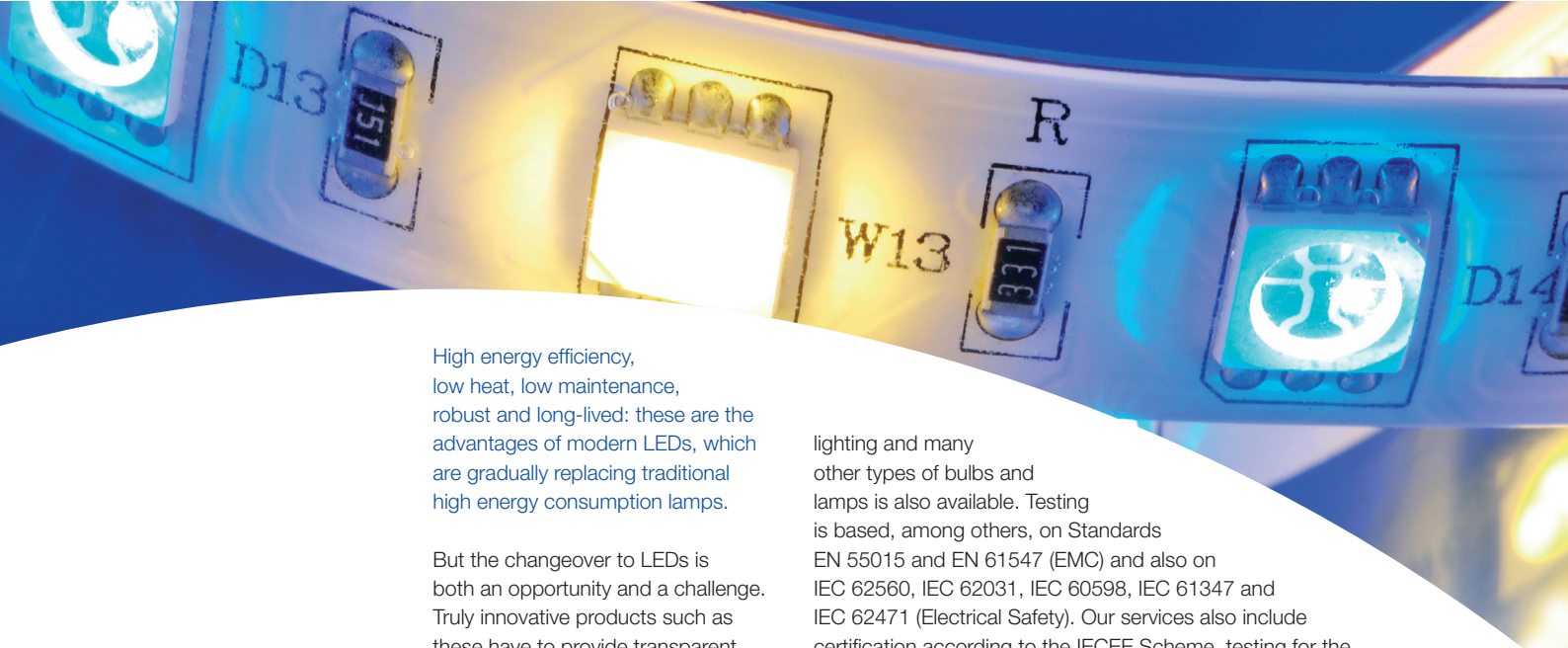


# TÜV NORD CERT – Testing of electromagnetic compatibility and electrical safety for LED lamps



High energy efficiency, low heat, low maintenance, robust and long-lived: these are the advantages of modern LEDs, which are gradually replacing traditional high energy consumption lamps.

But the changeover to LEDs is both an opportunity and a challenge. Truly innovative products such as these have to provide transparent proof of a high safety level if they are to be accepted by the mass market. For manufacturers, this not only means offering the right LED products for the right uses: as complex electronics are needed to control LEDs, a large number of legal regulations and standards have to be fulfilled. This is where TÜV NORD offers vital support with electromagnetic compatibility (EMC) and electrical safety testing.

TÜV NORD CERT offers product testing which serves as proof of conformity for CE marking of electrical and electronic lamp components right up to complete lighting systems. Testing of low-energy bulbs, LED modules and operating devices, emergency

lighting and many other types of bulbs and lamps is also available. Testing is based, among others, on Standards EN 55015 and EN 61547 (EMC) and also on IEC 62560, IEC 62031, IEC 60598, IEC 61347 and IEC 62471 (Electrical Safety). Our services also include certification according to the IECEE Scheme, testing for the GS mark and type approval examinations.

#### Target groups for service

The services are directed towards manufacturers, importers and sellers of LED systems, individual LED bulbs and lamps, and also operating devices.

#### Benefits of service

LED lighting will become ever more widespread in future – for private use, in industry and in public spaces. Within this growing market, the most successful suppliers are able to demonstrate the high quality of their products by fulfilling all requirements regarding safety, electromagnetic compatibility and performance.

Conformity of products with national and international standards, as verified by TÜV NORD CERT following successful testing, is also the prerequisite for unhindered access to the market.

#### Preconditions for service

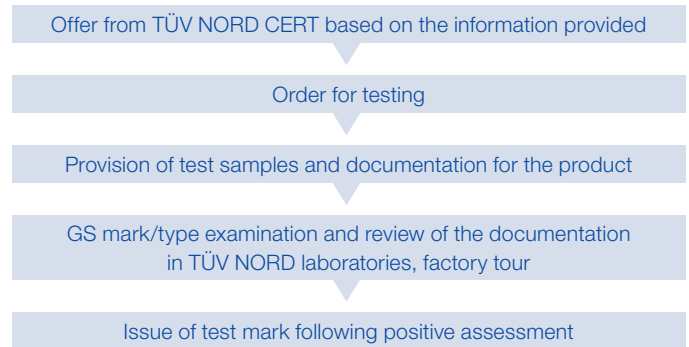
A test sample is needed for EMC testing. For electrical safety testing, complete circuit diagrams and documentation as well as data sheets of the components and materials used are required.

Apart from complete type examination or GS testing, it is of course also possible for manufacturers only to undertake individual tests for the CE marking within the framework of product qualification, such as EMC or conformity testing based on the Low Voltage Directive.

#### Our know-how for your success

TÜV NORD CERT is a well-established and reliable partner for inspection and certification services throughout the world. Our experts and auditors have extensive knowledge based on experience and are in general permanently employed by TÜV NORD. This guarantees independence and neutrality and also means that we can offer continuity in supporting our clients. The benefit to you is clear: our experts accompany and support the development of your products and provide you with objective feedback.

#### The route to the certificate



#### Are you interested?

Please send us your response by fax.

We are looking forward to hearing from you.

Yes, I am interested in certification of electromagnetic compatibility and electrical safety of LED lamps. Please contact me.

Sender (Please use block capitals)

Company .....

Postcode/Town .....

Ms./Mr. ....

Phone .....

Position .....

Telefax .....

Street, No. ....

E-mail .....

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