

Technical Note No. 2038 Rev. 1.0

LED Lifetime Considerations for NucleoCounter® NC-202™

The NucleoCounter® NC-202™ is a high-precision cell counter using the Via2-Cassette™ for cell sample loading and staining. This Tech Note describes the lifetime considerations of the instrument's LED light source.

LEDs are now widely used in many household applications. For years, they have been used as indicators in electronic equipment e.g. power indicator lights, car dashboard illumination, bicycle lights etc. With the development of intense and highly efficient white LEDs, they are also widely used for interior lighting.

LEDs are very stable light sources with long lifespans. In recent years, high power LEDs have been developed for solid-state lighting (SSL) applications, such as standard interior lighting in houses and buildings. Developing LEDs with an increased lifespan has made this application possible.

The typical life expectancy for an LED used in SSL applications is 50,000 - 100,000 hours when tested at an output level of 70% of the initial intensity. The LEDs contained in the NucleoCounter® NC-202™ are highly durable, as they can perform >200,000 analyses without any significant change to the count in a cell sample.