

INTERNATIONAL STANDARD

NORME INTERNATIONALE

**Semiconductor devices –
Part 5-6: Optoelectronic devices – Light emitting diodes**

**Dispositifs à semiconducteurs –
Partie 5-6: Dispositifs optoélectroniques – Diodes électroluminescentes**





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IEC 60747-5-6

Edition 1.0 2016-02

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**Dispositifs à semiconducteurs –
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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

COMMISSION
ELECTROTECHNIQUE
INTERNATIONALE

ICS 31.080.99

ISBN 978-2-8322-3209-5

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CONTENTS

FOREWORD.....	7
1 Scope.....	9
2 Normative references.....	9
3 Terms and definitions	10
3.1 General terms and definitions	10
3.2 Terms and definitions relating to the measurement of the quantity of radiation	12
3.3 Terms and definitions relating to the measurement of the photometric quantity.....	14
4 Absolute maximum ratings	17
5 Electrical and optical characteristics.....	18
6 Measuring method	19
6.1 Basic requirements	19
6.1.1 Measuring conditions	19
6.1.2 Measuring instruments and equipment.....	20
6.1.3 Essential requirements.....	21
6.1.4 General precautions.....	21
6.2 Forward voltage (V_F) measurement	22
6.2.1 Purpose	22
6.2.2 Circuit diagram	22
6.2.3 Requirements	22
6.2.4 Measurement procedure.....	23
6.2.5 Precautions to be observed.....	24
6.2.6 Specified conditions	24
6.3 Reverse voltage (V_R) measurement.....	24
6.3.1 Purpose	24
6.3.2 Circuit diagram	24
6.3.3 Measurement procedure.....	24
6.3.4 Precautions to be observed.....	24
6.3.5 Specified conditions	25
6.4 Differential resistance (r_f) measurement	25
6.4.1 Purpose	25
6.4.2 Circuit diagram	25
6.4.3 Requirements	25
6.4.4 Measurement procedure.....	25
6.4.5 Precautions to be observed.....	26
6.4.6 Specified conditions	26
6.5 Reverse current (I_R) measurement.....	26
6.5.1 Purpose	26
6.5.2 Circuit diagram	26
6.5.3 Provisions.....	27
6.5.4 Measurement procedure.....	27
6.5.5 Precautions to be observed.....	27
6.5.6 Specified conditions	27
6.6 Measurement of capacitance between terminals (C_t).....	27
6.6.1 General	27

6.6.2	Measurement using LCR meter	27
6.6.3	Measurement using AC bridge.....	28
6.7	Measurement of junction temperature and thermal resistance ($R_{th(j-X)}$).....	29
6.7.1	Purpose	29
6.7.2	Measurement principle	29
6.7.3	Measurement procedure.....	30
6.7.4	Precautions to be observed	33
6.8	Response time measurement	34
6.8.1	Purpose	34
6.8.2	Circuit diagram	34
6.8.3	Provisions.....	34
6.8.4	Measurement procedure.....	34
6.8.5	Precautions to be observed	35
6.8.6	Specified conditions	35
6.9	Frequency response and cut-off frequency (f_c) measurement.....	36
6.9.1	Purpose	36
6.9.2	Circuit diagram	36
6.9.3	Provisions.....	37
6.9.4	Measurement procedure.....	37
6.9.5	Precautions to be observed	38
6.9.6	Specified conditions	38
6.10	Luminous flux (Φ_V) measurement.....	38
6.10.1	Purpose	38
6.10.2	Measurement principle	38
6.10.3	Measuring circuit.....	38
6.10.4	Measurement procedure.....	39
6.10.5	Precautions to be observed	39
6.10.6	Measurement conditions to be defined.....	40
6.11	Radiant power (Φ_e) measurement	40
6.11.1	Purpose	40
6.11.2	Measurement principle	40
6.11.3	Measuring circuit.....	40
6.11.4	Measurement procedure.....	41
6.11.5	Precautions to be observed	41
6.11.6	Measurement conditions to be defined.....	42
6.12	Luminous intensity (I_V) measurement	42
6.12.1	Purpose	42
6.12.2	Measurement principle	42
6.12.3	Measuring circuit.....	43
6.12.4	Measurement procedure.....	44
6.12.5	Precautions to be observed	44
6.12.6	Measurement conditions to be defined.....	44
6.13	Radiant intensity (I_e) measurement	44
6.13.1	Purpose	44
6.13.2	Measurement principle	44
6.13.3	Measuring circuit.....	45
6.13.4	Measurement procedure.....	45
6.13.5	Measurement conditions to be defined.....	45
6.14	Luminance (L_V) measurement.....	45

6.14.1	Purpose	45
6.14.2	Measuring circuit.....	46
6.14.3	Measurement procedure.....	46
6.14.4	Measurement conditions to be defined.....	46
6.15	Emission spectrum distribution, peak emission wavelength (λ_p), and spectral half bandwidth ($\Delta\lambda$) measurement.....	47
6.15.1	Purpose	47
6.15.2	Measuring circuit.....	47
6.15.3	Measurement procedure.....	48
6.15.4	Measurement conditions to be defined.....	48
6.16	Chromaticity measurement	49
6.16.1	Purpose	49
6.16.2	Measurement principle	49
6.16.3	Measuring circuit.....	51
6.16.4	Measurement procedure.....	51
6.16.5	Measuring conditions to be defined	51
6.17	Directional characteristics measurement.....	51
6.17.1	Purpose	51
6.17.2	Measuring circuit.....	51
6.17.3	Measurement procedure.....	52
6.17.4	Measuring conditions to be defined	53
6.18	Illuminance (E_V) measurement	54
6.18.1	Purpose	54
6.18.2	Measuring circuit.....	54
6.18.3	Measurement procedure.....	54
6.18.4	Measuring conditions to be defined	54
7	Items to be indicated on the package	54
8	Quality evaluation	55
8.1	Classification of quality evaluations	55
8.1.1	General	55
8.1.2	Classification I	55
8.1.3	Classification II	55
8.1.4	Classification III	55
8.1.5	Precautions to be observed.....	55
8.2	Quality evaluation test.....	60
8.2.1	General	60
8.2.2	Specimens.....	60
8.3	Lot quality inspection	60
8.3.1	General	60
8.3.2	Specimens.....	60
8.4	Periodical quality inspection	60
8.4.1	General	60
8.4.2	Specimens.....	60
8.4.3	Inspection period	60
8.5	Easing of the lot quality inspection standards.....	61
8.6	Periodical evaluation maintenance tests	61
8.6.1	Test items and specimens	61
8.6.2	Test period	61
8.7	Long-term storage products.....	61

8.8	Continuous current test	61
8.8.1	General	61
8.8.2	Initial measurement.....	61
8.8.3	Test circuits	61
8.8.4	Test conditions	62
8.8.5	Post-treatment	62
8.8.6	Final measurement	62
Annex A (normative)	Standard luminous efficiency	63
Annex B (normative)	How to obtain the self-absorption correction factor	66
B.1	Purpose	66
B.2	LED light sources for self-absorption measurement.....	66
B.3	Method	66
Annex C (normative)	How to obtain the colour correction factor	68
C.1	Purpose	68
C.2	Method	68
C.2.1	Luminous flux and luminous intensity measurement.....	68
C.2.2	Radiant power and radiant intensity measurement	69
Annex D (normative)	Calibration of the luminance meter.....	70
D.1	Purpose	70
D.2	How to perform the calibration	70
Annex E (normative)	Colour-matching function of the XYZ colour system	72
Annex F (normative)	Spectral chromaticity coordinates	77
Annex G (normative)	Illuminometer calibration.....	82
G.1	Purpose	82
G.2	How to perform the calibration	82
Bibliography	83
Figure 1	– Radiant intensity	12
Figure 2	– Radiance.....	13
Figure 3	– Radiant exitance	14
Figure 4	– Irradiance.....	14
Figure 5	– Spectral luminous efficiency	15
Figure 6	– Circuit diagram for V_F measurement	22
Figure 7	– Circuit diagram for V_F measurement with a constant voltage source and a current-limiting resistor	23
Figure 8	– Circuit diagram for V_F measurement using an SMU	23
Figure 9	– Circuit diagram for V_R measurement.....	24
Figure 10	– circuit diagram for r_f measurement	25
Figure 11	– Circuit diagram for I_R measurement.....	26
Figure 12	– Circuit diagram for C_t measurement	27
Figure 13	– Circuit diagram for C_t measurement	28
Figure 14	– Circuit diagram for measurement of change in V_F	30
Figure 15	– Waveform of change in V_F	32
Figure 16	– Transient change in thermal resistance (double-logarithmic plots)	33
Figure 17	– Circuit diagram for response time measurement.....	34
Figure 18	– Waveform of response time measurement.....	36

Figure 19 – Circuit diagram for f_c measurement.....	37
Figure 20 – Circuit diagram for Φ_V measurement.....	39
Figure 21 – circuit diagram for Φ_e measurement.....	41
Figure 22 – Schematic diagram for I_V measurement.....	43
Figure 23 – Circuit diagram for I_V measurement.....	43
Figure 24 – circuit diagram for I_e measurement.....	45
Figure 25 – Circuit diagram for L_V measurement.....	46
Figure 26 – Circuit diagram for λ_p measurement.....	47
Figure 27 – Circuit diagram for λ_p measurement.....	48
Figure 28 – Schematic diagram of $\Delta\lambda$ measurement.....	48
Figure 29 – Chromaticity	50
Figure 30 – Circuit diagram for chromaticity measurement	52
Figure 31 – Directional characteristics (example 1).....	53
Figure 32 – Directional characteristics (example 2).....	53
Figure 33 – Circuit diagram for E_V measurement.....	54
Figure 34 – Circuit diagram for continuous current test	62
Figure B.1 – Schematic diagram for self-absorption measurement	66
Figure D.1 – Schematic diagrams for calibration	71
Figure G.1 – Schematic diagram for calibration	82
Table 1 – Absolute maximum ratings	18
Table 2 – Electrical and optical characteristics	19
Table 3 – CIE averaged LED intensity measurements.....	43
Table 4 – Items for the screening test and their conditions(reference)	55
Table 5 – Quality evaluation tests (1 of 2)	56
Table 6 – Lot quality inspection	58
Table 7 – Periodical quality inspection.....	59
Table A.1 – Definitive values of the spectral luminous efficiency function for photopic vision $V(\lambda)$ (1 of 3).....	63
Table E.1 – Colour-matching function of the XYZ colour system (1 of 5).....	72
Table F.1 – Spectral chromaticity coordinates (1 of 5).....	77

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SEMICONDUCTOR DEVICES –

Part 5-6: Optoelectronic devices – Light emitting diodes

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International Standard IEC 60747-5-6 has been prepared by subcommittee 47E: Discrete semiconductor devices, of IEC technical committee 47: Semiconductor devices.

This first edition of IEC 60747-5-6, together with IEC 60747-5-4, IEC 60747-5-5 and IEC 60747-5-7, cancels and replaces IEC 60747-5-1, IEC 60747-5-2 and IEC 60747-5-3, published in 1997, and their amendments. This edition constitutes a technical revision.

This edition includes significant technical changes to the clauses for light emitting diodes in IEC 60747-5-1:1997, IEC 60747-5-2:1997 and IEC 60747-5-3:1997, including their amendments.

The text of this standard is based on the following documents:

FDIS	Rapport de vote
47E/529/FDIS	47E/535/RVD

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

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- reconfirmed,
- withdrawn,
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- amended.

SEMICONDUCTOR DEVICES –

Part 5-6: Optoelectronic devices – Light emitting diodes

1 Scope

This part of IEC 60747 specifies the terminology, the essential ratings and characteristics, the measuring methods and the quality evaluations of light emitting diodes (LEDs) for general industrial applications such as signals, controllers, sensors, etc. LEDs for lighting applications are out of the scope of this part of IEC 60747.

The types of LED are divided into the following five classes:

- a) LED package;
- b) LED flat illuminator;
- c) LED numeric display and alpha-numeric display;
- d) LED dot-matrix display;
- e) I LED (infrared-emitting diode).

LEDs with a heat spreader or having a terminal geometry that performs the function of a heat spreader are within the scope of this part of IEC 60747.

An integration of LEDs and controlgears, integrated LED modules, semi-integrated LED modules, integrated LED lamps or semi-integrated LED lamps, are out of the scope of this part of IEC 60747.

2 Normative references

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

IEC 60051 (all parts), *Direct acting indicating analogue electrical measuring instruments and their accessories*

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

IEC 60749-6, *Semiconductor devices – Mechanical and climatic test methods – Part 6: Storage at high temperature*

IEC 60749-10, *Semiconductor devices – Mechanical and climatic test methods – Part 10: Mechanical shock*

IEC 60749-12, *Semiconductor devices – Mechanical and climatic test methods – Part 12: Vibration, variable frequency*

IEC 60749-14, *Semiconductor devices – Mechanical and climatic test methods – Part 14: Robustness of terminations (lead integrity)*