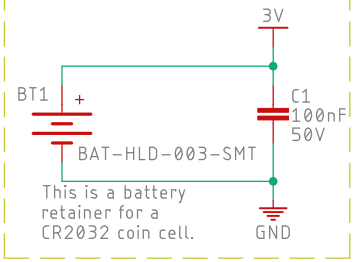
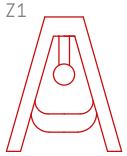
Power Supply



Programming



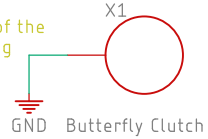
Connect your ST-Link or other programming tool using this SOIC8 test clip.

Use 3V3 power and logic levels.

This is only required if you wish to try your own firmware or if you have a blank MCU.

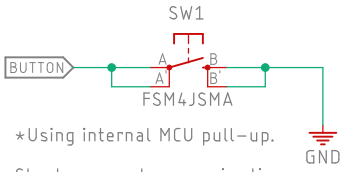
Clothing fastener

Note: tin both the pad and the back of the pin before soldering to ensure proper attachment.



Clasp used to attach and secure pin accessory to garment.
Connected to ground layer for mechanical stability.

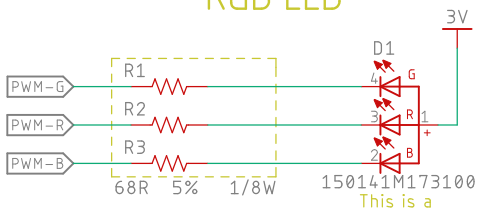
Button



*Using internal MCU pull-up.

Short press: change animation.
Long press: ON/OFF.

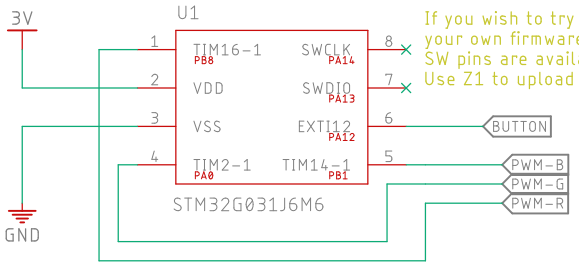
RGB LED



* Green ≈ 5 mA @ 100%
* Red ≈ 9 mA @ 100%
* Blue ≈ 3.6 mA @ 100%

≈18 mA for white(all) at 100% (measured with resistors)
MCU drives LEDs at 80% PWM max by default.

Microcontroller



If you wish to try your own firmware the SW pins are available. Use Z1 to upload it.

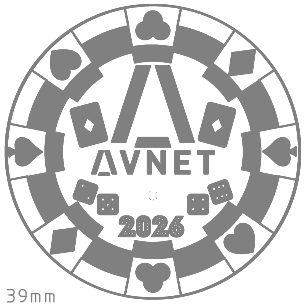
The microcontroller generates PWM signals to control the Red, Green, and Blue LEDs.

Battery Life

* Active: ≈22 h (animation-dependent)
* Sleep: ≈1.5 months
* Active: 6.5 mA + RGB LED
* Sleep: 0.2 mA

Remove battery for long-term storage.

PCB Specifications



Diameter 39mm
FR4 – 2.4mm thickness
White soldermask, No Silkscreen, ENIG Finish.
Images printed on both sides of PCB.

* This battery-powered electronic badge emulates a casino chip with programmable RGB LED animations.
* A low-power microcontroller controls a single RGB LED to display multiple colors representing different chip values.
* Powered by a CR2032 coin cell battery.
* Estimated battery life: ≈22 hours, depending on animation and usage.
* Designed for beginner-friendly assembly.

Recommended soldering order:

1. Resistors
2. Capacitor
3. Microcontroller
4. Pushbutton
5. Butterfly clutch pin
6. Battery holder
7. LED

Chip colors represent the following values:

* White = $1
* Red = $5
* Green = $25
* Blue = $100
* Purple = $500
* Yellow = $1,000

PCB Images

IMG-TOP IMG-BOTTOM

Firmware is pre-programmed, so no programming is required. Advanced users can upload their own firmware.

AVNET

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Avnet Programmable Casino Chip Trade Show Giveaway Kit v126	
8/31/2026 11:48 AM	
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