

# INTERNATIONAL STANDARD



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**Semiconductor devices –  
Part 18-1: Semiconductor bio sensors – Test method and data analysis for  
calibration of lens-free CMOS photonic array sensors**

INTERNATIONAL  
ELECTROTECHNICAL  
COMMISSION

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ICS 31.080.99

ISBN 978-2-8322-6909-1

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## SEMICONDUCTOR DEVICES –

**Part 18-1: Semiconductor bio sensors – Test method and data analysis  
for calibration of lens-free CMOS photonic array sensors**

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The text of this International Standard is based on the following documents:

FDIS	Report on voting
47E/643A/FDIS	47E/657/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 60747 series, published under the general title *Semiconductor devices*, can be found on the IEC website.

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- withdrawn,
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## INTRODUCTION

The IEC 60747-18 series on semiconductor bio sensors is expected to be composed of the following parts:

- IEC 60747-18-1 defines the test method and data analysis for calibration of lens-free CMOS photonic array sensor
- IEC 60747-18-2<sup>1</sup> defines the evaluation process of lens-free CMOS photonic array sensor package module
- IEC 60747-18-3<sup>2</sup> defines the fluid flow characteristics of lens-free CMOS photonic array sensor package module with fluidic system

The IEC 60747-18 series includes subjects such as noise analysis, long-term reliability tests, test methods for lens-free CMOS photonic array sensor package module under patchable environments, test methods under implantable environments, etc.

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KR1020150081134	[SOL]	The method of calibration of photon sensor pixel array by evaluating its characteristic	Subclauses 5.1, 5.2.1, 5.2.2, 5.3, 7.1
PCT/KR2016/006109	[SOL]	METHOD FOR CORRECTING OPTICAL SENSOR ARRAY MODULE THROUGH CHARACTERISTIC EVALUATION	Subclauses 5.1, 5.2.1, 5.2.2, 5.3, 7.1 Clause 6
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<sup>2</sup> Under preparation. Stage at the time of publication: IEC/PRVC 60747-18-3:2019.

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## **SEMICONDUCTOR DEVICES –**

### **Part 18-1: Semiconductor bio sensors – Test method and data analysis for calibration of lens-free CMOS photonic array sensors**

#### **1 Scope**

This part of IEC 60747 specifies the test methods and data analysis for the calibration of lens-free CMOS photonic array sensors. This document includes the test conditions of each process, configuration of lens-free CMOS photonic array sensors, statistical analysis of test data, calibration for planarization and linearity, and test reports.

#### **2 Normative references**

There are no normative references in this document.