



## STANDARD ST.7/E

### GUIDELINES FOR PHOTO-OPTICALLY GENERATED MICROFICHES

*Editorial Note by the International Bureau*

The microform technology covered by the series of WIPO Standards [ST.7](#), [ST.7/A](#), [ST.7/B](#), [ST.7/C](#), [ST.7/D](#), [ST.7/E](#), and [ST.7/F](#) has been replaced with new IT products (e.g., CD-ROM, DVD, etc.) since these Standards were first adopted during the 1980's. Therefore, due to the very limited use of this media by industrial property offices, no further review of these Standards has been carried out since the year 2000 (e.g., according to the decisions by the SCIT Standards and Documentation Working Group, at its second session, on December 6, 2002, Standard [ST.7/A](#) was not updated to incorporate revision to Standard [ST.6](#); according to the decisions by the SCIT Standards and Documentation Working Group, at its fourth session, on January 30, 2004, Standards [ST.7/A](#) and [ST.7/E](#) were not updated to incorporate revision to Standard [ST.8](#)). It is not expected that any additional offices will be providing data on this media in the future. (See paragraph 51 of document SCIT/SDWG/8/14.)



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### GUIDELINES FOR PHOTO-OPTICALLY GENERATED MICROFICHES

#### INTRODUCTION

1. These guidelines relate to transparent A6 size photo-optically generated microfiches when used as an information carrier in exchange among or general distribution to industrial property offices of *individual patent documents*, patent related texts or data.
2. The purpose of these guidelines is to provide a mutually satisfactory basis for the use of photo-optically generated microfiches by establishing a standardized format and acceptable quality criteria and by establishing criteria for the manner of supplying microfiches.
3. In the elaboration of these guidelines, the International Standard ISO 5126 was taken into account as far as applicable with regard to the quality of the microfiches, and the International Standard ISO 2707 was considered with regard to the image arrangements.
4. These guidelines are based on the assumption that first generation film will not be offered for exchange but, in fact, a subsequent negative generation of film, most likely not more than second generation. It is recognized, accordingly, that attainment of the specified minimum quality in the image generation to be disseminated requires commensurate quality in the earlier generation(s), giving due regard to the nominal losses which occur in image transfer processes.

#### PHYSICAL CHARACTERISTICS

##### *Sheet size*

5. The external shape of the microfiche shall be a rectangle of the following sizes and manufacturing tolerances:

$$\begin{array}{rcc} & 0 & 0 \\ 105 & \text{mm} & \times & 148 & \text{mm} \\ & -0.25 & & -0.25 & \end{array}$$

The tolerances specified apply immediately after processing. The measurements shall be made when the film has come to equilibrium at  $23 \pm 2^\circ\text{C}$  and  $50 \pm 5\%$  relative humidity.

##### *Thickness*

6. The thickness of the microfiche shall be such as to provide sufficient stiffness for easy handling. The gross thickness ranges of the microfiche exclusive of the heading area backing, if any, shall be the following:

Cellulose acetate film:	0.13 mm to 0.23 mm
Polyester base film:	0.10 mm to 0.23 mm

An opaque or translucent backing for the heading area is optional (N.B., the use of such backing restricts further duplication). If a heading area backing is used, it shall not increase the thickness of the fiche by more than 0.01 mm.

##### *Identification of sensitized side*

7. To facilitate microfiche-to-microfiche copying, a notch or a corner cut may be used to identify the sensitized layer of the microfiche. When a notch is used, it shall be made in the shorter side of the sheet, near the appropriate corner. The notch may be of any shape, but it shall not penetrate more than 1.6 mm inward from the edge of the microfiche. When a corner cut is used, it shall be made in the appropriate corner of the heading area only. The cut shall extend a nominal 6 mm along the longer side of the microfiche and a nominal 9 mm along the shorter side of the microfiche.



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8. The sensitized side shall be identified by one of the following methods:

Method A – When a sheet of raw film or a microfiche is held with the long sides in a horizontal position and the notch in the lower right-hand corner, or the corner cut is in the upper left-hand corner, the sensitized side will be towards the observer.

Method B – When a sheet of raw film or a microfiche is held with the long sides in a vertical position and the notch or corner cut is in the upper right-hand corner, the sensitized side will be towards the observer.

### *Corner rounding and measurements involving cut-off corners*

9. The corners of the microfiche may be rounded, with the exception of the corner which has been subjected to a corner cut (see 7, above). When corners are rounded, the process shall not remove more than 3 mm of either of the two edges forming the corner. Where segments of an edge have been removed by corner rounding or corner cuts, a straight line extending the remainder of the edge in the relevant direction shall constitute the basis for measuring dimensions and spacing.

10. All measurements will be made from the bottom edge and the left-hand corner of the microfiche as reference.

## FRAME SIZE AND FORMAT

### *General layout*

11. The following table specifies the arrangements that shall be used for photo-optically generated microfiches:

Arrangement	Image Area	Single Frame			Double Frame			See Figure
		Columns	Rows	Number of Frames	Columns	Rows	Number of Frames	
No.1	82.5 mm x 141 mm	12	5	60	6	5	30	1
No.2	87.5 mm x 140 mm	14	7	98	7	7	49	2 and 3

The reduction shall be of 1:12 to 1:25.5 depending on the size of the document.

12. If the intended use of the microfiche is the international exchange of (complete) patent documents, no more than one document shall be filmed on one single microfiche. If, in exceptional cases, the number of pages of the patent document exceeds the number of image areas available, trailer fiches shall be produced.

### *Micro-image placement and orientation*

13. Format and image arrangement shall be that of International Standard ISO 2707, No. 1 and No. 2. Micro-images shall be positioned according to the grid pattern shown in figures 1 and 2 in such a manner that, when the fiche is held so that the heading is right-reading and upright, micro-images shall always be right-reading and, whenever possible, upright.

14. Drawings or tables, which cannot be filmed upright on the microfiche, shall appear on the fiche rotated 90° counterclockwise from the upright position.

15. Drawings or the like which can be accommodated in a double, but not in a single, frame according to International Standard ISO 2707, No.1 and No.2.



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### *Reduction*

16. In order to provide a close compatibility with WIPO Standard [ST.7/A](#), the reduction of A4 size documents shall be so that there is a margin of at least 0.125 mm between the information area and the adjacent microfiche frame boundary. Smaller size documents shall reasonably fill the frame area.

### *Heading area*

17. The heading area above the image area of each microfiche shall be reserved for identification references. All characters in the heading area shall be upright and right-reading. All entries shall be readable without magnification.

18. The minimum areas reserved for the heading are indicated in figures 1 and 2. If additional heading space is required, the area allocated to the next entire row or rows of images shall be used. When more than one row is used for the heading, the frame identification, as specified in paragraphs 21 and 22, below, shall remain unchanged. The heading area constitutes the top of the microfiche. The minimum area reserved for the heading shall be used only for heading and identification purposes on all microfiche, and not for micro-images.

19. For microfiches used as unit record document carrier for exchange of patent documents:

(a) the main portion of the heading area shall be utilized for the identification of the document which shall comprise at least:

- the indication of the issuing office or the country of origin; if abbreviated the two-letter country code (WIPO Standard [ST.3](#)) shall be used
- the kind of document identified by the kind-of-document code (WIPO Standard [ST.16](#))
- the document number, to be placed in the top right portion;

(b) the main portion of the heading area should further preferably also be used for indicating at least the first IPC symbol allotted to the document;

(c) the extreme right-hand portion of the heading area shall be utilized for indicating how many microfiches have been used to record the document and the current number of the fiche within this series. If no trailer microfiche is required, this space may be left blank.

20. For microfiches containing patent-related text or data, the heading area shall be utilized as follows:

(a) The left portion of the area shall be dedicated to the identification of the subject. The country of origin shall be identified by the two-letter country code (WIPO Standard [ST.3](#)).

(b) The extreme right-hand portion shall be utilized for trailer microfiche identification. If no trailer microfiche is required, this space may be left blank.

(c) Other identification shall be put in between the two areas mentioned above.

### *Pagination*

21. When the microfiche is held so that the heading is upright and right-reading, the first micro-image shall be placed in the top left corner of the grid area. Succeeding frames shall appear either in sequence downward from left to right from column to column (vertical pagination), or in sequence from left to right and downward from row to row (horizontal pagination).



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### *Trailer microfiche identification*

22. When trailer microfiches are used, each microfiche in the set, including the first one, shall be identified sequentially. Where practicable the last microfiche in the set should be identified as the last one. This may be accomplished by using the technique 1 of 3, 2 of 3, 3 of 3, etc.

### *Frame identification*

23. When coordinate identification is used for location of images, alphabetic letters shall be used to identify rows. Starting at the top row below the heading area, the first row shall be A, the second row B, etc., as indicated in figure 3.

24. Columns shall be identified by numerals starting at the left. The first column shall be 1, the second 2, and so on. The indication of coordinates on the microfiche is optional. If coordinates are shown on the microfiche, they shall be located in the margins (see figure 3) or in the lower portion of the heading area. <sup>(1)</sup>

### AUTOMATION REQUIREMENTS: CUTTING MARK

25. Each microfiche may carry a cutting mark to provide for automatic cutting of processed roll film into microfiche. This cutting mark shall be 3.0 mm x 3.0 mm square, and the center of the square shall be located  $32.0 \pm 0.2$  mm from the left edge of the microfiche, with the bottom edge of the square within 0.2 mm of the bottom edge of the microfiche.

### INDEX FRAME

26. If an index to a microfiche is to be provided, the last micro-image of the index shall be placed at the bottom right corner of the grid area. Preceding index frames shall appear in reverse sequence subtracting from the allotted format. In the case that one or more trailer microfiche(s) are used, each microfiche including the first shall contain index frame(s) containing identical index information relating to the whole document. The index can contain, in addition to other information, an indication of the location where important pages of a patent document are to be found on the or each of the microfiche(s), e.g., those frames of the microfiche(s) containing the claims, the drawings and the description.

### QUALITY REQUIREMENTS

#### *Density*

27. The density difference in the micro-image between the image area of the background paper and the ink shall be such that two subsequent generation contact, reduction film copies and enlargement paper prints can be made without appreciable loss of information.

28. This condition shall be considered fulfilled in exchange microfiche if the density difference between the image and background areas of documents of good paper and ink is at least  $1.1 \pm 0.2$  where the density of the base plus fog of unexposed areas is no greater than 0.15.

29. Density values shall be determined by measuring with a properly calibrated densitometer the amount of diffused light transmitted through the film.

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<sup>(1)</sup> When coordinates are placed in the bottom margin, they may interfere with automatic cutters sensing the cutting mark.



*Legibility*

30. Dissemination microfiche should have a legibility index quality ("q" value) of at least 7 in accordance with the Quality Index Equation

$$R = \frac{qr}{e}, \text{ where:}$$

R = the resolving power in lines per millimeter on the film, determined in accordance with International Standard ISO 3334-1976 ("ISO Test Chart No.2 – Description and use in photographic documentary reproduction");

e = the height in millimeters of the lower case "e" in the type copied;

r = the reduction ratio; and

q = an arbitrary "quality index".

*Legibility of reproduction copies*

31. The subsequent generation which serves as the user copy shall meet the same legibility standard as that described for the first generation.

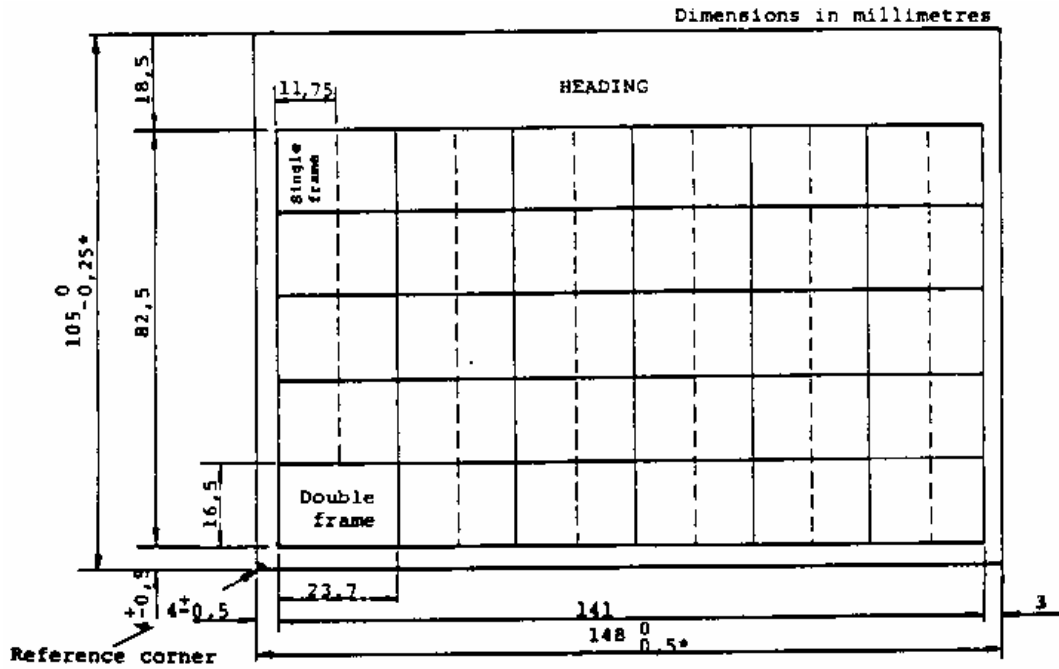
*Curl and bow*

32. A fully processed microfiche cut to distribution size shall be placed convex side down on a flat surface for at least 6 hours in an atmosphere in which the temperature is  $23 \pm 2^\circ\text{C}$  and the relative humidity  $50 \pm 5\%$ , after which no part of the microfiche shall be more than 6.5 mm above the surface.

*Packaging*

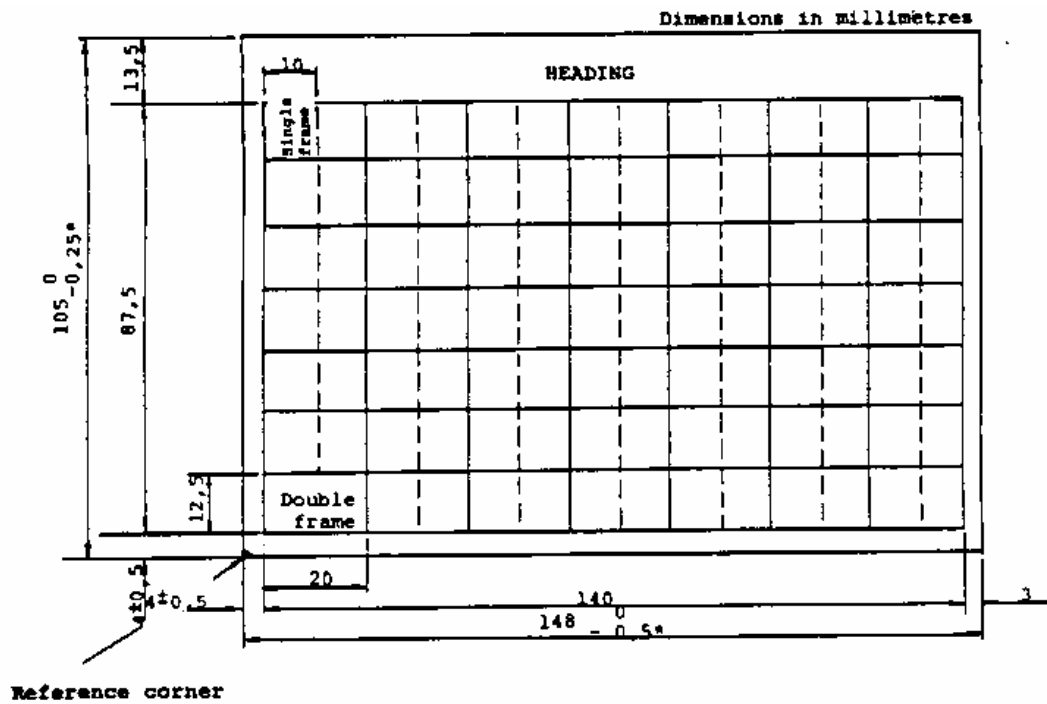
33. Microfiche to be disseminated shall be clean, dry and packaged in a manner that will afford adequate protection against deterioration and physical damage, e.g., by packaging in sealed plastic bags. The microfiche shall be protected from bending, curling or distortion by the use of paperboard or fiberboard stiffeners.

34. Each microfiche, or, in case trailer microfiches are used, the complete set of microfiches, but not more than 4, may also be furnished in a paper envelope. In order to permit the reading of the information contained in the heading area, the envelopes shall be of such quality as to provide physical protection of the microfiches for storing and handling and be free of chemicals which may cause deterioration of the microfiches.



\* Manufacturing tolerances for raw film.

Figure 1 – Image Arrangement No. 1



\* Manufacturing tolerances for raw film.

Figure 2 – Image Arrangement No. 2

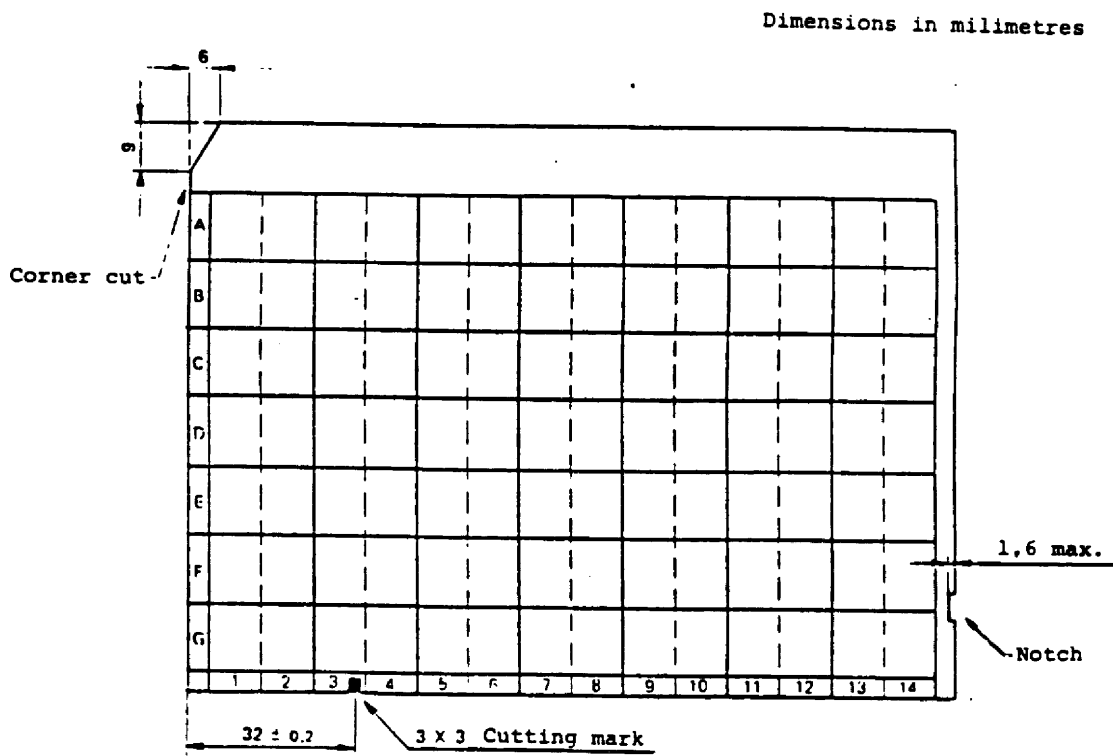


Figure 3 – Example of microfiche of uniform division, using image arrangement No. 2

[\[WIPO Standard ST.7/F follows\]](#)