



**We are so sure
of what we do that
we guarantee our products
for a lifetime**

NITEKO 
ILLUMINAZIONE

innovation in LED lighting



Some premises about our warranty

Technology and patents

Anti-EOS



The LED is a very sensitive device with regard to certain external factors. In particular, **electric overstresses (the so-called EOS)** are caused by electrical transient events, namely voltage and current phenomena characterized by values higher than the maximum ones accepted by the LED modules.

Currents can pass through the LED series in two ways: in differential mode and common mode. If the currents in differential mode, which are highly destructive, are eliminated by modern and more efficient power supplies, those in common mode are the sneakiest as they depend on the topology of the printed circuit and the materials used. Therefore, being difficult to eliminate, **this phenomena can be destructive for LED modules.**

The LEDs affected by these parasitic currents stop functioning even if visually they appear in excellent conditions, perfectly clean and free of burns or yellowing of the primary lens.

In order to reset the lighting fixture, it is necessary to change the LED module involving the removal of the fixture and its complete replacement, **with evident inconvenience and additional expenses.** Moreover, the problem may occur again if it is not resolved upstream.

Niteko's engineers have identified this problem through field analysis and testing, so they have studied an **exclusive technological solution** to protect the lighting fixtures against electrical stresses: this is called **Advanced EOS Protection System** and allows to eliminate almost all failures caused by EOS. Thus, Niteko products can be defined as "EOS free" and result in being the most reliable lighting fixtures in the industry with a failure rate of less than 0.2% per year.

This has allowed Niteko to be the world's first manufacturer to introduce lifetime warranty for its entire range of products.

VOC FREE



Several studies and articles about lighting have shown the existence of chemical compatibility issues between LEDs and some materials used in lighting fixtures, which cause a change in light color and a loss of light intensity leading to a sharp decrease in the service life of the light source. In particular, it was found and confirmed that, at high operating temperatures, some materials and products within the lighting fixtures (such as sealants, gaskets, etc.) release certain volatile organic compounds (VOCs) that create a thin dark layer on the LED chip. This can drastically influence the LED performance, stability and color temperature.

In order to avoid such phenomena, Niteko has carried out a series of tests and chemical analysis of a minimum duration of 1.000 hours at the maximum temperatures tolerated by each component: in this way, it has been proved that all the materials used for its lighting fixtures are compatible with LEDs and do not release VOC substances. Thanks to this focus on materials, Niteko is sure to offer 100% "VOC FREE" products, guaranteed over time.

Both anti-EOS and VOC FREE patents make Niteko lighting fixtures highly reliable and long-lasting products.



► Our reply to your doubts

- Does the Limited Lifetime Warranty relate to all the components of the lighting fixture or only to some parts of it?

It relates to all the components of the LED lighting fixture with the exclusion of any remote control devices that may be present, as indicated in point 9 of the warranty conditions. The term 'remote control devices' refers to those that are external to the power supply, such as wireless and power line controllers, twilight sensors and similar, whether they are inside the power supply compartment or outside, on NEMA or other types of socket.

- What does the term "Limited" Lifetime Warranty mean?

The warranty is said to be "limited" since the lighting fixture must respect specific operating restrictions (defined by the international standards) and determined conditions, all listed in paragraphs 4 and 5 of the warranty certificate. This means that some cases are not covered by the offered warranty.

- How can the company guarantee a product for a lifetime, even after twenty years? Will the company be able to guarantee the same product even after such a long period of time?

We are aware of the evolution of technology over time and, as reported in the warranty certificate, our commitment to customers is ensuring that the defective product will be repaired or replaced within a determined period of time, according to the conditions reported in point 6 of the warranty certificate, even taking into consideration the relevant technological evolution.

- What if technology changes? Will Niteko be able to replace the existing lighting fixture with a new, more technologically advanced one?

Absolutely yes, Niteko is always in the forefront of using the best and latest technologies available on the market. Our customers will always enjoy this advantage.

- How can the manufacturer offer a warranty for such a long period?

The service life of the lighting fixtures is regulated by some specific industry standards, used for building predictive models related to the product life. Obviously, these are statistical models and, within a certain probability, a well-defined behavior is expected. Niteko is sure about the highest quality materials it uses as well as the rigorous tests it carries out on its products, so it can easily take this risk and guarantee the products to its customers for 20 years.

- How can be possible that no other manufacturer offers a warranty of equal duration?

We believe that the duration of warranty is directly proportional to the constructive quality of a product. Niteko has come to guarantee its products for a period of 20 years by making very clear choices regarding the selection of materials and electronic devices, always without compromising quality and so proving to be successful, as confirmed by the numerous tests carried out in the last years.

- Should the warranty not be valid, would the lighting fixture be repairable anyway? Would it be possible to order a new driver and / or new LED chips in order to repair the device?

In the unfortunate event that the defective device is not covered by warranty (eg. in case of improper use or due to an electrical system that is not in compliance with the regulations), after a careful analysis of the lighting fixture in the laboratory, Niteko will offer the customer a quotation for the product repair or replacement. It is always possible to buy spare parts (such as the power supply) from Niteko so that the intervention of specialized personnel is not required.

- What is the meaning of the phrase "the warranty is valid for defects exceeding the nominal failure rate of 0.1% every 1.000 hours of use"?

In order to reply to this question, let's consider the example of a lighting fixture with a matrix of 200 LEDs. In the table below, we report the cases both covered and not covered by the warranty, depending on the time of use of the product:

Period of operation	Limit number of faulty LEDs that are covered by the warranty	Limit number of faulty LEDs that are NOT covered by the warranty
10.000 hours	3 or more	Up to 2
30.000 hours	7 or more	Up to 6
50.000 hours	11 or more	Up to 10
80.000 hours	17 or more	Up to 16
100.000 hours	21 or more	Up to 20

- We bought a lighting fixture with 6 LED chips: one of these has stopped working, flashes or has changed color and the quantity or quality of the emitted light differs from the other LED chips. Does the warranty cover the aforementioned case?

In paragraph 4 point g, the warranty validity conditions are defined with particular reference to the LED matrix. Let's try to understand the meaning of "The warranty is valid for defects exceeding the nominal failure rate of 0.1% every 1.000 hours of use" by considering a lighting fixture equipped with 6 LEDs in which the break of 1 LED represents 16% of the LED matrix. In order to get to the break of this LED, still respecting the nominal failure rate, it would be necessary to reach 160.000 hours of operation so, if the LED has stopped working before 160.000 hours, the warranty conditions are respected. Therefore, you have the right to ask for the lighting fixture repair or replacement.

- Niteko reports a failure rate of 0.2% per year. What are the main causes of these faults? Does the warranty also cover them?

In most cases, they are due to the break of power supplies that, as all the electronic devices, have a failure rate different from zero. This normal mortality is covered by the warranty offered by Niteko.

- What do the abbreviations EOS and VOC-free mean?

EOS stands for Electric Overstresses and VOC stands for Volatile Organic Compounds. In the section "Technologies and Patents" (<http://www.niteko.com/en/company/technology-and-patents/>) we explain these two phenomena and the robust solution that Niteko found in order to figure these problems out.

2018 | **New products**

icona

Essentiality of the forms and maximum
functionality of the technology

— **UP TO**
125W
18.000 lm

macro

Efficiency, performance
and productivity

— **UP TO**
200W
278.000 lm

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