

## Deutsche Akkreditierungsstelle

# Annex to the Accreditation Certificate D-PL-12130-01-00 according to DIN EN ISO/IEC 17025:2018

Valid from: 15.07.2022 Date of issue: 15.07.2022

Holder of accreditation certificate:

ams-OSRAM international GmbH **Reliability and Failure Analysis Laboratory** Leibnizstraße 4, 93055 Regensburg

with the location

ams-OSRAM international GmbH **Reliability and Failure Analysis Laboratory** Leibnizstraße 4, 93055 Regensburg

Tests in the fields:

Measurements on LEDs, environmental simulation and analysis of optoelectronic semiconductor components

Within the scope of accreditation marked with \*), 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 testing procedures within the flexible scope of accreditation.

\*Flexible range (1-4) – Category III Non-flexible area (page 5)

This certificate annex is only valid together with the written accreditation certificate and reflects the status as indicated by the date of issue. The current status of any given scope of accreditation can be found in the directory of accredited bodies maintained by Deutsche Akkreditierungsstelle GmbH at https://www.dakks.de.



Testing Field	Norm / in house procedure / version	Title of the standard or in-house procedure (if necessary, indicate deviations/modifications to standard procedures	Test area / restriction
Optics	CIE 127:2007	Measurement of LEDs	
Environmental- simulation	JESD22-A101: 2015	Steady State Temperature Humidity Bias Life Test	
	JESD22-A102: 2015	Accelerated Moisture Resistance – Unbiased Autoclave	
	JESD22-A103: 2015	High Temperature Storage Life	
	JESD22-A104: 2015	Temperature Cycling	
	JESD22-A105: 2011	Power Temperature Cycling	
	JESD22-A106: 2016	Thermal Shock	
	JESD22-A108: 2016	Temperature, Bias and Operating Life	
	JESD22-A113: 2016	Preconditioning of Nonhermetic Surface Mount Devices Prior to Reliability Testing	



Testing Field	Norm / in house procedure / version	Title of the standard or in-house procedure (if necessary, indicate deviations/modifications to standard procedures	Test area / restriction
	JESD22-A119: 2015	Low Temperature Storage Life	
	JESD22-B106: 2016	Resistance to Soldering Temperature for Through-Hole Mounted Devices	
	ANSI/ESDA/JEDEC JS-001: 2017	Electrostatic Discharge Sensitivity Testing Human Body Model (HBM) - Component Level	
	IEC 60068-2-2: 2007	Environmental testing - Part 2-2: Tests – Test B: Dry heat	
	IEC 60068-2-2:2007	Environmental testing - Part 2-2: Tests - Test B: Dry heat German version EN 60068-2-2:2007	
	IEC 60068-2-14: 2009	Environmental testing - Part 2-14: Tests - Test N: Change of temperature	without Na, Nb
	IEC 60068-2-14: 2010	Environmental testing - Teil 2-14: Tests - Test N: Change of temperature (IEC 60068- 2-14:2009); German version EN 60068-2- 14:2009	without Na, Nb
	IEC 60068-2-20:2008	Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads	
	DIN EN 60068-2-20: 2009	Environmental testing - Part 2-20: Tests - Test T: Test methods for solderability and resistance to soldering heat of devices with leads (IEC 60068-2-20:2008); German version EN 60068-2-20:2008	



Testing Field	Norm / in house procedure / version	Title of the standard or in-house procedure (if necessary, indicate deviations/modifications to standard procedures	Test area / restriction
	IEC 60068-2-58: 2015	Environmental testing – Part 2-58: Tests – Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	
	IEC 60068-2-58:2015	Environmental testing - Part 2-58: Tests - Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD); German version EN 60068-2-58:2015	
	IEC 68-2-67: 1995	Environmental testing Part 2-67: Tests – Test Cy: Damp Heat, Steady State, Accelerated Test Primarily Intended for Components	
	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 60068-2-67:1995); German version EN 60068-2-67:1996	
	IEC 60068-2-78: 2014- 02	Environmental testing - Part 2-78: Test methods - Test cabin: Humid heat, constant (IEC 60068-2-78:2012); German version EN 60068-2-78:2013	
	IEC 61760-1: 2016	Surface mounting technology – Part 1: Standard method for the specification of surface mounting components (SMD)	



Testing Field	Norm / in house procedure / version	Title of the standard or in-house procedure (if necessary, indicate deviations/modifications to standard procedures	Test area / restriction
Error analysis	A63501-R0108:V3	Elemental analysis with EDX	
	A63501-R0109:V3	Cross sectioning of embedded samples	
	A63501-R0110:V3	Measurement of geometrical dimensions with SEM	
	A63501-R0111:V2	X-ray analysis & evaluation	
	A63501-R0112:V3	Electron microscopy inspection	
	A63501-R0375:V1	Focussed Ion Beam (FIB) investigation	

## Verwendete Abkürzungen:

DIN Deutsches Institut für Normung e.V. NDS Hausverfahren der KBS