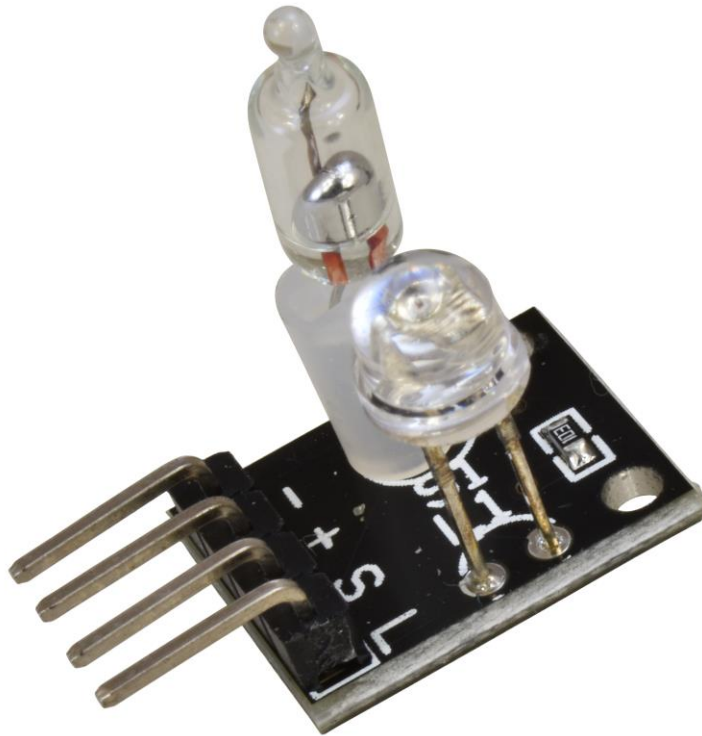


MAGIC CUP LIGHT MODULE - HR0025

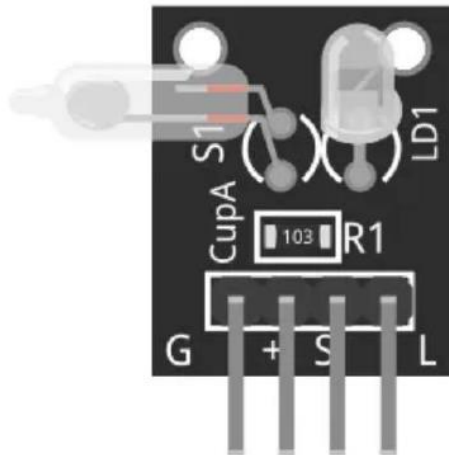


Pin Connections	
Pin -	0 VDC
Pin +	3.3 or 5 VDC
Pin S	Switch
Pin L	LED positive
LED Voltage	1.9 V
LED Current	20 mA
	Use current limiting resistor with LED
	Use 160 Ohms for 5 V

The KY-027 Magic Light Cup project consists of two HR0025 boards. Each one has an LED and a mercury tilt switch.

Using PWM to drive the LEDs on each module, the effect of light being “magically” transferred from one module to the other when tilting the modules can be achieved. This is similar to pouring water from one cup to the other, hence the name.

These modules are compatible with Arduino, Raspberry Pi, ESP32 and other popular electronic platforms.



KY-027 SPECIFICATIONS

The KY-027 project consists of two HR0025 modules. Each module is made up of a tilt switch, and LED, a 10 K-Ohm resistor and 4 male pin headers to connect the switch, LED, power and ground.

CONNECTION DIAGRAM

Connect each module using the following diagram.

KY-027 (A)	Arduino
G	GND
+	+5V
S	8
L	9

KY-027 (B)	Arduino
G	GND
+	+5V
S	7
L	6


```
1  int ledPinA = 9;
2  int switchPinA = 8;
3  int switchStateA = 0;
4  int ledPinB = 6;
5  int switchPinB = 7;
6  int switchStateB = 0;
7  int brightness = 0;
8  void setup()
9  {
10     pinMode(ledPinA, OUTPUT);
11     pinMode(ledPinB, OUTPUT);
12     pinMode(switchPinA, INPUT);
13     pinMode(switchPinB, INPUT);
14 }
15 void loop()
16 {
17     switchStateA = digitalRead(switchPinA);
18     if (switchStateA == HIGH && brightness != 255)
19     {
20         brightness ++;
21     }
22     switchStateB = digitalRead(switchPinB);
23     if (switchStateB == HIGH && brightness != 0)
24     {
25         brightness --;
26     }
27     analogWrite(ledPinA, brightness); // A slow fade out
28     analogWrite(ledPinB, 255 - brightness); // B slow bright
29     delay(20);
30 }
```