BS EN ISO 10685-3:2012

BSI Standards Publication

Ophthalmic optics — Spectacle frames and sunglasses electronic catalogue and identification

Part 3: Technical information (ISO 10685-3:2012)

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National foreword

This British Standard is the UK implementation of EN ISO 10685-3:2012.

The UK participation in its preparation was entrusted to Technical Committee CH/172/3, Spectacles.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Optique ophtalmique - Catalogue de montures de lunettes et de lunettes de soleil et identification - Partie 3: Informations techniques (ISO 10685-3:2012)

Augenoptik - Elektronischer Katalog und Warenbezeichnung für Brillenfassungen und Sonnenbrillen - Teil 3: Technische Daten (ISO 10685-3:2012)

This European Standard was approved by CEN on 7 December 2012.

EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

This document (EN ISO 10685-3:2012) has been prepared by Technical Committee ISO/TC 172 "Optics and photonics" in collaboration with Technical Committee CEN/TC 170 “Ophthalmic optics” the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2013, and conflicting national standards shall be withdrawn at the latest by May 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

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Endorsement notice

The text of ISO 10685-3:2012 has been approved by CEN as a EN ISO 10685-3:2012 without any modification.

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 10685-3 was prepared by Technical Committee ISO/TC 172, *Optics and photonics*, Subcommittee SC 7, *Ophthalmic optics and instruments*.

ISO 10685 consists of the following parts, under the general title *Ophthalmic optics — Spectacle frames and sunglasses electronic catalogue and identification*:

— *Part 1: Product identification and electronic catalogue product hierarchy*

— *Part 2: Commercial information*

— *Part 3: Technical information*

INTERNATIONAL STANDARD ISO 10685-3:2012(E)

Ophthalmic optics — Spectacle frames and sunglasses electronic catalogue and identification —

Part 3: Technical information

1 Scope

This part of ISO 10685 specifies the technical information and file format used for trading spectacle frames and sunglasses and to optimize the trading and processing of lenses for a given frame.

This part of ISO 10685 includes sunglass clip-ons.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8624, *Ophthalmic optics — Spectacle frames — Measuring system and terminology*

ISO 10685-1, *Ophthalmic optics — Spectacle frames and sunglasses electronic catalogue and identification — Part 1: Product identification and electronic catalogue product hierarchy*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
technical information
information needed to optimize the trading and processing of lenses for a given frame

4 Technical information

4.1 Identification

Any technical information requires the appropriate frame identification as specified in ISO 10685-1. Commercial information is available in ISO 10685-2.

4.2 Technical data for frames item catalogue

Tables 1 and 2 specify the fields used to identify the technical information portion of the electronic frame item catalogue. Additional information and examples are available in Annex A.

— The “name” column defines the tag and attribute names within the XML file (see Annex B for schema definition).

— The “O/M” column indicates whether a field is optional (O) or mandatory (M).

— The “format” column indicates the data type, e.g. TEXT.

— The “length” column indicates the field character length. The decimal lengths listed do not include the decimal point or the sign. For example, a field with the length of 3 could contain ‘100’,’10.1’ or ‘-1.01’. Data items in binary format are not limited in length.

— The “description” column is the description of the field.

Table 1 — Spectacle frame and sunglasses information for the technical portion of the electronic frame catalogue

NAME	O/M	FORMAT	LENGTH	DESCRIPTION
Former	O	BOOLEAN	1	LENS FORMER AVAILABILITY
Hbox	O	DECIMAL	Max 4	LENS WIDTH (MM)
Vbox	O	DECIMAL	Max 4	LENS HEIGHT (MM)
Dbl	O	DECIMAL	Max 4	DISTANCE BETWEEN LENSES
Tmplng	O	DECIMAL	3	OVERALL LENGTH OF SIDE
Fed	O	DECIMAL	4	FRAME EFFECTIVE DIAMETER
Ledg	O	TEXT	1	TYPE OF LENS EDGE
Gdepth	O	DECIMAL	Max 3	GROOVE DEPTH IN THE LENS OF A SEMI-RIMLESS
Gwidth	O	DECIMAL	Max 3	GROOVE WIDTH IN THE LENS OF A SEMI-RIMLESS
Panto	O	INTEGER	Max 2	FRAME PANTOSCOPIC ANGLE (ANGLE OF SIDE)
Fcrv	O	INTEGER	3	FRAME CURVE EXPRESSED IN CORRESPONDING BASE VALUE IN DIOPTRES
Ffang	O	INTEGER	Max 2	FACE FORM ANGLE
Traces	O	TABLE	—	SEE TABLE 2.
Drillpnts	O	Table	—	SEE TABLE 3.
Fprocdesc	O	TEXT	255	FRAME PROCESSING INSTRUCTIONS
Rxable	O	BOOLEAN	1	MANUFACTURER’S ASSERTION AS TO THE ABILITY TO INSERT AND RETAIN PRESCRIPTION LENSES IN THE FRAME

Table 2 — Traces

NAME	O/M	FORMAT	LENGTH	DESCRIPTION
Traceid	M	INTEGER	Max 14	TRACE ID
Traceweb	O	BOOLEAN	1	TRACE DATA IS AVAILABLE ON WEBSITE
Ftrc	O	TEXT	Max 50	FRAME TRACE DATA LINK
Trcfmt	O	BINARY	—	TRACE DATA
Trcshapeidref	O	INTEGER	Max 14	SHAPE ID OF THE RELATED SHAPE ONLY AVAILABLE IF ISO 10685-2 (COMMERCIAL INFORMATION) IS INCLUDED

Table 3 — Drilling points

NAME	O/M	FORMAT	LENGTH	DESCRIPTION
Drillid	M	INTEGER	Max 14	DRILLING POINTS ID
Drille	O	BINARY	—	DRILLING POINTS OF THE FRAME
Drill	O	BINARY	—	DRILLING POINTS OF THE FRAME (DEPRECATED VERSION)
Traceidref	O	INTEGER	Max 14	TRACE ID OF RELATED TRACE
DrillShapeidref	O	INTEGER	Max 14	SHAPE ID OF THE RELATED SHAPE ONLY AVAILABLE IF ISO 10685-2 (COMMERCIAL INFORMATION) IS INCLUDED

For sample XML file, see Annex D.

Annex A
(normative)

Field descriptions

Table A.1 contains detailed field descriptions and examples for the electronic frame catalogue.

Table A.1 — Field of descriptions and examples for the electronic frame catalogue

NAME	EXAMPLE	COMMENTS/ CODIFICATION	Additional comments	ebXML Mapping
Former	false	Boolean indicating if lens physical former is available.	Physical former is equivalent to lens shape or pattern as defined in ISO 11380. Flagged as true (available) or false (not available).	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Hbox	49.9	See Figure C.1.	A precise measurement of the horizontal distance between the vertical tangents of the frame groove. If the frame is either semi-rimless or three piece the measurement is taken using the lens edge. (mm)	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Vbox	27.7	See Figure C.1.	A precise measurement of the vertical distance between the horizontal tangents of the frame groove. If the frame is either semi-rimless or three piece the measurement is taken using the lens edge. (mm)	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Dbl	16.0	See Figure C.1.	A precise measurement of the minimum distance between lenses measured on the horizontal between the vertical tangents to the apices of the frame groove. If the frame is either semi-rimless or three piece the measurement is taken using the lens edge. (mm)	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Tmplng	135	ISO 8624	This is the length from the intersection of the dowel screw's axis with the median plane of the joint to the end of the side (temple) and parallel to the centreline of it, the drop having been straightened.	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Fed	54.1	DCS 3.08 or latest version and Figure C.1.	Frame effective diameter (twice the longest radius from box centre to apex of the frame groove) in millimetres. If the frame is either semi-rimless or three piece the endpoint of the radius is taken using the lens edge.	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Ledg	A	A – Bevel B – Flat C – Groove D – Mix	Type of lens edge (similar to DCS 3.08 - Etyp)	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic

Table A.1 *(continued)*

NAME	EXAMPLE	COMMENTS/ CODIFICATION	Additional comments	ebXML Mapping
Gdepth	0.4	DCS 3.08 or latest version	Groove depth in the lens when the Pclass of the frame is "SemiRimless MountSpectacleFrameClass" or "SemiRimlessMountSunglassClass" (mm)	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Gwidth	0.8	DCS 3.08 or latest version	Groove width in the lens when the Pclass of the frame is "SemiRimless MountSpectacleFrameClass" or "SemiRimlessMountSunglassClass" (mm)	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Panto	8		This angle in degrees is determined by measuring the angle between the centreline of the side and a line drawn perpendicular to the vertical axis of the corresponding plane of the lens shape as shown in Figure C.3.	ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Ffang	6	ISO 8624; See Figure C.2.	The angle between the plane of the spectacle front and the plane of the right lens shape, or of the left lens shape. The right or left face form angle is regarded as positive if the temporal side of the right or left lens plane is closer to the head than the plane of the spectacle front.	ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Traces			This table can support multiple traces.	In Frame Trace product: ReferencedOpticProduct → DesignatedOpticProduct Classification → SubClassCode (with ClassCode=FrameTrace Class)
Traceid	2		The Trace id	In Frame product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic In Frame Trace product: ReferencedOpticProduct→ SpecifiedOpticProduct Identification → ID
Traceweb	1	0 – Indicates that the trace is not available on a website 1 – Indicates that the trace is available on a website	Indicates if the trace data is available on a website	In Frame Trace product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Ftrc	ftp://xyz.com	DCS 3.08 or latest version	Lens shape available from an Internet site. If R&L not symmetrical, the internet site should have both (right and left) lens shape trace files. This is intended to be used for lens surface calculations and not for cutting lenses to fit to frame.	In Frame Trace product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic

Table A.1 *(continued)*

NAME	EXAMPLE	COMMENTS/ CODIFICATION	Additional comments	ebXML Mapping
Trcfmt	TRCFMT=1;400;U;L; F<CR/LF> R=2517;2450;2379; 2318;2247;2168; 2086;2014;1958; 1923 <CR/LF> R=1909;1914;1941; 1983;2033;2089; 2140;2200;2277; 2371 <CR/LF> … R=1922;1939;1989; 2072;2184;2322; 2471;2599;2645; 2579 <CR/LF> A=0;90;180;270; 360; 450;540;630;720; 810 <CR/LF> A=900;990;1080; 1170;1260;1350; 1440; 1530;1620;1710 <CR/LF> … A=35100;35190; 35280;35370; 35460; 35550;35640;35730; 35820; 35910<CR/LF> ZFMT=1;100;U;L;F <CR/LF> Z=322;331;342; 328; 314;308;300;295; 288; 280<CR/LF> … Z=316;318;324; 328; 333;343;349;352; 357; 362<CR/LF> ZA=0;360;720; 1080; 1440;1800;2160; 2520;2880;3240 <CR/LF> … ZA=32400;32760; 33120;33480; 33840; 34200;34560; 34920; 35280;35640<CR/LF>	DCS 3.08 or latest version. The minimal number of tracing points shall be 36. Recommended fields are: R, ZFMT.	This is intended to be used for lens surfacing calculations. This is not intended to be used for edging lenses before mounting in the frame.	In Frame Trace product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Trc Shapeidref	1		Reference to a Shapeid associated with a trace	In Frame Trace product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Drillpnts			This table can support multiple drilling points	In Frame Drilling Points product: ReferencedOpticProduct→ DesignatedOpticProduct Classification → SubClassCode (with ClassCode=DrillingPoints Class)

Table A.1 *(continued)*

NAME	EXAMPLE	COMMENTS/ CODIFICATION	Additional comments	ebXML Mapping
Drillid			The Drilling Points id	In Frame product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic In Frame Drilling Points product: ReferencedOpticProduct → SpecifiedOpticProduct Identification → ID
Drill		DCS 3.08 or latest version	Drilling points of the frame. This is the older version	In Frame Drilling Points product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Drille	B ; C; -17.0;10.32;2.3; -15.0; 10.32;1.5;1; A;-15.0;5.0	DCS 3.08 or latest version	Drilling points of the frame.	In Frame Drilling Points product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Drill Shapeidref	1		Reference to a Shapeid associated with drilling points	In Frame Drilling Points product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Traceidref	1		Reference to a Traceid. This field is mandatory when the Drille provided is not referencing the edge.	In Frame Drilling Points product: ReferencedOpticProduct→ DesignatedOpticProduct Classification→ ApplicableOpticProduct Characteristic
Fprocdesc	No heat		Comments intended to be used for laboratory processing, e.g. some plastic materials need different heat or no heat; a multi parameter list for recommended heat level, solvents, lens fit.	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Fcrv	6	DCS 3.08 or latest version.	Frame curve expressed in corresponding base value in dioptres for an index of 1.5.	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic
Rxable	1	0 – Frame does not have the ability to insert and retain prescription lenses 1 – Frame has the ability to insert and retain prescription lenses	Manufacturers assertion as to the ability to insert and retain prescription lenses in the frame	ReferencedOpticProduct→ DesignatedOpticProduct Classification → ApplicableOpticProduct Characteristic

Annex B
(normative)

Electronic frame catalogue schema (technical section)

The schema supporting the catalogue can be found on the following websites:

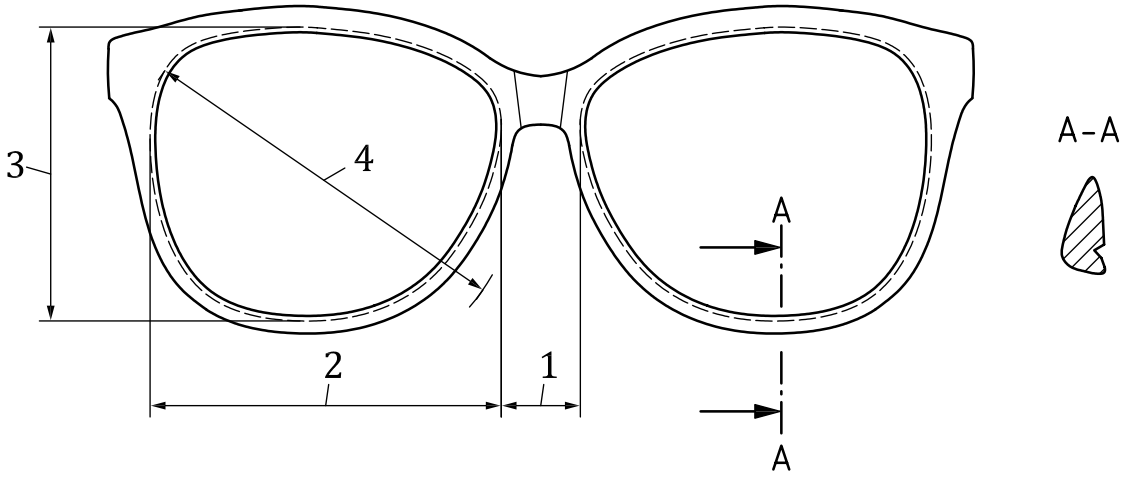
i) http://www.edi-optique.org/standard/

ii) http://www.thevisioncouncil.org/members/content_255.cfm?navID=457

iii) http://www.anfao.it/

Annex C
(normative)

Frame dimension descriptions



Key

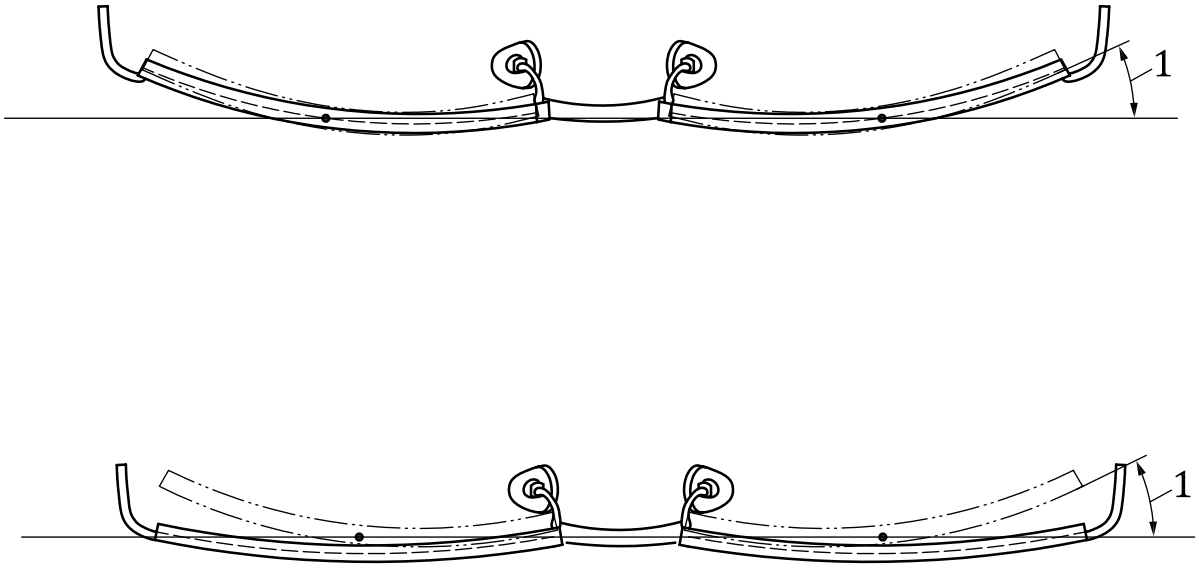
1 DBL – Abbreviation for Distance Between Lenses. Minimum distance between lenses, measured on the horizontal between the vertical tangents to the apices of the frame groove (V or U groove). If the frame is either semi-rimless or three piece the measurement is taken using the lens edge.

2 Hbox – The horizontal distance between the vertical tangents of the frame groove. If the frame is either semi-rimless or three piece the measurement is taken using the lens edge.

3 Vbox – The vertical distance between the horizontal tangents of the frame groove. If the frame is either semi-rimless or three piece the measurement is taken using the lens edge.

4 Fed – Abbreviation for Frame Effective Diameter. Fed is twice the longest radius from the boxed centre of shape to the apex of the frame groove. If the frame is either semi-rimless or three piece the endpoint of the radius is taken using the lens edge.

Figure C.1 — Frame dimensions

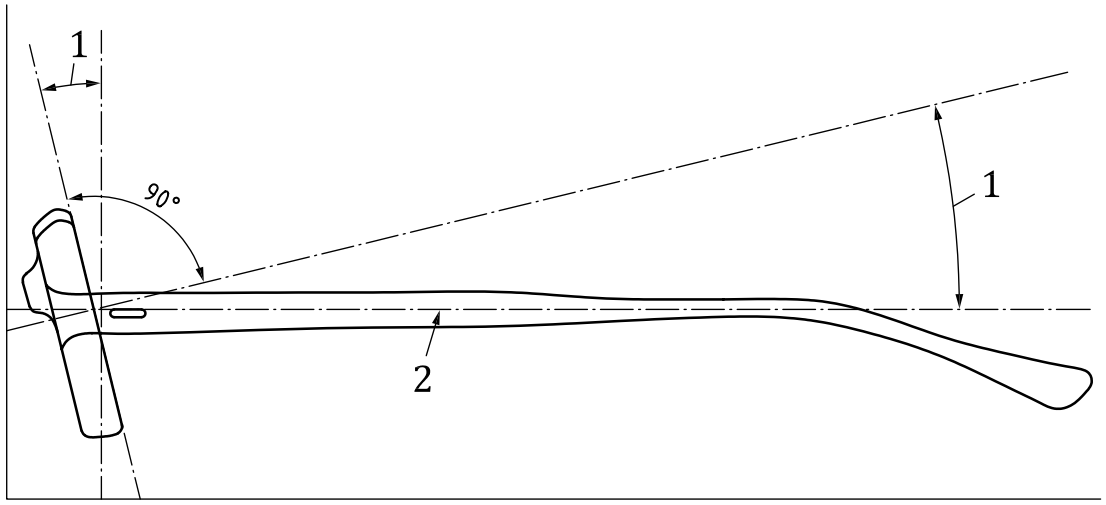


Key

1 face form angle, in degrees

NOTE These images are showing the lens mounts at one angle while the frontal top rim shown on the lower portion of the figure has another.

Figure C.2 — Face form angle (Ffang)



Key

1 pantoscopic angle

2 centreline of side

Figure C.3 — Pantoscopic angle

Annex D
(informative)

Electronic frame catalogue XML sample (technical section)

```
<?xml version="1.0" encoding="UTF-8"?>
<!--Sample XML file for ISO 10685-->
<ocm:CatalogueManifest xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
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xmlns:oram="urn:edi:optique:data:standard:OpticReusableAggregateBusinessInformationEntity:1"
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      <oram:ProviderOpticParty>
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