SLOVENSKI STANDARD
SIST EN 2591-6321:2004

01-maj-2004

Aerospace series - Elements of electrical and optical connection - Test methods - Part 6321: Optical elements - Damp heat, cyclic test

Aerospace series - Elements of electrical and optical connection - Test methods - Part 6321: Optical elements - Damp heat, cyclic test

Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 6321: Optische Elemente - Feuchte Wärme, zyklische Prüfung

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 6321: Organes optiques - Chaleur humide, essai cyclique

Ta slovenski standard je istoveten z: **EN 2591-6321:2002**

ICS:

49.060	Letalska in vesoljska elektriļ na oprema in sistemi	Aerospace electric equipment and systems

SIST EN 2591-6321:2004 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 2591-6321

June 2002

ICS 49.060

English version

Aerospace series - Elements of electrical and optical connection - Test methods - Part 6321: Optical elements - Damp heat, cyclic test

Série aérospatiale - Organes de connexion électrique et optique - Méthodes d'essais - Partie 6321: Organes optiques - Chaleur humide, essai cyclique

Luft- und Raumfahrt - Elektrische und optische Verbindungselemente - Prüfverfahren - Teil 6321: Optische Elemente - Feuchte Wärme zyklische Prüfung

This European Standard was approved by CEN on 8 February 2002.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Ref. No. EN 2591-6321:2002 E

Foreword

This document (EN 2591-6321:2002) has been prepared by the European Association of Aerospace Manufacturers (AECMA).

After enquiries and votes carried out in accordance with the rules of this Association, this Standard has received the approval of the National Associations and the Official Services of the member countries of AECMA, prior to its presentation to CEN.

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 December 2002, and conflicting national standards shall be withdrawn at the latest by December 2002.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom

1 Scope

This standard specifies a method of checking the ability of optical connection elements (including permanent connections) and fibre optic to withstand damp heat.

It shall be used together with EN 2591-100.

2 Normative references

This European Standard incorporates by dated or undated reference provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 2591-100	Aerospace series – Elements of electrical and optical connection – Test methods – Part 100: General [1)]
EN 2591-408	Aerospace series – Elements of electrical and optical connections – Test methods – Part 408: Optical elements – Mating and unmating forces
EN 2591-601	Aerospace series – Elements of electrical and optical connections – Test methods – Part 601: Optical elements – Insertion loss
EN 2591-602	Aerospace series – Elements of electrical and optical connections – Test methods – Part 602: Optical elements – Variation of attenuation and optical discontinuity
EN 2591-6101	Aerospace series – Elements of electrical and optical connections – Test methods – Part 6101: Optical elements – Visual examination

3 Preparation of specimens

3.1 Specimens shall be fitted with normal accessories and terminated in accordance with the product standard. Cavities with unterminated contacts shall have filler plugs fitted (where applicable).

If not yet at standard test conditions, the specimens shall be subjected to standard test conditions and stabilized at these conditions for 24 h as defined in EN 2591-100.

3.2 Unless otherwise indicated in the technical specification the following details shall be specified:

- specimens mated or unmated and fitted with protective covers;
- type and length of cable/fibre;
- maximum value of insertion loss;
- maximum permissible variation of attenuation;
- number of cycles;
- type of preconditioning;
- maximum and minimum mating and unmating forces.

1) Published as AECMA Prestandard at the date of publication of this standard

4 Apparatus

– Temporary joints as defined in EN 2591-601
– LLS and LDS as defined in EN 2591-100
– Condensed water from chamber walls or ceiling shall not drip on the specimens. The test chamber shall be designed so that its temperature and relative humidity are controlled

5 Method

5.1 Initial measurements (if applicable)

Measure the insertion loss value in according to EN 2591-601 insertion loss.

Measure the mating and unmating force values in accordance with EN 2591-408 Mating and unmating forces.

5.2 Procedure

The attenuation shall be monitored throughout the test in accordance with EN 2591-602, method A.

The specimens shall be placed in the test chamber. The procedure shall consist of the following phases:

– phase 1: within 2 h, the temperature of the test chamber shall be raised to (65 ± 3) °C and the relative humidity increased to (95 $^{+2}_{-3}$) %;
– phase 2: the above conditions shall be maintained for 6 h;
– phase 3: within 16 h, the temperature shall be progressively reduced to (38 $^{+4}_{0}$) °C while the relative humidity is maintained as high as possible and shall not decrease below 85 %.

These three phases (see figure 1) constitute one cycle.

The specified number of cycles shall be performed.

5.3 Final measurements and requirements (if applicable)

Immediately after the last cycle, (unless otherwise specified), the specimens shall be subjected to the following test sequence:

– measure the mating and unmating force values according to EN 2591-408 Mating and unmating forces;
– examine the test specimen for damage according to EN 2591-6101, Visual examination.

The measured values shall not exceed the specified limits.

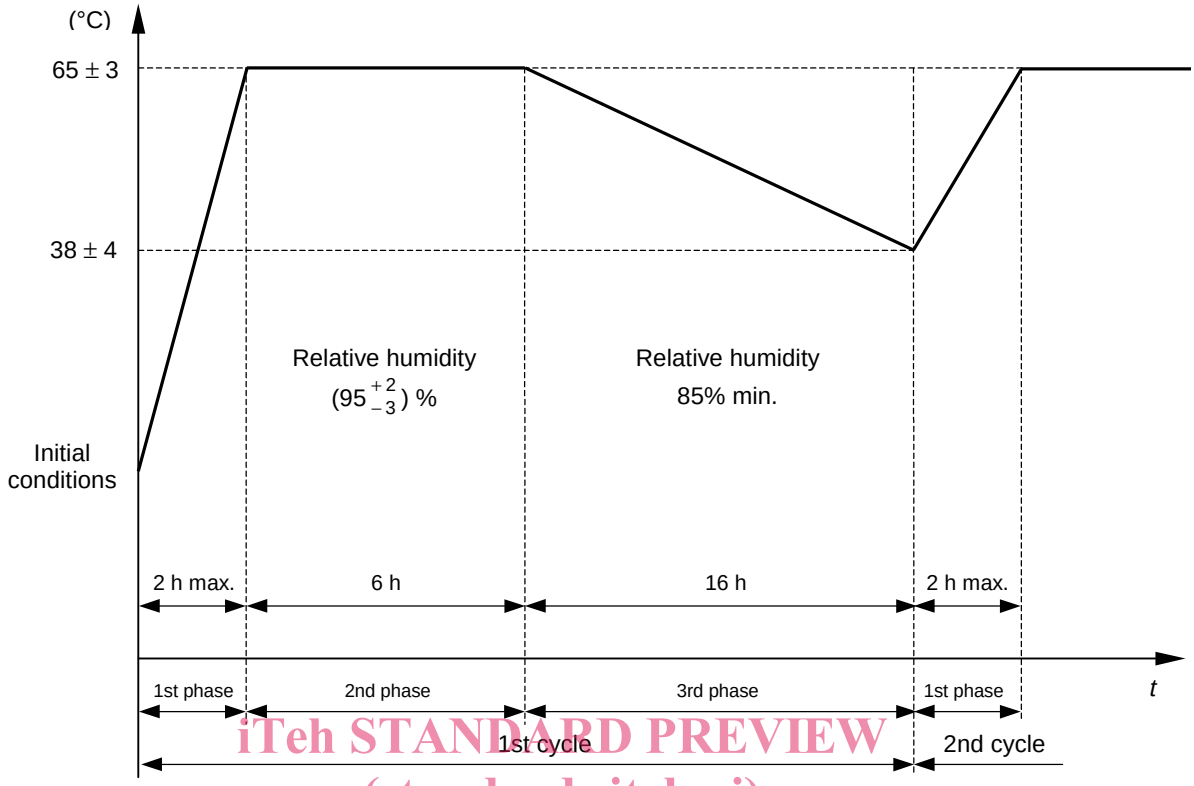

Figure 1 – Basic cycle