

INTERNATIONAL  
STANDARD

ISO/IEC  
23385

First edition  
2022-07

---

---

**Information technology — Office  
equipment — Method for measuring  
single photo printing time for digital  
printing devices**



Reference number  
ISO/IEC 23385:2022(E)

© ISO/IEC 2022

This document is a preview generated by ELS



**COPYRIGHT PROTECTED DOCUMENT**

© ISO/IEC 2022

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office  
CP 401 • Ch. de Blandonnet 8  
CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
Website: [www.iso.org](http://www.iso.org)

Published in Switzerland

# Contents

Page

<b>Foreword</b> .....	<b>iv</b>
<b>Introduction</b> .....	<b>v</b>
<b>1 Scope</b> .....	<b>1</b>
<b>2 Normative references</b> .....	<b>1</b>
<b>3 Terms and definitions</b> .....	<b>1</b>
<b>4 Test parameters and conditions</b> .....	<b>2</b>
4.1 Test platform test setup procedures.....	2
4.1.1 Initial platform setup.....	2
4.1.2 Initial test state.....	2
4.2 Printing device system setup.....	3
4.3 Printing device connection.....	3
4.4 Printing device condition.....	3
4.5 Sample size.....	3
4.6 Sheet size and print mode.....	3
4.7 Maintenance.....	4
4.8 Test file.....	5
4.9 Environment.....	5
4.10 Voltage.....	5
<b>5 Test method</b> .....	<b>5</b>
5.1 Overview.....	5
5.2 Test measurement procedure.....	6
5.2.1 Test setup.....	6
5.2.2 Single photo printing time.....	6
5.3 Test method process.....	8
5.3.1 Suggested flow chart.....	8
5.3.2 $\pm 5$ % consistency criteria.....	8
<b>6 Calculations and treatment of data</b> .....	<b>9</b>
<b>7 Presentation of results</b> .....	<b>9</b>
7.1 General.....	9
7.2 Minimum declaration.....	9
7.3 Report.....	10
7.4 Full detailed report.....	10
<b>Annex A (informative) Full detailed report example</b> .....	<b>11</b>
<b>Annex B (normative) Test file</b> .....	<b>13</b>
<b>Annex C (normative) Procedure to establish ready delay time</b> .....	<b>14</b>
<b>Bibliography</b> .....	<b>17</b>

## Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see [www.iso.org/directives](http://www.iso.org/directives)).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see [www.iso.org/patents](http://www.iso.org/patents)).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see [www.iso.org/iso/foreword.html](http://www.iso.org/iso/foreword.html).

This document was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 28, *Office equipment*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

## Introduction

In recent years, photo printing devices have become widely available leading to widespread adoption of photo printing. Digital photo printing devices usually produce photoprints in short time.

The existing international standard (ISO/IEC 24734) for measuring printing productivity mainly addresses a method for measuring business documents. These documents may be multiple copies and consist of mixed content of text and graphics, on 8,5" × 11", A4, A3, and 11" × 17" paper typically used in offices. Another existing international standard (ISO/IEC 17629) for measuring first page out time addresses first page productivity of business documents at various states (ready, sleep, off) of devices.

This document provides a method and a procedure for measuring single photo printing time of digital photo printing devices. It allows manufacturers of digital photo printing devices to describe the single photo printing time and it allows buyers to compare various digital photo printing devices with respect to representative photo size and usage.



# Information technology — Office equipment — Method for measuring single photo printing time for digital printing devices

## 1 Scope

This document specifies a method for measuring single photo printing time of digital photo printing devices on a wide range of print technologies. This document is applicable to digital photo printing devices that can produce photo prints on either 2" × 3" (51 mm × 76 mm), L (89 mm × 127 mm), 4" × 6" (102 mm × 152 mm), A6 (105 mm × 148 mm), A4 (210 mm × 297 mm), 8,5" × 11" (215,9 mm × 279,4 mm), 11" × 17" (279,4 mm × 431,8 mm), A3 (297 mm × 420 mm) or A3+ size sheets. Devices can be connected to either the computer system, media card or mobile devices. This document includes test setup procedure, test runtime procedure and reporting requirements for the digital single photo printing time measurements. Instant photoprint systems, which do not complete image formation at the time of paper ejection from device, are out of the scope of this document.

NOTE Inkjet, thermal transfer, dye-sublimation, electro photo and colour or monochrome thermal activated systems (such as ZINK<sup>®1)</sup>) are typical technologies of the scope.

## 2 Normative references

ISO/IEC 24734, *Information technology — Office equipment — Method for measuring digital printing productivity*

## 3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO/IEC 24734 and the following apply.

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

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

### 3.1

#### A3+

sheet size similar to A3 but slightly larger than A3

Note 1 to entry: A3+ is slightly larger in each dimension than A3. Examples of A3+ are 329 mm × 483 mm and 320 mm × 450 mm (SRA3).

### 3.2

#### default driver

printing device driver that is selected as the default per the manufacturers' installation procedure

### 3.3

#### full detailed report

presentation of information including device setup and measured test results

Note 1 to entry: An example of full detailed report is shown in [Annex A](#). Also refer to [7.4](#)

1) ZINK is an example of a suitable product available commercially. This information is given for the convenience of users of this document and does not constitute an endorsement by ISO or IEC of this product.