

LED lamps have many advantages:

- They are much less sensitive to vibration and impact
- LED lamps are wear-resistant and maintenance-free
- They are also dust and watertight
- More compact designs are possible
- Completely new designs are possible with LED technology (eg Lightguide or Running Flasher)
- LEDs use much less power than light bulbs. Savings of up to 90% are possible here.
- The lower power consumption also contributes to CO2 reduction. This is how customers also make their contribution to the environment
- Due to the extended life, the customer also saves money with reduced down time, parts and labour.

But these advantages are also a disadvantage.

Due to the low power consumption, some traction vehicles do not recognize the LED.

The result ➡ The vehicle warns the driver because of a defective light bulb.

Why do vehicles monitor the functions of a rear lamp?

The legislation clearly states in the ECE-R48 that a vehicle must monitor the function of flasher.

The vehicle must warn the driver when lamp is not working.

The Sanube Flasher Monitoring System!

The flasher monitoring system simulates the load of a bulb.

This ensures that the vehicle really recognises the LED lights.

The electronics of the flasher monitoring system are configured in such a way that in the case of a defect within the flasher function (mechanical or electronics) the simulated load switches off.

The vehicle does not recognize the function flasher and automatically warns the driver.

Versions of the Flasher Monitoring System:

Sanube offers the customer in principle 2 versions of flasher monitoring systems.

The first version in the form of an external control unit.

This is installed in the cable harness system before the rear lamp.

Disadvantage: It is an external device which must be installed additionally.

This naturally results in an additional time expenditure in assembly and an additional financial expense.



„LED-BOX small“

Sanube was the first manufacturer who integrated the flasher monitoring system in a rear lamp.

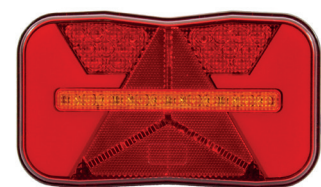
With our rear lamp „ROM IV“ we have integrated the full function of the „LED-BOX small“ into a LED tail light.

This means that the customer no longer needs an expensive, separate control unit.

As a result, LED lamps have become a genuine alternative for customers for the first time. Sanube have now extended this successful concept with the rear lamp „RIO“.



„ROM IV“



„RIO“

NOTE:
All lamps with integrated flasher monitoring system are marked with this symbol in the Sanube-catalogue.