



El-Shorouk Academy

Higher Institute of Engineering



Communication and Computer  
Engineering Department

**Course Name:**  
**Electronic circuits Analysis**

**Course Code:**  
**(ECE 222)**

**Level: 2nd Year**

**First Semester 2024/2025**

***Infrared detector using 555 IC***

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*Sec:8*



CamScanner

**Objective:**

- 1. No IR radiation: The LED remains off.**
- 2. IR radiation detected: The IR detector module sends a low signal to the 555 timer IC's TRIG (pin 2), triggering the timer.**
- 3. Timer output: The 555 timer IC's OUT (pin 3) goes high, turning on the LED.**
- 4. Timer period: Adjust the 10k $\Omega$  resistor and 10nF capacitor to change the timer's period.**

**Equipment Required:**

- 555 Timer IC
- BC547 transistor
- BC557 transistor
- IR LED or TV/DVD Remote
- IR receiver or Photo diode
- 10K resistor
- 1K resistor
- 22K resistor
- Buzzer
- LED
- Power supply 5 Volt
- 10  $\mu$ F capacitor
- 220 Ohm resistor
- Bread board

## Experiment Setup:





