

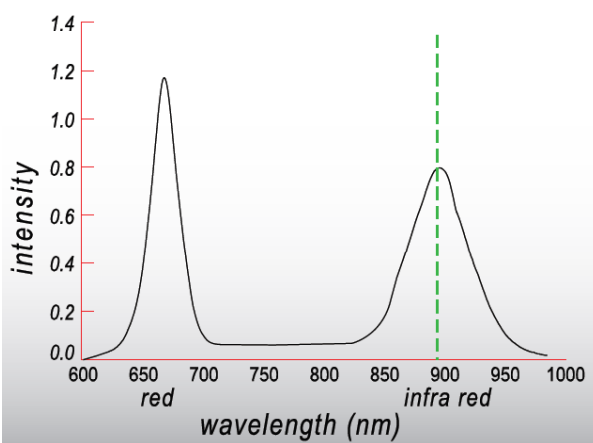
There are testers on the market specifically designed for checking SpO₂ probes. In most cases, these testers check probe continuity. However, the Lightman SpO₂ sensor tester (The Electrode Company Ltd, Usk, UK) [23] is a portable spectrometer which can test the individual performance of the LEDs used in a probe. As LEDs age, the wavelength of light they produce may drift (figure 6), which can lead to inaccuracies in the measurement of SpO₂. Quality checks can also be performed on batches of new sensors. The Lightman allows EBME technicians to check that probe LEDs are emitting the wavelengths of light specified by the manufacturer.

Figure 5. The Lightman

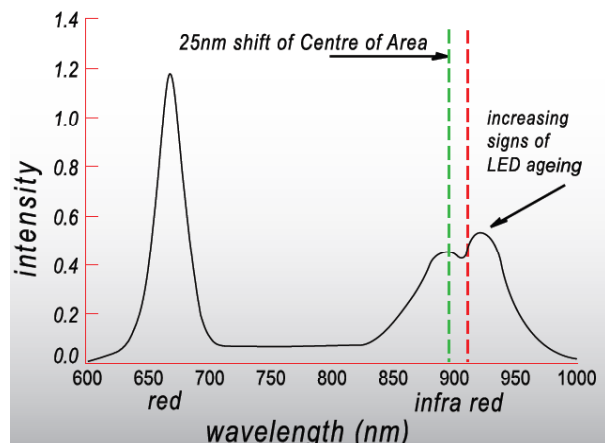


Image from the Electrode Company [23]

Figure 6. Example of how LED wavelengths drift with age



Red and infrared spectrum with no signs of ageing



Red and infrared spectrum with signs of age deterioration in the infrared LED

Image from the Electrode Company [23]