Deutsche Akkreditierungsstelle

Annex to the Partial Accreditation Certificate D-PL-19088-01-02 according to DIN EN ISO/IEC 17025:2018

Valid from: **03.01.2024**

Date of issue: 03.01.2024

This annex is a part of the accreditation certificate D-PL-19088-01-00.

Holder of partial accreditation certificate:

TÜV Rheinland Lichttechnik GmbH, TÜV Rheinland Group
Rhinstraße 46, 12681 Berlin

With the location

TÜV Rheinland Lichttechnik GmbH
Rhinstraße 46, 12681 Berlin

The testing laboratory meets the requirements of DIN EN ISO/IEC 17025:2018 to carry out the conformity assessment activities listed in this annex. The testing laboratory meets additional legal and normative requirements, if applicable, including those in relevant sectoral schemes, provided that these are explicitly confirmed below.

The management system requirements of DIN EN ISO/IEC 17025 are written in the language relevant to the operations of testing laboratories and confirm generally with the principles of DIN EN ISO 9001.

Tests in the field of:

Testing the changes of materials in relation to air humidity and temperature; Testing for protection against foreign objects; Testing for protection against water; Testing the corrosion resistance

The testing laboratory is permitted, without being required to inform and obtain prior approval from DAkkS, the free choice of standard or equivalent testing methods.

The testing laboratory maintains a current list of all testing within the flexible scope of accreditation.

1. Testing the changes of materials in relation to air humidity and temperature

Static and dynamic tests of air humidity and temperature using a climate chamber

IEC 60068-2-1 2007-03 DIN EN 60068-2-1 2008-01	Environmental testing - Part 2-1: Tests – Test A: Cold
IEC 60068-2-2 2007-07 DIN EN 60068-2-2 2008-05	Environmental testing - Part 2-2: Tests – Test B: Dry heat
IEC 60068-2-14 2009-01 DIN EN 60068-2-14 2010-04	Environmental testing - Part 2-14: Tests – Test N: Change of temperature
IEC 60068-2-30 2005-08 DIN EN 60068-2-30 2006-06	Environmental testing - Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)

IEC 60068-2-38 2009-01 DIN EN 60068-2-38 2010-06	Environmental testing - Part 2-38: Tests – Test Z/AD: Composite temperature/humidity cyclic test
IEC 60068-2-67 1995-12 DIN EN 60068-2-67 1996-07	Environmental testing - Part 2: Tests – Test Cy: Damp heat, steady state, accelerated test primarily intended for components
IEC 60068-2-78 2012-10 DIN EN 60068-2-78 2010-10	Environmental testing - Part 2-78: Tests – Test Cab: Damp heat, steady state

2. Testing for protection against foreign objects

IEC 60068-2-68 1994-08 DIN EN 60068-2-68 1997-02	Environmental testing - Part 2: Tests - Test L: Dust and sand *4.2 Method La2*: Non-abrasive dust, constant air pressure
DIN EN 60529 2019-06	Degrees of protection provided by enclosures (IP Code) 13 Test for protection against solid foreign bodies, indicated by the first code number (*limited to IP3X, IP4X, IP5X, IP6X*)
ISO 20653 2013	Road vehicles - Degrees of protection (IP code) - Protection of electrical equipment against foreign objects, water and access 8.3 Requirements and tests for degrees of protection against foreign objects and access (*limited to IP3X, IP4X, IP5KX, IP6KX*)

SAE J575 2018-08	Test Methods and Equipment for Lighting Devices for Use on Vehicles Less than 2032 mm in Overall Width *4.12 Dust Exposure Test*
DIN EN 168 2002-04	Non-optical tests on viewing glasses *15 Testing the resistance of the surface to damage caused by small particles*

3. Testing for protection against water

IEC 60068-2-18 2017-03 DIN EN 60068-2-18 (VDE 0468-2-18) 2018-01	Environmental testing - Part 2: Tests - Test R and guidance: Water 6 Test Rb: Spray water
DIN EN 60529 2019-06	Degrees of protection provided by enclosures (IP Code) 14 Test for protection against water, indicated by the second code number (*limited to IPX3, IPX4, IPX5, IPX6, IPX9*)
DIN EN 168 2002-04	Non-optical tests on viewing glasses *16 Testing the resistance of lenses to fogging*
ISO 20653 2013	Road vehicles - Degrees of protection (IP code) - Protection of electrical equipment against foreign objects, water and access 8.4 Requirements and test for degrees of protection against water (*limited to IPX3, IPX4, IPX4K, IPX5, IPX6, IPX6K, IPX9K*)
SAE J575 2018-08	Test Methods and Equipment for Lighting Devices for Use on Vehicles Less than 2032 mm in Overall Width *4.10.1 Water Spray Test - Type A* *4.10.2 Water Spray Test - Type B*

4. Testing the corrosion resistance

DIN EN ISO 9227 2017-07	Corrosion tests in artificial atmospheres - Salt spray tests
DIN EN 60068-2-11 2000-02	Environmental testing - Part 2: Tests - Test Ka: Salt mist
SAE J575 2018-08	Test Methods and Equipment for Lighting Devices for Use on Vehicles Less than 2032 mm in Overall Width *4.13 Corrosion Test* *4.14 Corrosion Resistance Test for Reflectors of Replaceable Lens Lamps*
ASTM B117-19 2019-10	Standard Practice for Operating Salt Spray (Fog) Apparatus

Type of test	**Measurand**	**Characteristic test procedure**
Surface resistance to small particles	Scattered light component in diffusely transmitting material	DIN EN 168
climate	Rel. humidity	DIN EN 60068
	temperature	DIN EN 60068
Test for protection against solid foreign bodies (dust)	Type of dust	Din EN 60068-2-68
	Flow	
	Negative pressure	
Test for protection against solid foreign bodies (test probe)	Diameter	DIN EN 60529
	Test force	
Test for protection against water	Flow	DIN EN 60068-2-18
	Pressure	
	Temperature	
Corrosion resistance testing	Temperature	DIN EN 60068-2-11 DIN EN ISO 9227
	Amount of precipitation on collection area	
	Salt concentration	
	ph value	

Abbreviations used:

ASTM	American Society for Testing and Materials
DIN	German institut for standardisation
EN	European Standard
ISO	International Organization for Standardisation
IEC	International Electrotechnical Commission
SAE	Society of Automotive Engineers