

International Standard



8038

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Optics and optical instruments — Microscopes — Screw thread for objectives

Optique et instruments d'optique — Microscopes — Filetage de fixation des objectifs

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Foreword

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Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 8038 was prepared by Technical Committee ISO/TC 172, *Optics and optical instruments*.

Users should note that all International Standards undergo revision from time to time and that any reference made herein to any other International Standard implies its latest edition, unless otherwise stated.

Optics and optical instruments — Microscopes — Screw thread for objectives

1 Scope

This International Standard specifies the dimensions of a screw thread for connecting a microscope objective to the nose-piece.

NOTE — The values given in this International Standard conform, except for the length of the thread lug¹⁾ (see figure 1), to the internationally used screw thread laid down by the Royal Microscopical Society, London, in 1858, and published in the *Journal of the Royal Microscopical Society*, Ser. 3, Vol. 56, pp. 377-379, as Royal Microscopical Society Standard (RMS-Standard) in December 1936 after revision.

2 Field of application

The use of this screw thread is recommended for all microscopes unless other fittings are required for optical or design reasons.

Objectives which are not optically compatible with other existing microscope systems are not restricted to the maximum thread length of 5 mm.

3 Dimensions

The dimensions of the screw thread shall be as illustrated in figure 2 and given in the table.

Table

Dimensions in millimetres

Dimensions for		External diameter		Pitch diameter		Core diameter		Calculated play between internal and external threads		Allowances	Tolerance	
External thread	max.	D	20,396	D ₂	19,944	D ₁	19,492	—	Maximum play 0,198	+ 0,076	0,076	
	min.		20,320		19,868		19,416	Minimum play 0,046		0		
Internal thread	max.	d	20,274	d ₂	19,822	d ₁	19,370	—			− 0,046	0,076
	min.		20,198		19,746		19,294				− 0,122	

NOTE — See also figures 1 and 2.

1) The length of the thread lug according to this International Standard is 5 mm max. The RMS-Standard specifies the length of the thread as 3,175 mm and the length of the guide cylinder as 2,540 mm, thus giving a total of 5,715 mm.