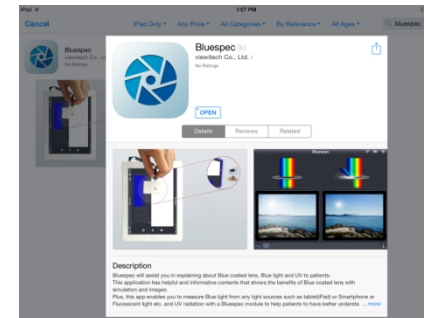




Quick Start Guide

Begin by updating your iOS device to the latest firmware (ver. 7.x +)
Install the Bluespec app, free from the iTunes App Store

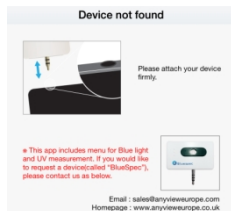
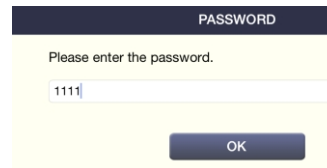


<https://itunes.apple.com/gb/app/bluespec/id845672449?mt=8>



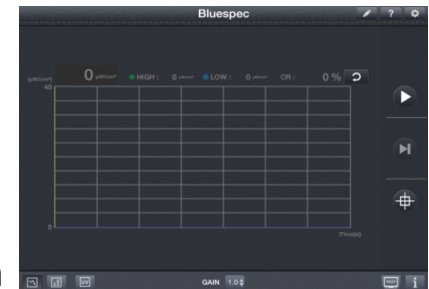
Allow access to the microphone

Enter '1111' when prompted for password
(You will only do this once upon setup)



Plug in the Bluespec device when prompted
You will now see the main test screen

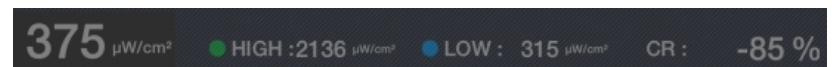
Press and follow prompt to calibrate Bluespec



To begin measuring blue light intensity press ; wait until the measurement stabilizes, then press . Position the lens you wish to demonstrate between the sensor and light source; press . Again, achieve stabilization, then press . The graph will look similar to below. Swipe across a high section, then again, across a low portion.



The readout will display the average of the high and low region selected and % difference, thus indicating a level of protection.

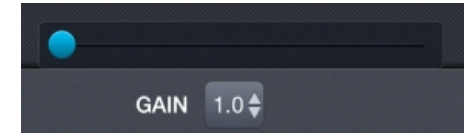


Measure UV light power by pressing . Sensor is on reverse side of the Bluespec device.



Adjusting the GAIN Settings- Bluespec has four gain levels, each capable of measuring up to a specified threshold. For accurate measurements, use the lowest possible gain setting without reaching the maximum for that stop. Maxima are:

4092 $\mu\text{W}/\text{cm}^2$ @1.0, **6138** $\mu\text{W}/\text{cm}^2$ @ 1.5, **8184** $\mu\text{W}/\text{cm}^2$ @ 2.0, **10240** $\mu\text{W}/\text{cm}^2$ @ 2.5



Spectrally tuned to measure illuminance from wavelengths between 425-465 nanometers, Bluespec displays blue light power in terms of micro-watts per square centimeter, up to 10,240 $\mu\text{W}/\text{cm}^2$ or ~ 10 milliwatts. Keep in mind damage may potentially begin at less than 1 mW/cm^2 -See Rozanowska

Links to access relevant research and literature on the hazards of high energy visible light:

<http://www.photobiology.info/Rozanowska.html>

<http://www.molvis.org/molvis/v17/a98/index.html>

<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3242847/>

<http://www.nature.com/eye/journal/v25/n1/full/eye2010149a.html>

http://ceolas.net/Docs/Zissis_et_alia_LEDs_and_Eyes_04_2011.pdf

For more detail, an online user guide for the Bluepec device can be viewed here:

<https://www.youtube.com/watch?v=Y4lwSeOgO7U>

Please direct inquiries to Bright Optical 1.877.870.0105 ext. 3 or email mbhinton@macuhealth.com