



# Application Alley

## LED Capabilities

*"Lighting the way for decades – now with LED technology"*

Standex Electronics, manufacturer of precise, reliable, and long-lasting miniature switches, sensors, and relays has literally been lighting the way for decades. Since the 1950's they have been providing lighting solutions through their high-performing products. Through growth, acquisition, strategically partnering with customers, and applying the latest engineering designs to the needs of an ever-changing world, their technology has infused transforming results into an array of customer's needs. This ultimately allows end users the ability to seamlessly open a door, flip a switch, measure fluid levels, track an object, adjust a thermostat, fly a plane, drive a car, captain a boat, wash clothes, get a medical test, or thousands of other activities. With innovative designs and manufacturing expertise Standex-Meder plans to continue to be a leader in the lighting and electronic components industry for many years to come.

### Light Emitting Diode Trends

The trend towards using light emitting diode (LED) lighting instead of common bulbs has opened new doors for reed switches and sensors because of the changed load conditions. What makes LED lighting so attractive? Simply put, they offer lower warranty costs and greater efficiency. Use of them leads to component reduction. They draw less than average current, there is no initial turn-on surge current, and finally they have a long lifespan.

The use of LEDs also allows for important changes in electrical design. Since there is no large initial in-rush when an LED is turned on, it becomes much easier to use a reed switch to turn indicator lights on and off. With incandescent bulbs, an additional resistor was often required to reduce the in-rush current and prolong the life of the switching device. Since LEDs use less power, switching via a reed switch becomes much simpler and more feasible. LED is being used more and more in home appliances, as well as for building and automation purposes. Reed switches also offer a variety of bene-



fits when used in automotive LED lighting applications. They are capable of switching most interior automotive lighting loads directly. Reed sensors can be directly mounted to a printed circuit board or electrical circuit to make instant electrical transfer.



## Automotive Industry and LED Lighting Innovations

With the "Lighting Industry" changing via the evolution of technology, energy, and related innovations, the automotive market is searching for low cost/high returns on their manufacturing/parts that go in vehicles. Automakers are increasingly adopting LEDs as a preferred solution for internal indicator lights, running lights, tail lights, and other applications in which incandescent bulbs were previously used. By switching to LEDs, automakers can enjoy improved efficiency, reliability, and power consumption savings. The reasoning behind this switch is fivefold:

- LEDs can lower warranty costs.
- They draw less average current.
- They do not have an initial turn-on surge current.
- They allow for component reduction.
- They offer a more reliable and longer working life.



Reed switches from Standex-Meder are also robust enough to endure the conditions inside a vehicle. The switching element in their reed switch sensors is hermetically sealed, protecting the sensor from its surroundings. As a result, reed sensors can operate over a wide range of temperatures (-55°C to 155°C) and function in dirty, corrosive under-the-hood environments without any negative effects on their operating characteristics.

Component Corner (Expert Insights)  
Mark Faulhaber  
Director of Engineering, Standex-Meder

“ There is no “one size fits all” standard solution for each of these Lighting/LED applications. We use our comprehensive reed switch product platform, technical experience, and magnetic analysis tools to create custom reed switch and magnet combinations for robust functionality and reliability. Also, we utilize our experience in mechanical engineering, plastic part design, pcb design, encapsulation, and wire processing to provide a complete turnkey sensor product for each unique application. ”

Find out more about our ability to propel your business with our products by visiting [www.standexelectronics.com](http://www.standexelectronics.com) or by giving us a [hello@standexelectronics.com](mailto:hello@standexelectronics.com) today! One of our brilliant engineers or sales leaders will listen to you intently.

## About Standex Electronics

Standex Electronics is a worldwide market leader in the design, engineering, and manufacture of standard and custom electro-magnetic components, including magnetics products and reed switch-based solutions.

Our magnetics offerings include planar, current sense, and conventional low- and high-frequency transformers and inductors. Reed switch-based solutions include Meder, Kent, and KOFU brand reed switches, as well as a complete portfolio of reed relays, and a comprehensive array of fluid level, proximity, motion, water flow, HVAC condensate, hydraulic pressure differential, capacitive, conductive and inductive sensors.

We offer engineered product solutions for a broad range of product applications in the transportation, automotive, medical, test and measurement, military and aerospace, aviation, HVAC, appliance, security and safety, and general power and industrial markets.

Standex Electronics has a commitment to absolute customer satisfaction through a partner, solve, and deliver approach. With a global organization that offers sales support, engineering capabilities, and technical resources worldwide – we implement customer driven innovation that puts the customer first.

For more information on Standex Electronics, visit us on the web at [standexelectronics.com](http://standexelectronics.com).

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