



Diagram of the PCF8574 module and its connections:

- Module:** U7 PCF8574
- Power:** +3V3 and +5V supplies.
- Capacitors:** C31 (2.2uF), C32 (100nF) for bypass/decoupling.
- Resistors:** R33-R40 (1k) for LED connections; R41-R43 (1k) for jumper connections.
- Jumpers:** JP11 (A0), JP12 (A1), JP13 (A2).
- LEDs:** D26-D33 connected to the module's output pins.

Notes:

- No pull-up resistor here. Not needed because they are connected to the same bus as the other LEDs.
- These jumpers set the I2C address of the PCF8574 module.
- All pins Low, A0 HIGH: Read address = 67(decimal)
- Write address = 66(decimal)
- Datasheet here

The diagram shows the PCB8574 module with the following connections:

- Power:**
 - +3V3:** Connected to JP8 (A0_Jumper), JP9 (A1_Jumper), and JP10 (A2_Jumper). It also powers bypass capacitors C29 (2.2uF) and C30 (100nF).
 - +5V:** Connected to a series of LEDs (D18-D25) through resistors R23-R30 (1k).
- I2C:**
 - SCL_Bus_1 (pin 11):** Connected to JP8 (A0_Jumper).
 - SDA_Bus_1 (pin 12):** Connected to JP9 (A1_Jumper).
- LEDs:**
 - 4 LEDs (D18-D21) are connected to pins P0-P3.
 - 5 LEDs (D22-D26) are connected to pins P4-P7.
- Other:**
 - INT (pin 13):** Connected to GND.
 - VDD (pin 16):** Connected to +3V3.
 - VSS (pin 18):** Connected to GND.

Notes:

- JP8, JP9, JP10:** These jumpers set the I2C address of the PCB8574 module. All pins are low. Read address = 65(decimal), Write address = 64(decimal). See the Datasheet here.
- Bypass/Decoupling capacitors:** C29 (2.2uF) and C30 (100nF) are connected to the +3V3 supply.

[illegible]