

Irish Standard I.S. EN IEC 60747-5-5:2020

Semiconductor devices - Part 5-5: Optoelectronic devices - Photocouplers

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I.S. EN IEC 60747-5-5:2020

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This document is based on: EN IEC 60747-5-5:2020 *Published:* 2020-09-11

This document was published		ICS number:	
and comes into effect on:		31.080.01	
2020-09-28		31.260	
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National Foreword

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EN IEC 60747-5-5

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2020

ICS 31.080.01; 31.260

Supersedes EN 60747-5-5:2011 and all of its amendments and corrigenda (if any)

English Version

Semiconductor devices - Part 5-5: Optoelectronic devices -Photocouplers (IEC 60747-5-5:2020)

Dispositifs à semiconducteurs - Partie 5-5 : Dispositifs optoélectroniques - Photocoupleurs (IEC 60747-5-5:2020) Halbleiterbauelemente - Teil 5-5: Optoelektronische Bauelemente - Optokoppler (IEC 60747-5-5:2020)

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European foreword

The text of document 47E/706/FDIS, future edition 2 of IEC 60747-5-5, prepared by SC 47E "Discrete semiconductor devices" of IEC/TC 47 "Semiconductor devices" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60747-5-5:2020.

The following dates are fixed:

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IEC 60065	NOTE	Harmonized as EN 60065
IEC 60270:2000	NOTE	Harmonized as EN 60270:2001 (not modified)
IEC 60747-5-2	NOTE	Harmonized as EN 60747-5-2
IEC 60747-5-3	NOTE	Harmonized as EN 60747-5-3

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: <u>www.cenelec.eu</u>.

Publication	Year	<u>Title</u> <u>EN/HD</u>	Year	
IEC 60068-1	2013	Environmental testing - Part 1: General EN 60068-1 and guidance	2014	
IEC 60068-2-1	-	Environmental testing - Part 2-1: Tests - EN 60068-2-1 Test A: Cold	-	
IEC 60068-2-2	-	Environmental testing - Part 2-2: Tests - EN 60068-2-2 Test B: Dry heat	-	
IEC 60068-2-6	-	Environmental testing - Part 2-6: Tests - EN 60068-2-6 Test Fc: Vibration (sinusoidal)	-	
IEC 60068-2-14	-	Environmental testing - Part 2-14: Tests - EN 60068-2-14 Test N: Change of temperature	-	
IEC 60068-2-17	-	asic environmental testing procedures - EN 60068-2-17 art 2-17: Tests - Test Q: Sealing		
IEC 60068-2-20	-	Environmental testing - Part 2-20: Tests - EN 60068-2-20 Test T: Test methods for solderability and resistance to soldering heat of devices with leads	-	
IEC 60068-2-27	-	Environmental testing - Part 2-27: Tests - EN 60068-2-27 Test Ea and guidance: Shock	-	
IEC 60068-2-30	-	Environmental testing - Part 2-30: Tests - EN 60068-2-30 Test Db: Damp heat, cyclic (12 h + 12 h cycle)	-	
IEC 60068-2-58	-	Environmental testing - Part 2-58: Tests - EN 60068-2-58 Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)	-	
IEC 60068-2-78	-	Environmental testing - Part 2-78: Tests - EN 60068-2-78 Test Cab: Damp heat, steady state	-	
IEC 60112	-	Method for the determination of the proof EN 60112 and the comparative tracking indices of solid insulating materials	-	

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EN IEC 60747-5-5:2020 (E)

Publication	<u>Year</u>	Title	<u>EN/HD</u>	<u>Year</u>
IEC 60216-1	-	Electrical insulating materials - Thermal EN 60216-1 endurance properties - Part 1: Ageing procedures and evaluation of test results		-
IEC 60216-2	-	Electrical insulating materials - Thermal EN 60216-2 endurance properties - Part 2: Determination of thermal endurance properties of electrical insulating materials - Choice of test criteria		-
IEC 60664-1	2007	Insulation coordination for equipmen within low-voltage systems - Part 1 Principles, requirements and tests	t EN 60664-1 :	2007
IEC 60672-2	-	Ceramic and glass insulating materials Part 2: Methods of test	- EN 60672-2	-
IEC 60695-11-5	-	Fire hazard testing - Part 11-5: Test flames - Needle-flame test method - Apparatus confirmatory test arrangement and guidance	s EN 60695-11-5 , 1	-
IEC 61000-4-5	-	Electromagnetic compatibility (EMC) - Par 4-5: Testing and measurement techniques - Surge immunity test	t EN 61000-4-5 S	-
IEC 62368-1	2018	Audio/video, information and communication technology equipment Part 1: Safety requirements	I EN IEC 62368-1 -	2020



IEC 60747-5-5

Edition 2.0 2020-07

INTERNATIONAL STANDARD

Semiconductor devices – Part 5-5: Optoelectronic devices – Photocouplers





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IEC Glossary - std.iec.ch/glossary

67 000 electrotechnical terminology entries in English and French extracted from the Terms and Definitions clause of IEC publications issued since 2002. Some entries have been collected from earlier publications of IEC TC 37, 77, 86 and CISPR.





Edition 2.0 2020-07

INTERNATIONAL STANDARD

Semiconductor devices – Part 5-5: Optoelectronic devices – Photocouplers

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 31.080.01; 31.260

ISBN 978-2-8322-8602-9

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SEMICONDUCTOR DEVICES -

Part 5-5: Optoelectronic devices – Photocouplers

FOREWORD

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International Standard IEC 60747-5-5 has been prepared by subcommittee 47E: Discrete semiconductor devices, of IEC technical committee 47: Semiconductor devices.

This second edition cancels and replaces the first edition published in 2007 and Amendment 1:2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) optional data sheet basic insulation rating in accordance with IEC 60664-1:2007, 6.1.3.5;
- b) editorial corrections on the use of V_{IORM} ;
- c) editorial corrections on Figure 2: Time intervals for method b);
- d) addition of an alternative surge pulse V_{IOSM} test method.

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The text of this International Standard is based on the following documents:

FDIS	Report on voting	
47E/706/FDIS	47E/714/RVD	

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60747 series, published under the general title *Semiconductor devices*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

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SEMICONDUCTOR DEVICES -

Part 5-5: Optoelectronic devices – Photocouplers

1 Scope

This part of IEC 60747 specifies the terminology, essential ratings, characteristics, safety tests, as well as the measuring methods for photocouplers.

NOTE The term "optocoupler" can also be used instead of "photocoupler".

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

IEC 60068-1:2013, Environmental testing – Part 1: General and guidance

IEC 60068-2-1, Environmental testing – Part 2-1: Tests – Test A: Cold

IEC 60068-2-2, Environmental testing – Part 2-2: Tests – Test B: Dry heat

IEC 60068-2-6, Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)

IEC 60068-2-14, Environmental testing – Part 2-14: Tests – Test N: Change of temperature

IEC 60068-2-17, Basic environmental testing procedures – Part 2-17: Tests – Test Q: Sealing

IEC 60068-2-20, Environmental testing – Part 2-20: Tests – Test T: Test methods for solderability and resistance to soldering heat of devices with leads

IEC 60068-2-27, Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock

IEC 60068-2-30, Environmental testing – Part 2-30: Tests – Test Db: Damp heat, cyclic (12 h + 12 h cycle)

IEC 60068-2-58, Environmental testing – Part 2-58: Tests – Test Td: Test methods for solderability, resistance to dissolution of metallization and to soldering heat of surface mounting devices (SMD)

IEC 60068-2-78, Environmental testing – Part 2-78: Tests – Test Cab: Damp heat, steady state

IEC 60112, Method for the determination of the proof and the comparative tracking indices of solid insulating materials

IEC 60216-1, *Electrical insulating materials* – *Thermal endurance properties* – *Part 1: Ageing procedures and evaluation of test results*



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