

The LBG10 LED bar graph display provides a 0-5V meter display through the NITRO-SLG, NITRO or RXC cards (Note: NITRO & RXC cards require the Plasma-Lite V2 module)



#### Features LBG10:

- 20 LED segment meter display
- Reference voltage trim
- Brightness control
- BAR or DOT mode selection
- 0 to 5VDC input
- Small PCB footprint 1" x 2.7"
- Compatible with Dx10-8BIT, NITRO & RXC cards

#### Features LBG10-DG:

- 20 LED segment meter display
- Brightness control with Day / Night setting. (LGB10-DG Only)
- SPI digital signal inputs
- Small PCB footprint 1" x 2.7"
- Compatible with Nitro-SLG

#### Connecting the LBG10 Card:

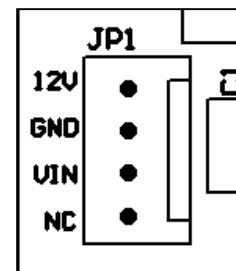
**LBG10:** Connect *JP1* to any DAC output on the NITRO or RC cards using a maximum cable length of 36" (22-24 AWG stranded wire).

**12V:** VCC pin. The DAC card must supply the required +12VDC.

**GND:** Ground pin.

**VIN:** 0-5VDC input pin.

**NC:** No contact. Leave this pin unconnected.



**LBG10-DG:** Connect *JP3* to any SPI output on the Nitro-SLG card using a maximum cable length of 36" (22-24 AWG stranded wire).

**VCC:** VCC pin. The Nitro-SLG card must supply the required +5VDC.

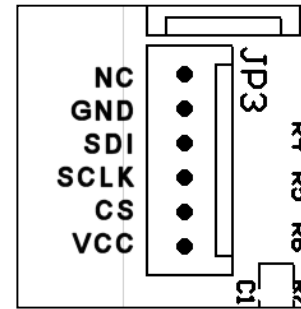
**GND:** Ground pin.

**CS:** Chip Select line. Set CS Line to LOW in device manager.

**SCLK:** SPI clock line.

**SDI:** SPI Data In line.

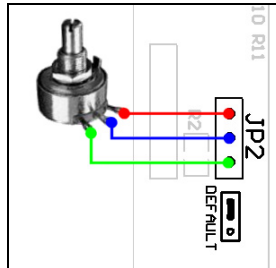
**NC:** No contact. Leave this pin unconnected.



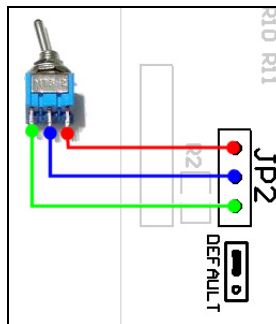
### Brightness Control:

**LBG10:** Adjust the *BRIGHTNESS* trimpot to the desired level. Note that the trimpot will only provide partial control (i.e. the LEDs cannot be turned off). This is by design.

**LBG10-DG:** Connect any suitable pot over 10k Ohms to *JP2* and adjust to desired brightness level.



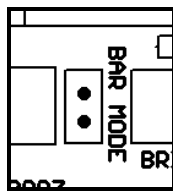
Alternately you can connect a switch to toggle between Day and Night brightness levels.



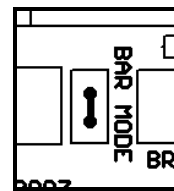
### Reference Trim (LBG10 Version Only):

Connect the LBG10 to a DAC output. Using the USBSPIDAC.exe utility, set the slider for the DAC output to maximum (i.e. 5V). Adjust the *REF TRIM* pot so that all the LEDs are turned ON.

**BAR/DOT Mode (LBG10 Version Only):**



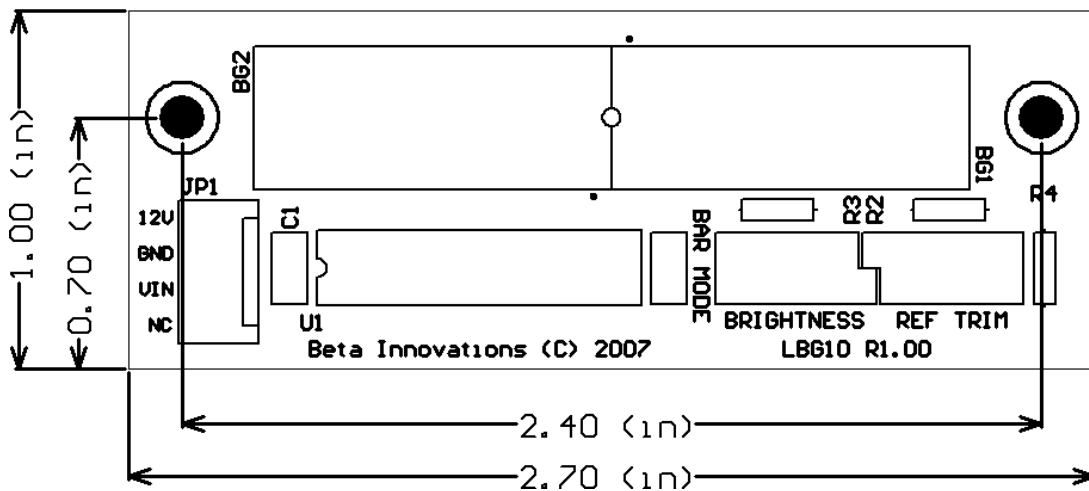
DOT mode (remove jumper)



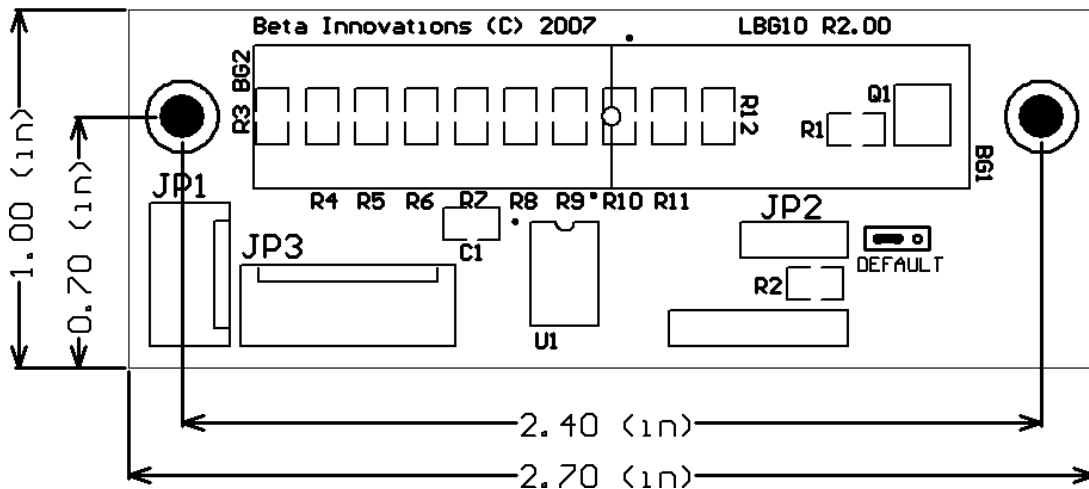
BAR mode (insert jumper)

**Mechanical Specifications:**

**LBG10 R1.00**



**LBG10-DG R2.00**



Visit [www.betainnovations.com](http://www.betainnovations.com) for the availability of expansion modules and accessories.