

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

LED light source characteristics –  
Part 1: Data sheets

Caractéristiques de source lumineuse à LED –  
Partie 1: Feuilles de caractéristiques

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## LED LIGHT SOURCE CHARACTERISTICS –

## Part 1: Data sheets

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

Draft	Report on voting
34A/2297/FDIS	34A/2312/RVD

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

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

A list of all parts in the IEC 63356 series, published under the general title *LED light source characteristics*, can be found on the IEC website.

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## INTRODUCTION

The IEC 63356 series (LED light source characteristics) is split into two parts:

- Part 1: Data sheets

The scope of Part 1 covers data sheets that are comprehensive specifications for unique LED light sources (LED lamp or LED module). These are full specifications for products including, where necessary, information on interchangeability aspects, for example mechanical, electrical, optical.

Each data sheet in Part 1 relates to an individual type of LED lamp or LED module.

- Part 2: Design parameters and values

The scope of Part 2 covers design parameters and values that are used in the design of an LED light source (LED lamp or LED module) or a related component. Part 2 does not provide full product specifications but includes important interface aspects (e.g. mechanical, electrical, optical) that should be taken account of in the design of LED light sources and related components.

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# LED LIGHT SOURCE CHARACTERISTICS –

## Part 1: Data sheets

### 1 Scope

This part of IEC 63356 specifies data sheets of LED lamps and LED modules with a series of parameters per data sheet for a specific LED light source that enables interchangeability between products from different LED light source manufacturers.

Compliance criteria relating to data sheet parameters in this document are covered by IEC 63220<sup>1</sup> for safety, or IEC 63221<sup>2</sup> for performance.

### 2 Normative references

There are no normative references in this document.

### 3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

[IEC 63356-1:2022](#)

- IEC Electropedia: available at <https://www.electropedia.org>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

### 4 Overview and common information

#### 4.1 General

Unless otherwise specified, mechanical dimensions refer to a temperature of  $(25 \pm 5) ^\circ\text{C}$ .

#### 4.2 Numbering system

Data sheets are numbered so that:

- the first part represents the number of the publication "63356-1", followed by the letters "IEC";
- the second three-digit number represents the data sheet group;
- the third four-digit number represents the data sheet number;
- the fourth single-digit number represents the data sheet edition.

NOTE In cases where a data sheet comprises more than one page, all pages of the specific data sheet are issued with the same updated edition number.

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<sup>1</sup> Under consideration.

<sup>2</sup> Under consideration.



Data sheet numbers are grouped as follows:

- single-capped LED lamp data sheets:
  - non-integrated 100-xxxx;
  - semi-integrated 110-xxxx;
  - integrated 120-xxxx;
- double-capped LED lamp data sheets:
  - non-integrated 200-xxxx;
  - semi-integrated 210-xxxx;
  - integrated 220-xxxx;
- LED module data sheets:
  - non-integrated 300-xxxx;
  - semi-integrated 310-xxxx;
  - integrated 320-xxxx.

EXAMPLE 63356-1-IEC-110-0001-1: Single-capped LED lamp, semi-integrated, number 0001, version 1.

### 4.3 List of data sheets

#### 4.3.1 List of single-capped LED lamp data sheets

Void.

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**4.3.2 List of double-capped LED lamp data sheets**

**Table 1 – List of data sheets for non-integrated double-capped LED lamps**

Sheet no. 63356-1- IEC-2xx- xxxx	Shape	Nominal length  mm	Rated diameter  mm	Rated current	Rated voltage	Power range  W	Cap
63356-1- IEC-200- 0001-1	linear	600	25,5	0,35 A DC		7,9 to 16,6	GX16t-5
63356-1- IEC-200- 0002-1	linear	600	32,5	0,35 A DC		7,9 to 16,6	GX16t-5
63356-1- IEC-200- 0003-1	linear	900	25,5	0,35 A DC		11,0 to 24,8	GX16t-5
63356-1- IEC-200- 0004-1	linear	900	32,5	0,35 A DC		11,0 to 24,8	GX16t-5
63356-1- IEC-200- 0005-1	linear	1 200	25,5	0,35 A DC		14,3 to 33,3	GX16t-5
63356-1- IEC-200- 0006-1	linear	1 200	32,5	0,35 A DC		14,3 to 33,3	GX16t-5
63356-1- IEC-200- 0007-1	linear	1 500	25,5	0,35 A DC		14,3 to 42,0	GX16t-5
63356-1- IEC-200- 0008-1	linear	1 500	32,5	0,35 A DC		14,3 to 42,0	GX16t-5
63356-1- IEC-200- 0009-1	linear	2 400	25,5	0,35 A DC		28,7 to 66,5	GX16t-5
63356-1- IEC-200- 0010-1	linear	2 400	32,5	0,35 A DC		28,7 to 66,5	GX16t-5

**4.3.3 List of LED module data sheets**

Void.

**5 Single-capped LED lamp data sheets**

Void.

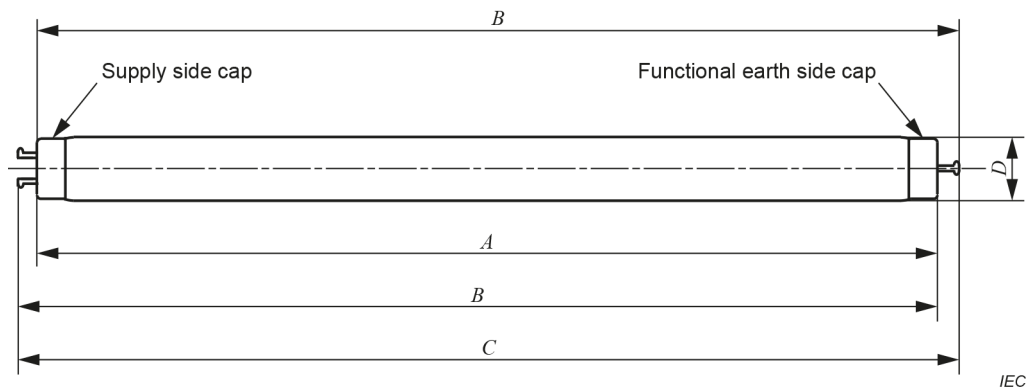
**6 Double-capped LED lamp data sheets**

**6.1 Linear double-capped LED lamp with GX16t-5 caps**

NOTE The data sheets in 6.1.2 are taken from IEC 62931:2017 without technical modifications.

**6.1.1 Diagrammatic information for location of lamp dimensions**

Figure 1 shows the dimensions used in conjunction with the relevant data sheet for the GX16t-5 LED lamp.

**Key**

- 1) For lamps with GX16t-5 caps and nominal length up to or equal to 1 200 mm

The values for dimensions  $A$ ,  $B$  and  $C$  are derived from a basic value, designated  $X$ .

$A$  = cap face to cap face

$$A_{\max} = X$$

$B$  = cap face to end of opposite pins

$$B_{\max} = X + 7,1 \text{ mm}$$

$$B_{\min} = X + 4,7 \text{ mm}$$

$C$  = overall length of the lamp between pin ends

$$C_{\max} = X + (2 \times 7,1) = X + 14,2 \text{ mm}$$

$$C_{\min} = \text{not specified}$$

- 2) For lamps with GX16t-5 caps and nominal length greater than 1 200 mm

The values for dimensions  $A$ ,  $B$  and  $C$  are derived from a basic value, designated  $X$ .

$A$  = cap face to cap face

$B$  = cap face to end of opposite pins

$$B_{\max} = X + 7,4 \text{ mm}$$

$$B_{\min} = X + 4,4 \text{ mm}$$

$C$  = overall length of the lamp between pin ends

$$C_{\max} = X + (2 \times 7,4) = X + 14,8 \text{ mm}$$

$$C_{\min} = \text{not specified}$$

NOTE Dimension  $D$  specifies the maximum dimension of the cross section of the tube.

**Figure 1 – Location of dimensions of linear double-capped lamps with GX16t-5 caps**

**6.1.2 Data sheets**

Data sheet 63356-1-IEC-200-0001-1:

NOTE This data sheet is numbered 62931-IEC-600-1 (rated  $D = 25,5$  mm) in IEC 62931:2017.

Nominal length mm	Rated DC lamp current A	Range of lamp power W	Cap
600	0,35	7,9 to 16,6	GX16t-5

Dimensions mm							
<i>A</i>			<i>B</i>		<i>C</i>	<i>D</i>	
Min.	Rated	Max.	Min.	Max.	Max.	Rated	Max.
587,4	588,5	589,8	594,5	596,9	604,0	25,5	26,7

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Electrical characteristics		
DC test current A	DC lamp voltage V	
0,35	Min.	Max.
	22,5	47,5

Information for controlgear design		
Type of controlgear	Constant DC current output V	
DC output voltage range for the constant DC current	Max.	Min.
	47,5	22,5
Tolerance of the constant DC current	±10 %	

## Data sheet 63356-1-IEC-200-0002-1:

NOTE This data sheet is numbered 62931-IEC-600-1 (rated  $D = 32,5$  mm) in IEC 62931:2017.

Nominal length mm	Rated DC lamp current A	Range of lamp power W	Cap
600	0,35	7,9 to 16,6	GX16t-5

Dimensions mm							
<i>A</i>			<i>B</i>		<i>C</i>	<i>D</i>	
Min.	Rated	Max.	Min.	Max.	Max.	Rated	Max.
587,4	588,5	589,8	594,5	596,9	604,0	32,5	34,0

Electrical characteristics		
DC test current A	DC lamp voltage V	
0,35	Min.	Max.
	22,5	47,5

Information for controlgear design		
Type of controlgear	Constant DC current output	
DC output voltage range for the constant DC current	V	
	Max.	Min.
	47,5	22,5
Tolerance of the constant DC current	±10 %	