

## Deutsche Akkreditierungsstelle GmbH

### Annex to the Accreditation Certificate D-PL-11042-01-00 according to DIN EN ISO/IEC 17025:2018

**Valid from: 15.05.2019**

Date of issue: 15.05.2019

Holder of certificate:

**Pintsch GmbH**  
**Hünxer Straße 149, 46537 Dinslaken**

Tests in the fields:

**Photometric testing of luminaires for rail vehicles, civil aircraft, motor vehicles, ships and signalling systems for railways, shipping and aviation**

**The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkKS, to use standards or equivalent testing methods listed here with different issue dates. The testing laboratory maintains a current list of all methods within the flexible scope of accreditation.**

**This document is a translation. The definitive version is the original German annex to the accreditation certificate.**

Abbreviations used: see last page

*The certificate together with its annex reflects the status at the time of the date of issue. The current status of the scope of accreditation can be found in the database of accredited bodies of Deutsche Akkreditierungsstelle GmbH.  
<https://www.dakks.de/en/content/accredited-bodies-dakks>*

**Photometric testing of luminaires for rail vehicles, civil aircraft, motor vehicles, ships and signalling systems for railways, shipping and aviation**

DIN EN ISO 11664-3 2013-08	Colorimetry – Part 3: CIE tristimulus values
DIN 5032-1 1999-04	Photometry – Part 1: Methods of measurement
DIN 5032-2 1992-01	Photometry – Part 2: Operation of electric lamps and measurement of the respective quantities
DIN 5032-4 1999-01	Photometry – Part 4: Measurement of luminaires
DIN 5033-7 2014-10	Colorimetry – Part 7: Measuring conditions for object colours
DIN 5033-8 1982-04	Colorimetry – Part 8: Measuring conditions for light sources
DIN 5036-3 1979-11	Radiometric and photometric properties of materials; methods of measurement for photometric and spectral radiometric characteristics
DIN EN 12368 2015-09	Traffic control equipment – Signal heads
DIN EN 13032-1 2012-06	Light and lighting – Measurement and presentation of photometric data of lamps and luminaires
DIN EN 15153-1 2017-04	Railway applications – External visible and audible warning devices for trains – Part 1: Head, marker and tail lamps
CIE 15 2018	Colorimetry
CIE 63 1984	The spectroradiometric measurement of light sources
CIE 70 1987	The measurement of absolute luminous intensity distributions

**-Translation-**

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CIE 84 1989	The measurement of luminous flux
CIE 105 1993	The spectroradiometry of pulsed optical radiation sources
CIE 121 1996	The photometry and goniophotometry of luminaires
CIE 127 2007	Measurement of LEDs
CIE 130 1998	Practical methods for the measurement of reflectance and transmittance
ECE-R 6, ÄS 01 2018-10	Uniform provisions concerning the approval of direction indicators for motor vehicles and their trailers
ECE-R 7, ÄS 02 2018-02	Uniform provisions concerning the approval of front position (side) lamps, rear position (side) lamps, stop lamps and end-outline marker lamps for motor vehicles (other than motorcycles) and their trailers
ECE-R 65, ÄS 00 2017-11	Uniform conditions concerning the approval of indicator lamps for flashing lights (rotating lights) for motor vehicles
IALA Recomm. E-200-3 2008-12	Recommendation for marine signal lamps – Part 3 – Measurement

**Abbreviations used:**

CIE	Commission Internationale de l'Éclairage
ECE	Economic Commission for Europe
IALA	International Association of Lighthouse Authorities
ICAO	International Civil Aviation Organisation
UIC	Union Internationale des Chemins de Fer

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