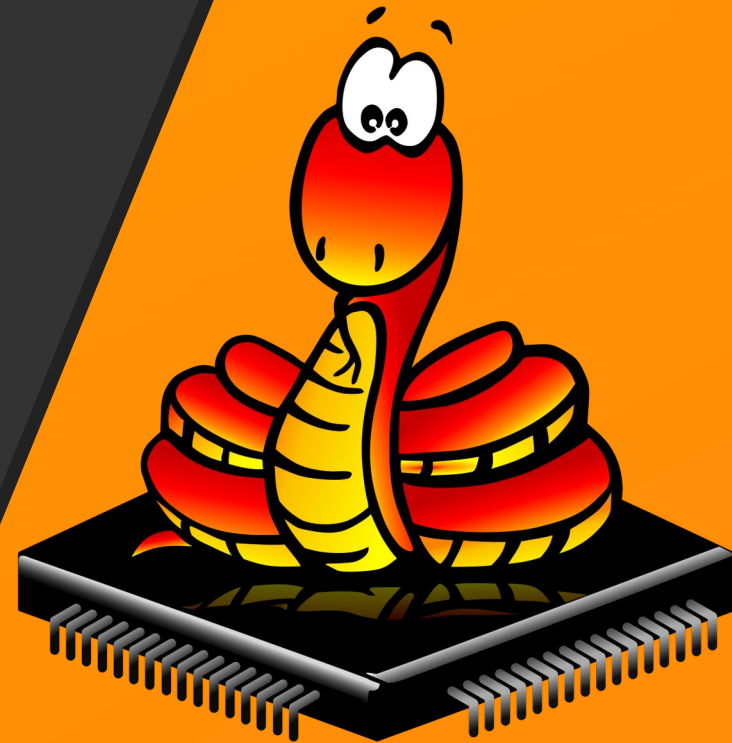


# آموزش میکروپایتون برای برنامه نویسه برد ESP32 و ESP8266

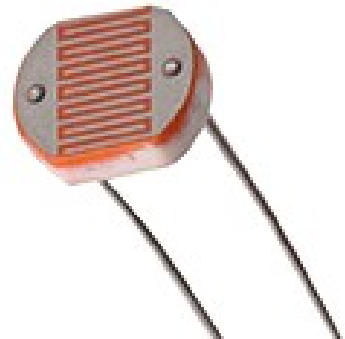
درس دهم: پروژه تشخیص روشنایی با حسگر LDR

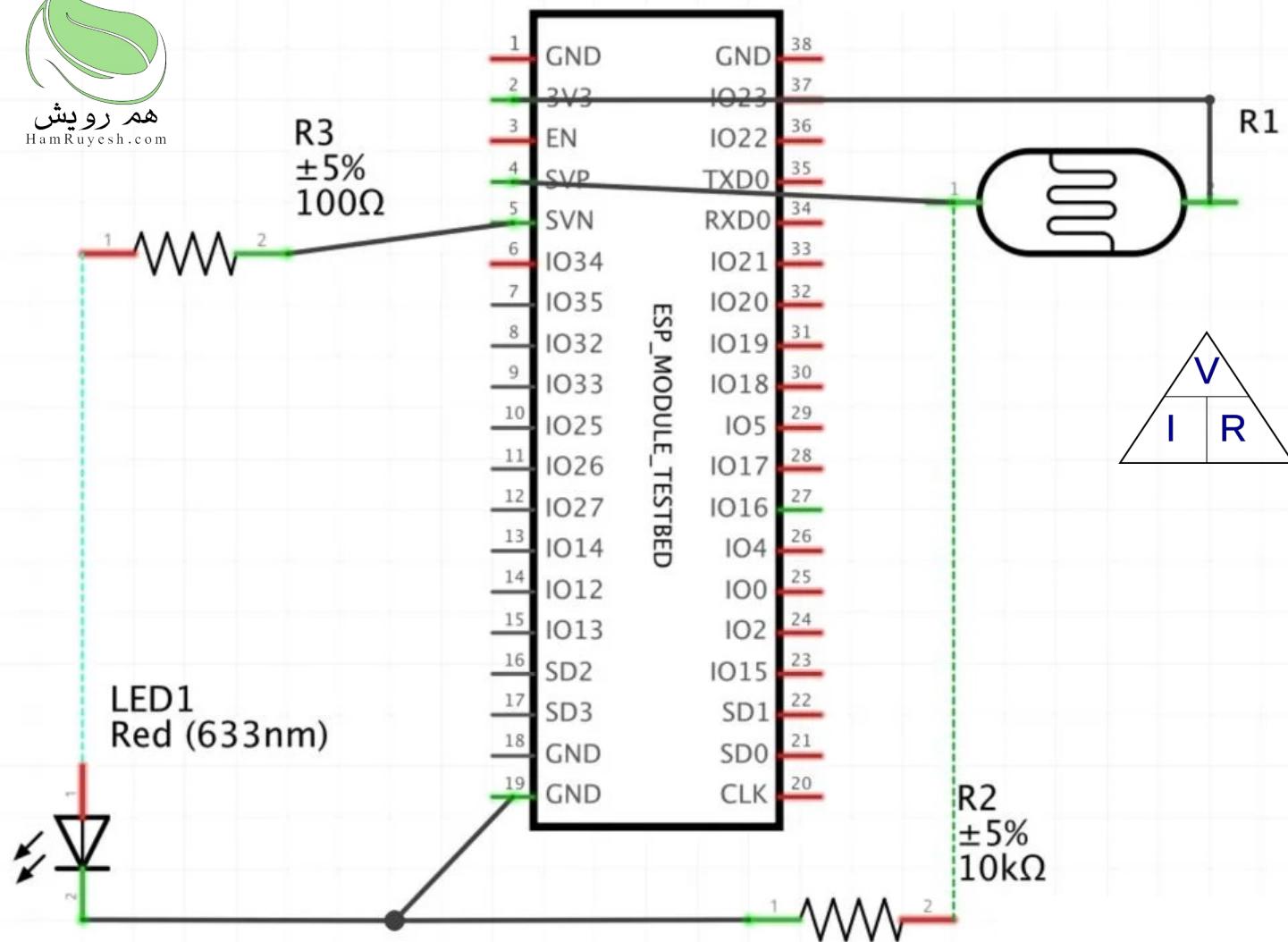
مدرس: مصطفی آصفی  
info@asefy.com



Photoresistors, also known as light dependent resistors (LDR), are light sensitive devices most often used to indicate the presence or absence of light, or to measure the light intensity.

In the dark, their resistance is very high, sometimes up to **1MΩ**, but when the LDR sensor is exposed to light, the resistance drops dramatically, even down to **a few ohms**, depending on the light intensity.





نمودار نمادین مدار  
Schematic Circuit Diagram

# تبدیل ولتاژ آنالوگ

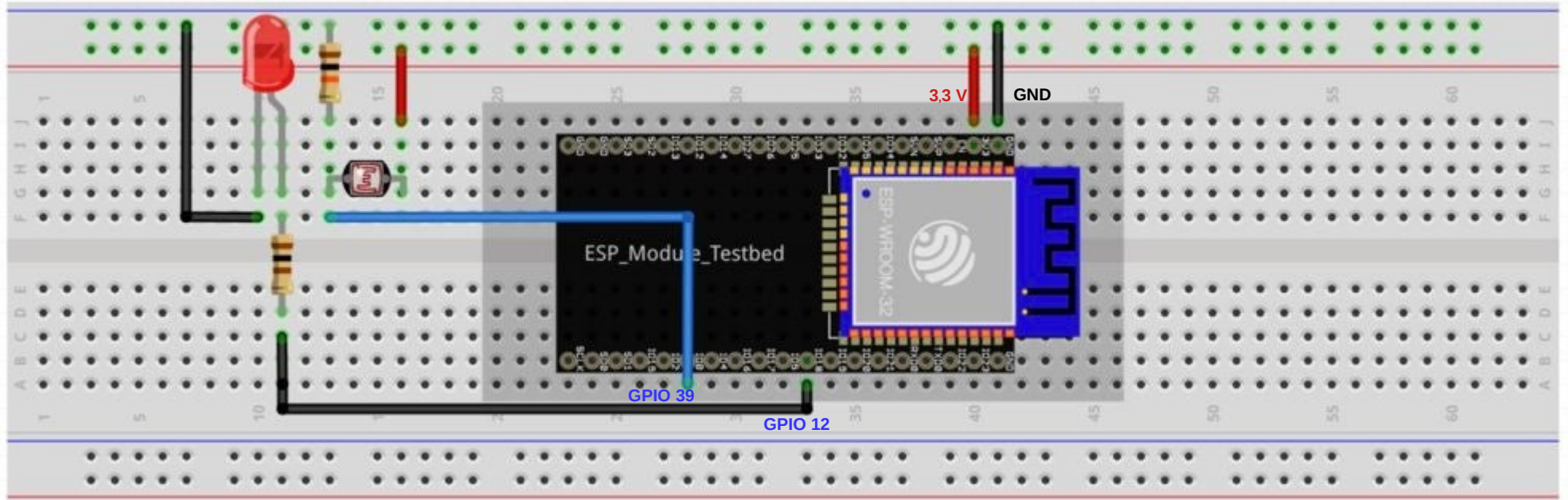


# نمودار تصویری مدار

## Pictorial Circuit Diagram



هم رویش  
HamRuyesh.com



# Decibel

$$S_{\text{dB}} = 10 \log_{10} (P_2 / P_1)$$

# Decibel

Factor 10 or Factor 20?

$$P = \frac{V^2}{R}$$

# Decibel

Factor 10 or Factor 20?

$$S_{dB} = 10 \log_{10} \frac{V_2^2}{V_1^2} = 20 \log_{10} \frac{V_2}{V_1}$$