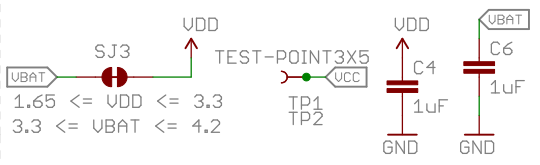


### Power Supply

The OLED needs 1.65-3.3V for its logic circuits (VDD) and 7-7.5V for its display circuitry (VCC). It features a charge-pump boost converter to generate a 7V supply (VCC) from 3.3-4.2V. The charge-pump input voltage is taken from VBAT. SJ3, closed by default, shorts VDD and VBAT. This way the same supply you use to power the logic can be boosted for the VCC supply as well. In this case, your VDD supply should be around 3.3V.



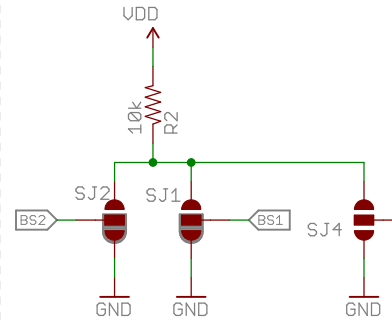
1.65 <= VDD <= 3.3  
3.3 <= VBAT <= 4.2

VCC (7.0-7.5V) will be generated by on-board DC-DC converter, as long as C3 and C2 are present. It's boosted up from VBAT. VDD current < 300 uA  
VCC current (Internally generated) = 5.8-20.9mA  
VCC current (Externally supplied) = 1.7-6.9mA

### Interface selection

The SSD1306 can be controlled via SPI, I2C, or a parallel interface.

Use the BS1 & BS2 jumpers to select the interface. The breakout defaults to SPI (BS1 & BS2 to GND).



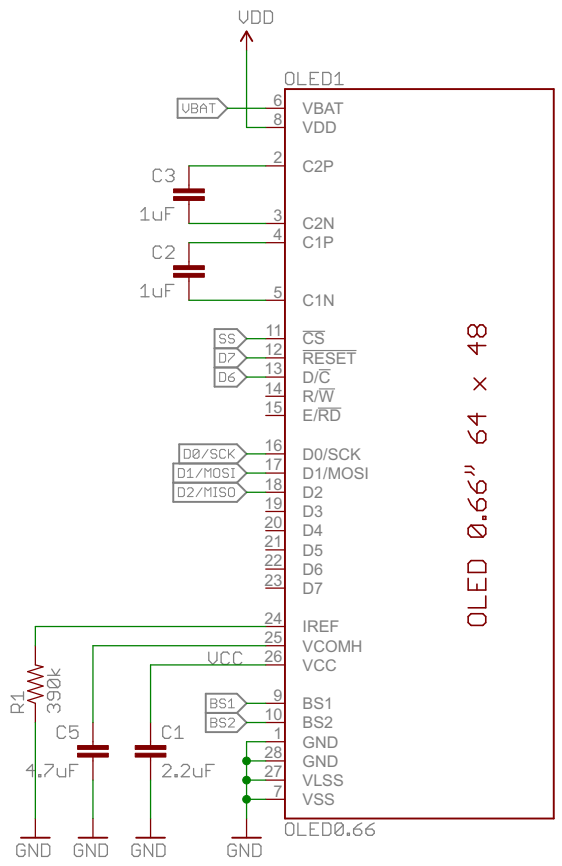
In I2C mode, D/C sets the lower bit of the 7-bit address. Short it one way or the other. Default is 0.

D/C	I2C Address
0	0x3C
1	0x3D

Interface	BS1	BS2
SPI	0	0
I2C	1	0
8-bit (6800)	0	1
8-bit (8080)	1	1

D1 (SDAin) and D2 (SDAout) are cleared for SPI mode. Short for I2C. SJ5

The D/C jumper should be open if SPI or parallel interfaces are used. In those interfaces this pin determines whether incoming signals are data or command.



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TITLE: Photon\_Micro\_OLED\_Shield\_v10a

Design by: Ben Leduc-Mills

REV: v10

Date: 9/3/2015 12:23:10 PM

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