



Edition 2.0 2025-05 REDLINE VERSION

# INTERNATIONAL STANDARD

Printed electronics – Part 401: Printability – Overview

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# INTERNATIONAL ELECTROTECHNICAL COMMISSION

# PRINTED ELECTRONICS -

# Part 401: Printability – Overview

## FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
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This redline version of the official IEC Standard allows the user to identify the changes made to the previous edition IEC 62899-401:2017. A vertical bar appears in the margin wherever a change has been made. Additions are in green text, deletions are in strikethrough red text.

IEC 62899-401 has been prepared by IEC technical committee 119:Printed electronics. It is an International Standard.

This second edition cancels and replaces the first edition published in 2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) The published IEC 62899-4XX documents are listed in the Bibliography.
- b) The definitions of printed electronics, printed pattern, and void are modified.
- c) The term printing media is specified as printing plate.
- d) The term pattern width is specified as line pattern width.
- e) The term thickness is specified as thickness of printed line.
- f) The definition of basic pattern is modified.
- g) The structure of IEC 62899-4XX series is updated according to the present projected documents numbering.

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

Draft	Report on voting
119/535/FDIS	119/542/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members\_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

A list of all parts in the IEC 62899 series, published under the general title *Printed electronics*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

## INTRODUCTION

This part of IEC 62899 contains an overview of measurements and requirements for printability in printed electronics. <u>This document</u> The IEC 62899-4XX series provides highly reliable measurements for the comparable evaluation and the necessary specifications for the quality and reproducibility of printed patterns.

The requests from industry for this document are the guarantee of both the quality and reproducibility in order to facilitate international trade and enhance user value in the field of the printed electronics.

Quality and reproducibility of the printing technology in electronics manufacturing help to facilitate international trade and enhanced user value in the field of printed electronics.

# PRINTED ELECTRONICS -

# Part 401: Printability – Overview

## 1 Scope

This part of IEC 62899 provides an overview of the IEC 62899-4XX series and explains its modular structure. The IEC 62899-4XX series establishes requirements for the printability of printed electronics. These requirements are stated as measurement of quality, reproducibility, analysis and compliance test methods, as well as measuring methods for environmental conditions.

The IEC 62899-4XX series specifies the measurements and the requirements of both the quality and the reproducibility of printed patterns as the result of the interaction of printing media, plate, ink, substrate, and environmental condition.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050 (all parts), International Electrotechnical Vocabulary (IEV) (available at www.electropedia.org)

There are no normative references in this document.





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