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INTERNATIONAL STANDARD

Printed electronics –
Part 101: Terminology – Vocabulary

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FOREWORD

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International Standard IEC 62899-101 has been prepared by IEC technical committee 119: Printed Electronics.

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

FDIS	Report on voting
119/279/FDIS	119/285/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 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 "http://webstore.iec.ch" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

Due to the trend towards a globalized, technological and connected society, there is a rising demand for a new breed of technologies enabling low-priced, flexible and new-concept products. Some conventional technologies (including silicon-based microelectronics) have reached their limits due to their high fabrication costs and environmental issues. Armed with new printing technologies and innovative materials, printed electronics has recently emerged as a promising environmentally friendly alternative route for producing electronic products at low cost and with new possibilities of such creative technologies as flexible electronics. Currently, this technology is beginning to be used in the manufacturing of products such as sensors, photovoltaic devices, signage, RFID, batteries, lighting devices, and some parts of display devices, where cost, flexibility and recycling are critical issues.

For successful industrialization of printed electronics, not only the reliability and repeatability in equipment and processes should be provided under global standardization, but also the harmonization of terminology and definitions is a key element for a successful transition of printed electronics to the market.

PRINTED ELECTRONICS –

Part 101: Terminology – Vocabulary

1 Scope

This part of IEC 62899 defines terms used in the field of printed electronics, addressing topics including, but not limited to, materials, printing processes, and print characterization. It focuses on terms that are of particular importance to printed devices. Therefore, terms that are already defined in relation to conventional electronics materials, processes, devices, components or systems that can be used in the field of printed electronics without alteration are not included in this document. Similarly, established terms and definitions in relation to printing technology that apply to the field of printed electronics are not included.

Definitions in this document are the primary reference for printed electronics terminology.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at http://www.electropedia.org/
- ISO Online browsing platform: available at http://www.iso.org/obp

3.1
1-d qualification feature
feature that is qualified by single directional parameters

3.2
2-d qualification feature
feature that is qualified by area-based qualification parameters

3.3
4-probe measurement
method to measure the resistance of a material while eliminating lead and contact resistance from the measurement result by employing separate pairs of current-carrying and voltage-sensing electrodes

3.4
annealing
<metals> treatment that alters the microstructure of a metal, causing changes in properties such as strength and hardness, in order to induce ductility and to relieve internal stresses