TC121

International Standard ISO 7376/2

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Laryngoscopic fittings — Part 2 : Miniature electric lamps — Screw threads and sockets

Éléments de laryngoscopes — Partie 2 : Lampes électriques miniatures — Filetages et douilles

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Descriptors : medical equipment, laryngoscopes, incandescent lamps, miniature lamps, screw threads, sockets (threaded), dimensions.

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.

International Standard ISO 7376/2 was developed by Technical Committee ISO/TC 121, *Anaesthetic equipment and medical breathing machines*, and was circulated to the member bodies in December 1981.

It has been approved by the member bodies of the following countries :

Australia	Japan	Sweden
Canada	Mexico	United Kingdom
China	Netherlands	USA
Czechoslovakia	New Zealand	USSR
Egypt, Arab Rep. of	Romania	
France	South Africa, Rep. of	

The member body of the following country expressed disapproval of the document on technical grounds :

Germany, F.R.

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Laryngoscopic fittings — Part 2 : Miniature electric lamps — Screw threads and sockets

0 Introduction

This part of ISO 7376 has been prepared in order to specify screw threads for miniature electric lamps and lamp sockets used in laryngoscopes as described in part 1, to ensure the interchangeability of lamps in laryngoscopes made by different manufacturers.

As a large number of blades with inch series threads are in daily use and have a long life expectancy, the technical committee responsible for this part of ISO 7376 has decided to adopt one size of socket with a specified inch series screw thread to accept a miniature electric lamp of most widely used size so that universal interchangeability can be promoted.

A limited number of blades manufactured with smaller sockets and lamps (for paediatric and other special uses) employ other screw threads but the majority of paediatric blades can employ this standardized lamp without compromising clinical safety and effectiveness.

1 Scope and field of application

This part of ISO 7376 specifies requirements for screw threads for miniature electric lamps and lamp sockets used in laryngoscopes as described in part 1 of this International Standard. The contact form and general dimensions of these lamps are also specified.

2 References

ISO 262, *ISO general purpose metric screw threads — Selected sizes for screws, bolts and nuts.*

ISO 263, *ISO inch screw threads — General plan and selection for screws, bolts and nuts — Diameter range* 0.06 *to* 6 in.

ISO 5864, *ISO inch screw threads — Allowances and tolerances.*

ISO 7376/1, Laryngoscopic fittings — Part 1 : Hook-on type handle blade fittings.

3 Definitions

3.1 lamp : Electric filament bulb intended to provide illumination during laryngoscopy.

3.2 metal cap : Metallic outer housing of the lamp which provides electrical contact and mechanical engagement of the lamp by means of a male screw thread.

3.3 socket : Component with a female screw thread attached to the laryngoscope blade and intended to provide electrical contact and mechanical engagement with the lamp.

4 Materials

Components of electrical contacts shall be made of corrosion resistant high conductivity metals to ensure durability and low electrical resistance in the circuit between the handle and the lamp.

5 Electric lamp

5.1 Metal cap and base contact

The metal cap and base contact of the electric lamp including insulation and washer shall be in accordance with the figure and table 1. The outside of the metal cap shall be designed to facilitate insertion and removal of the cap from the socket. The base contact of the lamp shall be rigidly mounted, and shall be capable of withstanding the axial force applied during insertion of the lamp without causing the contact length measured from the shoulder of the bulb housing (F) to be reduced.

5.2 Screw thread

The screw thread of the metal cap shall be in accordance with No. 8-32 UNC-2A of ISO 263 and ISO 5864 (manufacturing tolerances calculated by the method specified in ISO 5864 are given in table 2).

NOTE — The technical committee responsible for this part of ISO 7376 acknowledges that in some countries a metric thread for example M4 × 0,5 in accordance with ISO 262, is commonly used. This thread is not compatible with the widely used thread specified in this part of ISO 7376.

6 Socket

6.1 Dimensions and centre contact

The socket dimensions shall be in accordance with the figure and table 1.

The socket shall provide a grip which prevents rotation of the lamp once screwed in position. When the lamp is unscrewed it shall cease to be lit at least one full turn prior to disengagement of the screw threads from the socket.

The centre contact shall have a mechanism for maintaining electrical contact with the lamp, for example, a spring.

6.2 Screw thread

The screw thread of the socket shall be in accordance with No. 8-32 UNC-2B of ISO 263 and ISO 5864 (manufacturing tolerances calculated by the method specified in ISO 5864 are given in table 2).

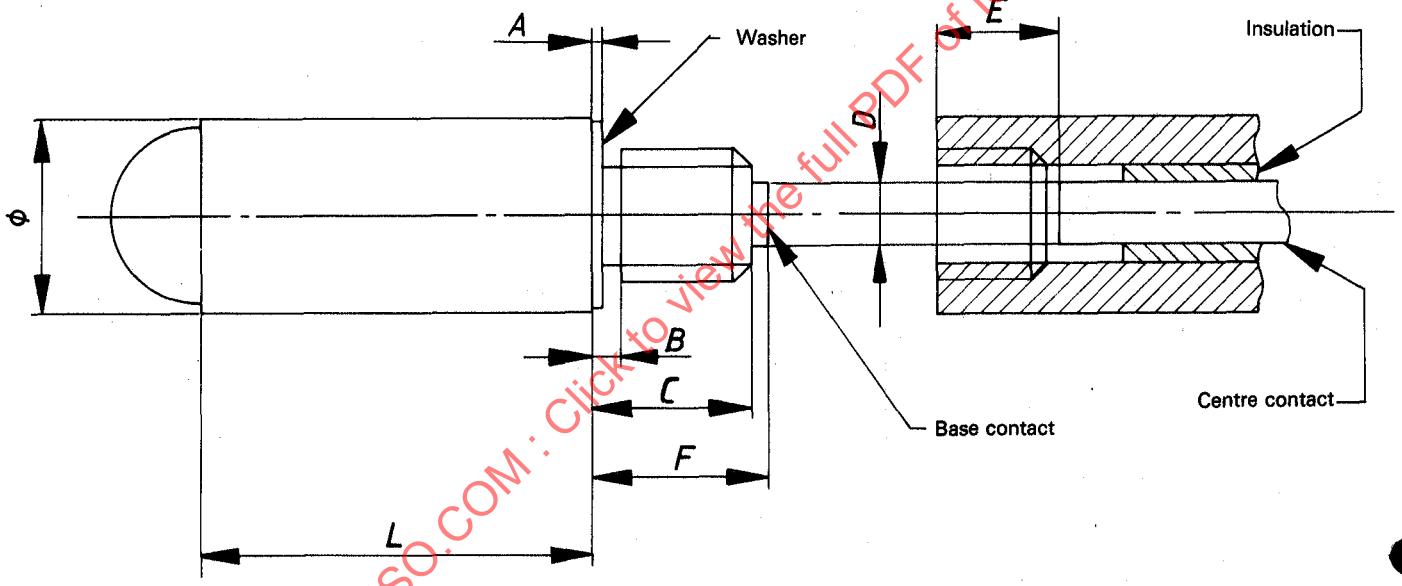

Figure — Lamp and socket dimensions

Table 1 — Lamp and socket dimensions

Dimensions in millimetres

A	*B*	*C*	*D*	*E**	*F*	*L*	*ϕ*
0,5 ± 0,1	1,5 ± 0,1	4,0 ± 0,1	2,0 ± 0,5	3,0 ± 0,5	5,0 ± 0,2	10 min. 14 max.	5 min. 6 max.

* Dimension *E* shows the depth of the centre contact in the socket prior to lamp insertion.