convenient for wiring.)

Diagram

Software Setting

- Download the demo
- After connecting the wire according to the diagram, you can set the software:

environment building

Performance

- After setting up the CircuitPython environment, you can copy all the contents of the CircuitPython directory in the downloaded Pico example to the recognized USB flash driver, and you can run the example (there are 16 demos in this code).
- The PSD folder is a file in ".psd" format, which can be used to modify the text image that needs to be moved. The modified image needs to be saved as "Excellent" and the format needs to be converted to "BMP" format.

【Function】

- Display text
- Set scrolling effect

Resources

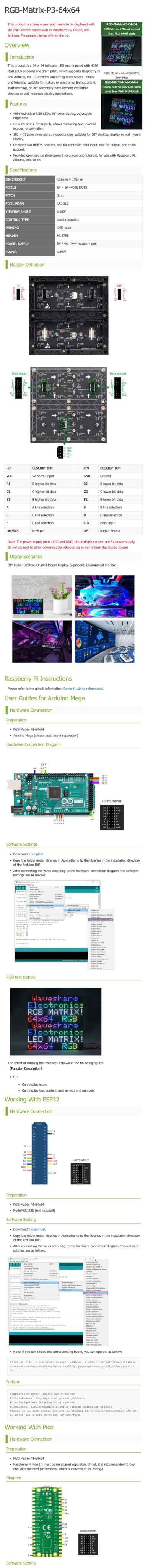
- Demo Sample
- 2D Drawing
- windows-arduino-1.8.15

Support

If you require technical support, please go to the page and open a ticket.

[Waveshare RGB-Matrix-P4-64x32: 64x32 LED Matrix Panel for DIY Projects]

Discover the Waveshare RGB-Matrix-P4-64x32, a 64x32 RGB LED matrix panel with 4mm pitch, perfect for DIY desktop or wall-mounted displays. It is compatible with Raspberry Pi, Arduino, and ESP32, offering extensive open-source resources.



RGB-Matrix-P3-64x64

This product is a bare screen and needs to be displayed with the main control board such as Raspberry Pi, ESP32, and Arduino. For details, please refer to the list.

Overview

Introduction

This product is a 64 × 64 full-color LED matrix panel with 4096 RGB LEDs onboard and 3mm pitch, which supports Raspberry Pi and Arduino, etc. It provides supporting open-source demos and tutorials, suitable for makers or electronics Enthusiasts to start learning, or DIY secondary development into other desktop or wall-mounted display applications.

Features

- 4096 individual RGB LEDs, full-color display, adjustable brightness.
- 64 × 64 pixels, 3mm pitch, allows displaying text, colorful images, or animation.
- 192 × 192mm dimensions, moderate size, suitable for DIY desktop display or wall mount display.
- Onboard two HUB75 headers, one for controller data input, one for output, and chain support.
- Provides open-source development resources and tutorials, for use with Raspberry Pi, Arduino, and so on.

Specifications

DIMENSIONS	192mm × 192mm
PIXELS	64 × 64=4096 DOTS
PITCH	3mm
PIXEL FORM	1R1G1B
VIEWING ANGLE	≥160°
CONTROL TYPE	synchronization
DRIVING	1/32 scan
HEADER	HUB75E
POWER SUPPLY	5V / 4A（VH4 header input）
POWER	≤20W

Header Definition

PIN	DESCRIPTION		PIN	DESCRIPTION
VCC	5V power input		GND	Ground
R1	R higher bit data		R2	R lower bit data
G1	G higher bit data		G2	G lower bit data
B1	B higher bit data		B2	B lower bit data
A	A line selection		B	B line selection
C	C line selection		D	D line selection
E	E line selection		CLK	clock input
LAT/STB	latch pin		OE	output enable

Note: The power supply ports (VCC and GND) of the display screen are 5V power supply, do not connect to other power supply voltages, so as not to burn the display screen.

Usage Scenarios

DIY Maker Desktop Or Wall Mount Display, Signboard, Environment Monitor...

Raspberry Pi Instructions

Please refer to the github information: Demo, wiring reference.

User Guides for Arduino Mega

Hardware Connection

Preparation

- RGB-Matrix-P3-64x64
- Arduino Mega (please purchase it separately)

Hardware Connection Diagram

Software Settings

- Download example
- Copy the folder under libraries in AuroraDemo to the libraries in the installation directory of the Arduino IDE
- After connecting the wires according to the hardware connection diagram, the software settings are as follows:

RGB text display

The effect of running the instance is shown in the following figure:

【Function Description】

- UI:
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Working With ESP32

Hardware Connection

Preparation

- RGB-Matrix-P4-64x64
- NodeMCU-32S (not included)

Software Setting

- Download the demo.
- Copy the folder under libraries in AuroraDemo to the libraries in the installation directory of the Arduino IDE.
- After connecting the wires according to the hardware connection diagram, the software settings are as follows:
- Note: if you don't have the corresponding board, you can operate as below:

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Click on file -> add board manager address -> enter: https://raw.githubuse
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Perform

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SimpleTestShapes: Display basic shapes
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#There is an open source project on GitHub: ESP32-HUB75-MatrixPanel-I2S-DM
A, which has a more detailed introduction.
```

Working With Pico

Hardware Connection

Preparation

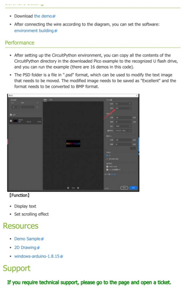
- RGB-Matrix-P4-64x64
- Raspberry Pi Pico (It must be purchased separately. If not, it is recommended to buy one with soldered pin headers, which is convenient for wiring.)

Diagram

Software Setting

[Waveshare RGB-Matrix-P3-64x64: 64x64 Full-Color LED Matrix Panel & Integration Guide]

Explore the Waveshare RGB-Matrix-P3-64x64, a 64x64, 3mm pitch full-color LED matrix panel. This guide covers features, specifications, and detailed integration steps for Raspberry Pi, Arduino, ESP32, and Raspberry Pi Pico.



- Download the demo
- After connecting the wire according to the diagram, you can set the software: environment building

Performance

- After setting up the CircuitPython environment, you can copy all the contents of the CircuitPython directory in the downloaded Pico example to the recognized U flash drive, and you can run the example (there are 16 demos in this code).
- The PSD folder is a file in ".psd" format, which can be used to modify the text image that needs to be moved. The modified image needs to be saved as "Excellent" and the format needs to be converted to BMP format.

【Function】

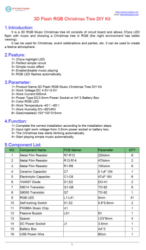
- Display text
- Set scrolling effect

Resources

- Demo Sample
- 2D Drawing
- windows-arduino-1.8.15

Support

If you require technical support, please go to the page and open a ticket.



3D Flash RGB Christmas Tree DIY Kit

1.Introduction:

It is a 3D RGB Music Christmas tree kit consists of circuit board and allows 37pcs LED flash with music and showing a Christmas tree in RGB (the night environment has better viewing).

It can be used for Christmas, event celebrations and parties, etc. It can be used to create a festive atmosphere.

2.Feature:

1>.37pcs highlight LED
2>.Perfect simple circuit
3>.Simple music effect
4>.Enable/disable music playing
5>.RGB LED flashes automatically

3.Parameter:

1>.Product Name:3D Flash RGB Music Christmas Tree DIY Kit
2>.Work Voltage:DC 4.5V~5.0V
3>.Work Current:500mA
4>.Power Type:DC3.5mm Power Socket or AA*3 Battery Box
5>.Color:RGB LED
6>.Work Temperature:-40℃~85℃
7>.Work Humidity:5%~85%RH
8>.Size(Installed):153*153*315mm

4.Function:

1>.Complete the correct installation according to the installation steps.
2>.Input right work voltage from 3.5mm power socket or battery box.
3>.The Christmas tree starts blinking automatically.
4>.Start playing simple music automatically.

5.Component List:

NO.	Component Name	PCB Marker	Parameter	QTY
1	Metal Film Resistor	R7-R12	220ohm	6
2	Metal Film Resistor	R13,R14	470ohm	2
3	Metal Film Resistor	R1-R6	10Kohm	6
4	Ceramic Capacitor	C7	0.1uF 104	1
5	Electrolytic Capacitor	C1-C6	47uF 16V	6
6	1N4007 Diode	D1,D2	DO-41	2
7	S9014 Transistor	Q1-Q6	TO-92	6
8	S8050 Transistor	Q7	TO-92	1
9	RGB LED	L1-L41	5mm	41
10	Self-locking Switch	S1,S2	5.8*5.8mm	2
11	PX088A Music Chip	U1		1
12	Passive Buzzer	LS1	5V	1
13	Spacer		I.D3*8mm	4
14	DC Power Socket	J1	3.5mm	1
15	Battery Box		AA*3	1
16	USB Power Wire		80cm	1

1

3D Flash RGB Christmas Tree DIY Kit Assembly Guide

Comprehensive guide for assembling the 3D Flash RGB Music Christmas Tree DIY Kit from ICStation. Includes component list, schematic, and detailed step-by-step installation instructions.

YATO

PL SZLIFIERKA STOŁOWA
EN BENCH GRINDER
DE DOPPELSCHLEIFMASCHINE
RU ТОЧИЛЬНЫЙ СТАНОК
UA НАСТІЛЬНА ШЛІФУВАЛЬНА МАШИНА
LT STALINIS ŠLIFUOKLIS
LV GALDA SLĪPMAŠĪNA
CZ STOLNÍ BRUSKA
SK STOLOVÁ BRÚSKA
HU ASZTALI KÖSZÖRŰ
RO POLIZOR DE BANC
ES AMOLADORA DE BANCO
FR MEULEUSE D'ÉTABLI
IT SMERIGLIATRICE DA BANCO
NL BANKSLIJPMACHINE
GR ΜΎΛΟΣ ΠΆΓΚΟΥ
BG НАСТОЛНА МЕЛНИЦА
PT MOEDOR DE BANCADA
HR DVOSTRANA STOLNA BRUSILICA
AR طاحونة مقاعد البدلاء

YT-822100
YT-822103
YT-822107
YT-822110
YT-822112

INSTRUKCJA ORYGINALNA 1

Instrukcja Obsługi Szlifierek Stołowych YATO YT-822100-YT-822112

Instrukcja obsługi dla szlifierek stołowych marki YATO, modele YT-822100, YT-822103, YT-822107, YT-822110, YT-822112. Zawiera informacje o bezpieczeństwie, obsłudze, montażu i konserwacji.

instructables

Arduino LED Matrix Display

by giantjovan

Recently I saw video of Great Scott, where he made 10x10 LED matrix using ws2812b RGB LED diodes. I decided to also make it. So now i will explain step by step how to make it.

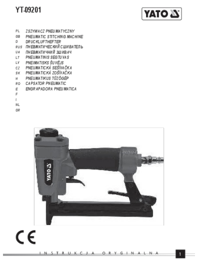
Supplies:

-100 LEDs ws2812b LED Strip, i made a mistake here. Better choose 96 LEDs per meter, insted of 144LEDs per meter.
-Wire about 20m
-Soldering Wire
-Cardboard
-Plexiglass
-Arduino (Nano is the smallest and best option)
-Cardboard
-Wood
-Glue

Arduino LED Matrix Display: Page 1

Arduino LED Matrix Display: DIY Project Guide

Step-by-step instructions for building a custom Arduino-controlled LED matrix display using WS2812b RGB LEDs. Learn how to assemble, wire, program, and create animations for your own LED matrix.



YT-09201

YATO

PL ZSZYWACZ PNEUMATYCZNY
GB PNEUMATIC STITCHING MACHINE
D DRUCKLUFTHEFTER
RUS ПНЕВМАТИЧЕСКИЙ СШИВАТЕЛЬ
UA ПНЕВМАТИЧНИЙ ЗШИВАЧ
LT PNEUMATINIS SEGTUVAS
LV PNEIMATISKS ŠUVĒJS
CZ PNEUMATICKÁ SEŠÍVAČKA
SK PNEUMATICKÁ ZOŠÍVAČKA
H PNEUMATIKUS TŰZŐGÉP
RO CAPSATOR PNEUMATIC
E ENGRAPADORA PNEUMATICA
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INSTRUKCJA ORYGINALNA 1

YATO YT-09201 Pneumatic Stitching Machine - Operating Manual

Comprehensive operating manual for the YATO YT-09201 pneumatic stitching machine, covering safety, technical data, operation, maintenance, and troubleshooting.