

INTERNATIONAL STANDARD

**Printed electronics –
Part 302-2: Equipment – Inkjet – Imaging-based measurement of droplet volume**





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CONTENTS

FOREWORD.....	3
1 Scope.....	5
2 Normative references	5
3 Terms and definitions	5
4 Droplet volume measurement	6
4.1 General.....	6
4.1.1 Overview	6
4.1.2 Volume measurement and droplet shape equalization processes.....	6
4.1.3 Imaging optics	7
4.1.4 Image shape processing.....	7
4.1.5 Calibration	7
4.1.6 Uncertainties	7
4.2 Processes for measurement of inkjet droplet volume.....	8
4.2.1 General	8
4.2.2 Process for measurement of inkjet droplet volume – Method 1.....	8
4.2.3 Process for measurement of inkjet droplet volume – Method 2.....	8
Annex A (informative) Key considerations for in-flight droplet volume measurement	10
A.1 Jetted droplet volume in printed electronics	10
A.1.1 General	10
A.1.2 Image resolution.....	10
A.1.3 Greyscale-to-binary image conversion	11
A.1.4 Absolute droplet volume	13
A.2 Formulae for inkjet droplet volume.....	14
A.3 Results	15
Bibliography.....	16
Figure 1 – Representation of greyscale drop size 1 (“native drop”) to size 7	5
Figure A.1 – Magnified droplet grey image.....	10
Figure A.2 – Threshold value influence on binary image: on the left, a threshold of 25; on the right, a threshold of 75	12
Figure A.3 – Apparent image height of objects imaged near the focal plane (FP) using a conventional lens.....	12
Figure A.4 – Example of percentage size distortion in image plane for a conventional lens ...	13
Figure A.5 – Shadowgraph of inkjet-printed droplets, ligaments and satellites in-flight	14

INTERNATIONAL ELECTROTECHNICAL COMMISSION

PRINTED ELECTRONICS –

Part 302-2: Equipment – Inkjet –
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FDIS	Report on voting
119/204/FDIS	119/216/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.

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PRINTED ELECTRONICS –

Part 302-2: Equipment – Inkjet – Imaging-based measurement of droplet volume

1 Scope

This part of IEC 62899 specifies the method for determining accurate inkjet droplet volume based on images obtained by drop-in-flight measurement systems. It does not apply to imaging systems using interference fringes, such as holography or phase Doppler anemometry. This document is not limited to drop-on-demand inkjet systems, but might not be applicable to continuous inkjet or liquid dispensing systems. This document includes a description of the issues concerning such measurements and consideration of the limits to measurement accuracy.

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

droplet volume

amount of jetted fluid from an inkjet print-head nozzle measured by single event imaging

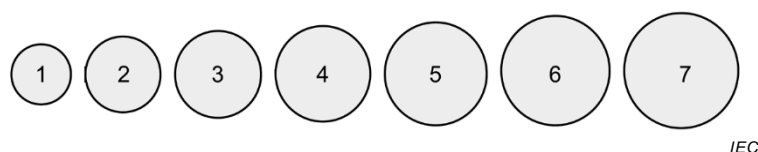
Note 1 to entry: For a single event drive pulse designed to produce sub-drops that are intended to merge in-flight to form a larger droplet (or example to form a specific greyscale image value on deposition, droplet volume refers to the large merged droplet and not to smaller component sub-drops.

3.2

native drop volume

amount of fluid within the smallest sub-drop jetted from a greyscale inkjet print-head used to create images with droplets formed by multiple sub-drops within a single event

Note 1 to entry: Native drops (or threads or satellite drops) might be too small for accurate measurements by flash imaging, but satellite drops that have merged in-flight might be large enough for drop analysis systems. (See Figure 1 for a representation of the relative sizes for greyscale droplets in-flight.)



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**Figure 1 – Representation of greyscale drop size 1
("native drop") to size 7**