

JAPANESE
INDUSTRIAL
STANDARD

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JIS C 3612 : 2022

(JSA)

**600V Flame retardant polyethylene
insulated wires
(Amendment 1)**

JIS C 3612 : 2002 was revised under date of 21 February 2022.
This Amendment includes the revised items and is to be used in
conjunction with **JIS C 3612 : 2002**.

This document has incorporated the erratum to the Japanese
version issued in January, 2023.

ICS 29.060.20

Reference number : JIS C 3612 : 2022 (E)

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Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry in accordance with the Industrial Standardization Act. This Amendment partially replaces the previous edition (**JIS C 3612 : 2002**), which has been technically revised.

However, **JIS C 3612 : 2002** may be applied in the **JIS** mark certification based on the relevant provisions of Article 30, paragraph (1), etc. of the Industrial Standardization Act until 20 February 2023.

Date of Establishment: 2002-10-20

Date of Revision: 2022-02-21

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In the event of any doubts arising as to the contents,
the original JIS is to be the final authority.

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600 V Flame retardant polyethylene insulated wires (Amendment 1)

JIS C 3612 : 2002 is revised as follows.

Clause 2

Delete “JIS C 0081 *Environmental testing — Electrotechnical products — Fire hazard testing — Smoke obscuration — Small scale static method — Materials*

Remarks : **IEC 60695-6-31** : 1999 *Fire hazard testing — Part 6-31 : Smoke obscuration — Small-scale static test — Materials* is identical with the said standard.”

Clause 2

Add the following at the end of the list of standards :

JIS Z 8703 *Standard atmospheric conditions for testing*

6.10

Replace with the following :

6.10 Smoke concentration The smoke concentration shall be examined on the insulation in accordance with Annex A.

After Attached Table 2

Add the following Annex A and Bibliography :

Annex A (normative)

Smoke concentration test method

A.1 Sample The sample used for the test shall be as follows.

- a) **Dimensions** The sample shall be made from the same material as that used for the finished product, and shall be a sheet approximately 76 mm long, approximately 76 mm wide, and $0.5 \text{ mm} \pm 0.1 \text{ mm}$ thick.
- b) **Conditioning** Prior to testing, the sample shall be allowed to stand at an ambient temperature of $23 \text{ }^{\circ}\text{C} \pm 3 \text{ }^{\circ}\text{C}$ and relative humidity of $(50 \pm 10) \%$ for at least 24 h, and tested within 30 min after this conditioning.

A.2 Test apparatus

A.2.1 General The test apparatus shall consist of a test chamber equipped with mechanisms to control test conditions (internal pressure control mechanism and temperature measurement mechanism), a radiation heating furnace, a sample holder, and a light transmission measurement system (hereafter referred to as the optical device).

A.2.2 Test chamber (see Figures A.1 and A.2), meeting the following requirements.

- a) The test chamber shall consist of laminated panels made of metal plates that are resistant to chemical erosion or corrosion and given coating, etc. to facilitate cleaning. The chamber shall have a capacity of 0.51 m^3 and the following inner dimensions :
 - width : $914 \text{ mm} \pm 3 \text{ mm}$;
 - depth : $610 \text{ mm} \pm 3 \text{ mm}$;
 - height : $914 \text{ mm} \pm 3 \text{ mm}$.
- b) The test chamber shall have a door with an observation window and a light-shielding cover, and a blow-up panel made of aluminium foil sheet installed at the floor opening as a safety measure against pressure buildup.
- c) Two optical windows shall be installed on the ceiling and floor of the test chamber as shown in Figure A.2. The housing of the optical device specified in **A.2.5** shall be fixed to the test chamber by means of three metal supporting rods.
- d) The test chamber shall be equipped with a “chamber internal pressure control device” as shown in Figure A.3 that is capable of raising the pressure inside the chamber from the atmospheric pressure to 1.5 kPa and maintaining it at 1.5 kPa. It shall also have a thermocouple attached at the centre of the inner surface of its back wall for measurement of chamber inner temperature.

Unit: mm

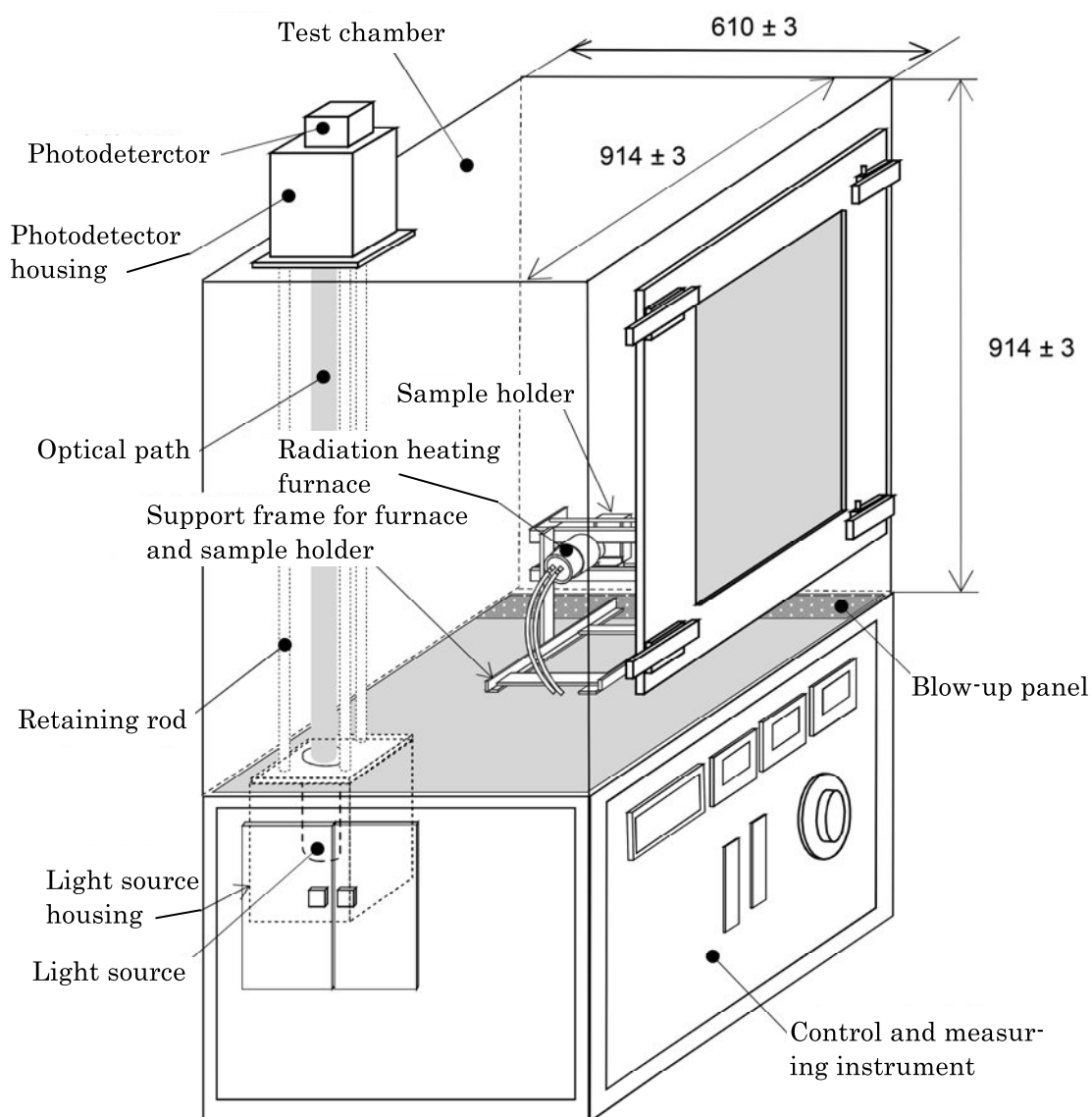


Figure A.1 Example of test apparatus

Unit: mm

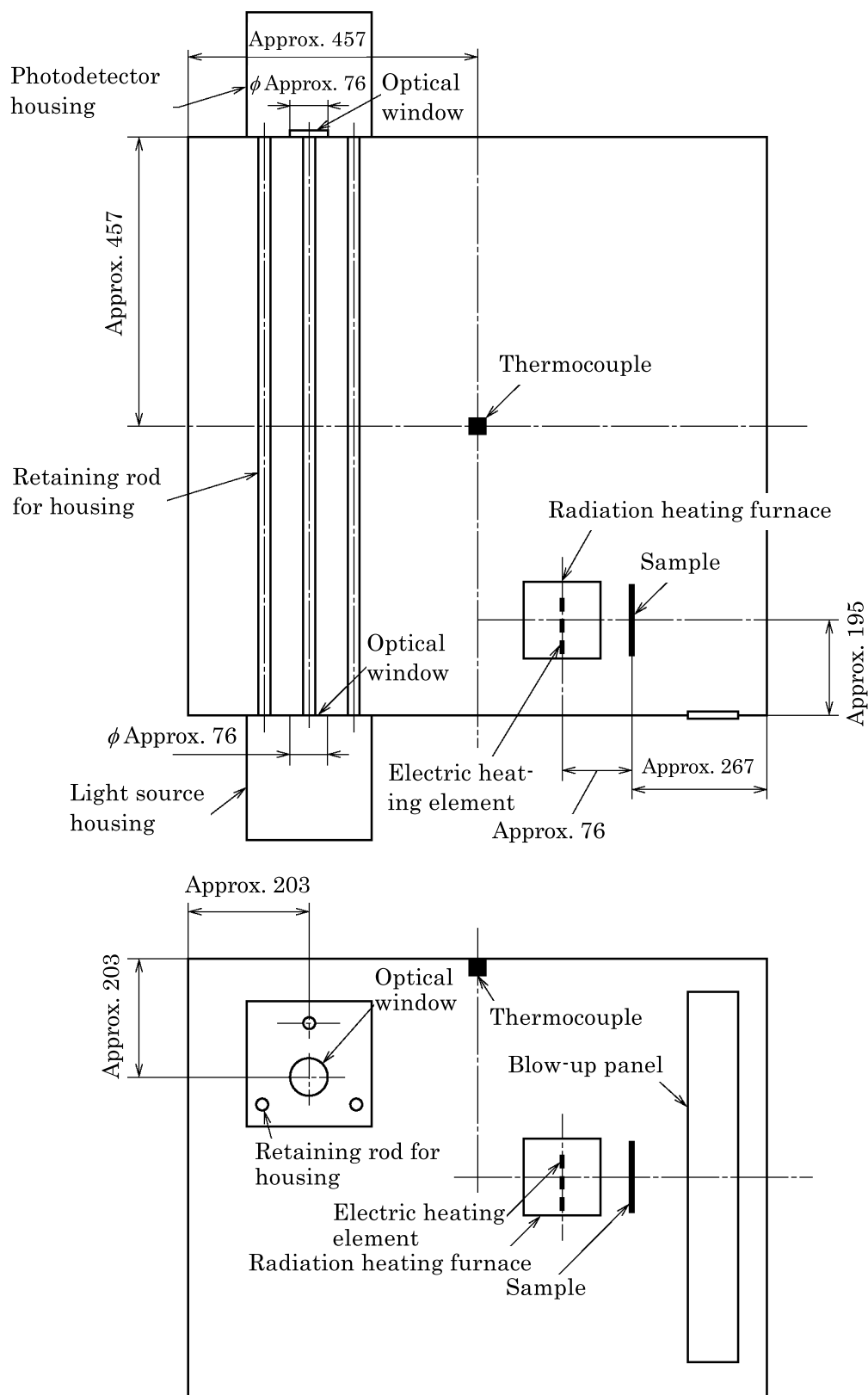


Figure A.2 Detailed view of inside of test chamber