# Testing of Lamps, Luminaires and Lighting Components

Overview of the key directives and standards for manufacturers, distributors and retailers

## **European Directives**

| STANDARD       | DIRECTIVE   |
|----------------|---|
| (EU) 2019/2020 | Ecodesign requirements for light sources and separate control gears (required since 2021) |
| (EU) 2019/2015 | Energy labelling of light sources (required since 2021)                                   |
| (EU) 2019/1782 | Ecodesign requirements for external power supplies  |
| 2014/35/EU     | Low Voltage Directive   |
| 2014/30/EU     | Electromagnetic Compatibility (EMC) Directive   |
| 2014/53/EU     | Radio Equipment Directive (RED)   |
| 2011/65/EU     | RoHS Directive  |
| 2012/19/EU     | Waste Electrical and Electronic Equipment (WEEE) Directive                                |

# **Electromagnetic Compatibility**

| STANDARD          | PRODUCT TYPE   |  |
|-------------------|--|--|
| IEC/EN 62493      | Assessment of lighting equipment related to human exposure to electromagnetic fields (EMF)                                     |  |
| IEC/EN 61547      | Electromagnetic immunity requirements  |  |
| IEC/EN 61000-3-2  | EMC limits: Limits for harmonic current emissions  |  |
| IEC/EN 61000-3-3  | EMC limits: Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems               |  |
| CISPR 15/EN 55015 | Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar electrical equipment |  |

## **Environmental Simulation Tests**

| STANDARD     | PRODUCT TYPE  |
|--------------|---|
| IEC/EN 60529 | Ingress Protection (IP) ratings certification IP20-IP69 |
| IEC/EN 62262 | IK ratings testing IK01-IK10                            |
| DIN 18032-3  | Ball impact resistance testing of luminaires            |



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### Standards for Lighting Products (ENEC, GS, Type, CB)

| STANDARD                      | PRODUCT TYPE   |
|-------------------------------|--|
| IEC/EN 60598-1                | Luminaires: General requirements and tests (safety)                  |
| IEC/EN 60598-2 et seq.        | Luminaires: Particular requirements (safety)                         |
| IEC/EN 60570                  | Electrical supply track systems for luminaires (safety)              |
| IEC/EN 62722                  | LED luminaires (performance)   |
| IEC/EN 62471;<br>IEC/TR 62778 | Photobiological safety   |
| IEC/EN 61347-1                | Lamp control gear: General requirements (safety)                     |
| IEC/EN 61347-2 et seq.        | Lamp control gear: Particular requirements (safety)                  |
| IEC/EN 62384                  | Electronic control gear for LED modules (performance requirements)   |
| IEC/EN 62031                  | LED modules (safety specifications)                                  |
| IEC/EN 62717                  | LED modules (performance requirements)                               |
| IEC/EN 62560                  | LED lamps (>50 V AC / >120 V DC)                                     |
| IEC/EN 62838                  | LED lamps (<50 V AC / <120 V DC)                                     |
| EN 50171                      | Central safety power supply systems for emergency lighting           |
| EN 62034                      | Automatic test systems for battery powered emergency escape lighting |

### **BAUART GEPRÜFT (TYPE TESTED)**



### GEPRÜFTE SICHERHEIT (GS)



### ENEC 24 & ENEC+



# Standards for Lighting Products NRTL (cTUVus)

| STANDARD   | PRODUCT TYPE  |
|------------|---|
| UL 48      | Luminaires for Electric Signs                                       |
| UL 153     | Portable Electric Luminaires  |
| UL 962     | Household and Commercial Furnishings                                |
| UL 924     | Emergency Lighting and Emergency Power Equipment                    |
| UL 1573    | Stage and Studio Luminaires and Connector Strips                    |
| UL 1598    | Luminaires Intended for Installation                                |
| UL 8750    | LED Equipment for Use in Lighting Products                          |
| CSA 250.0  | Luminaires Intended for Installation                                |
| CSA 250.4  | Portable Luminaires   |
| CSA 250.13 | LED Equipment for Lighting Applications (Control Gear, LED Modules) |





TÜV Rheinland LGA Products GmbH Tillystraße 2 90431 Nuremberg, Germany Phone +49 911 655 5225 Fax +49 911 655 5226 service@de.tuv.com

