



National Standards Authority of Ireland

IRISH STANDARD

**I.S. EN 61192-1:2003**

ICS 31.190

**WORKMANSHIP REQUIREMENTS FOR  
SOLDERED ELECTRONIC ASSEMBLIES  
PART 1: GENERAL  
(IEC 61192-1:2003)**

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EUROPEAN STANDARD

**EN 61192-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2003

ICS 31.190

English version

**Workmanship requirements for soldered electronic assemblies**  
**Part 1: General**  
(IEC 61192-1:2003)

Exigences relatives à la qualité  
d'exécution des assemblages  
électroniques brasés  
Partie 1: Généralités  
(CEI 61192-1:2003)

Anforderungen an die Ausführungsqualität  
von Lötbaugruppen  
Teil 1: Allgemeines  
(IEC 61192-1:2003)

This European Standard was approved by CENELEC on 2003-03-01. CENELEC 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 Central Secretariat or to any CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 91/345/FDIS, future edition 1 of IEC 61192-1, prepared by IEC TC 91, Electronics assembly technology, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61192-1 on 2003-03-01.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2003-12-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2006-03-01

This standard should be used in conjunction with the following parts of EN 61192, under the general title *Workmanship requirements for soldered electronic assemblies*:

Part 2: Surface-mount assemblies  
Part 3: Through-hole mount assemblies  
Part 4: Terminal assemblies

Annexes designated "normative" are part of the body of the standard.  
In this standard, annex ZA is normative.  
Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 61192-1:2003 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

IEC 60068-2-58	NOTE	Harmonized as EN 60068-2-58:1999 (not modified).
IEC 60326	NOTE	Related but not equivalent to EN 123600:1996, EN 123700:1996 and EN 123800:1996.
IEC 61188-5-1	NOTE	Harmonized as EN 61188-5-1:2002 (not modified).
IEC 61189-2	NOTE	Harmonized as EN 61189-2:1997 (not modified).
IEC 61190-1-2	NOTE	Harmonized as EN 61190-1-2:2002 (not modified).
IEC 61190-1-3	NOTE	Harmonized as EN 61190-1-3:2002 (not modified).
ISO 9001	NOTE	Harmonized as EN ISO 9001:2000 (not modified).
ISO 9453	NOTE	Harmonized as EN ISO 29453:1993 (not modified).

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

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 (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60194	- <sup>1)</sup>	Printed board design, manufacture and assembly - Terms and definitions	-	-
IEC 61188-1-1	- <sup>1)</sup>	Printed boards and printed board assemblies - Design and use Part 1-1: Generic requirements - Flatness considerations for electronic assemblies	EN 61188-1-1	1997 <sup>2)</sup>
IEC 61188-5-2	- <sup>3)</sup>	Part 5-2: Attachment (land/joint) considerations - Discrete components	-	-
IEC 61189-3	- <sup>1)</sup>	Test methods for electrical materials, interconnection structures and assemblies Part 3: Test methods for interconnection structures (printed boards)	EN 61189-3	1997 <sup>2)</sup>
IEC 61190-1-1	- <sup>1)</sup>	Attachment materials for electronic assembly Part 1-1: Requirements for soldering fluxes for high-quality interconnections in electronics assembly	EN 61190-1-1	2002 <sup>2)</sup>
IEC 61191-1	- <sup>1)</sup>	Printed board assemblies Part 1: Generic specification - Requirements for soldered electrical and electronic assemblies using surface mount and related assembly technologies	EN 61191-1	1998 <sup>2)</sup>

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<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

<sup>3)</sup> To be published.

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<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61191-2	- <sup>1)</sup>	Part 2: Sectional specification - Requirements for surface mount soldered assemblies	EN 61191-2	1998 <sup>2)</sup>
IEC 61191-3	- <sup>1)</sup>	Part 3: Sectional specification - Requirements for through-hole mount soldered assemblies	EN 61191-3	1998 <sup>2)</sup>
IEC 61191-4	- <sup>1)</sup>	Part 4: Sectional specification - Requirements for terminal soldered assemblies	EN 61191-4	1998 <sup>2)</sup>
IEC 61192-2	- <sup>3)</sup>	Workmanship requirements for soldered electronic assemblies Part 2: Surface-mount assemblies	-	-
IEC 61192-3	- <sup>1)</sup>	Part 3: Through-hole mount assemblies	EN 61192-3	2003 <sup>2)</sup>
IEC 61192-4	- <sup>1)</sup>	Part 4: Terminal assemblies	EN 61192-4	2003 <sup>2)</sup>
IEC 61249-8	Series	Materials for interconnection structures Part 8: Sectional specification set for non-conductive films and coatings	EN 61249-8	Series
IEC 61340-5-1	- <sup>1)</sup>	Electrostatics Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements	EN 61340-5-1 + corr. April	2001 <sup>2)</sup> 2001
IEC 61340-5-2	- <sup>1)</sup>	Part 5-2: Protection of electronic devices from electrostatic phenomena - User guide	EN 61340-5-2 + corr. August	2001 <sup>2)</sup> 2001
IEC 61760-2	- <sup>1)</sup>	Surface mounting technology Part 2: Transportation and storage conditions of surface mounting devices (SMD) - Application guide	EN 61760-2	1998 <sup>2)</sup>
ISO 9002	- <sup>1)</sup>	Quality systems - Model for quality assurance in production, installation and servicing	EN ISO 9002	1994 <sup>2)</sup>

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