

BUREAU OF INDIAN STANDARDS

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मसौदा भारतीय मानक
रंगीन टेलीविज़न पिक्चर ट्यूबों के मापन के तरीके
(पहला परिशोधन)

Draft Indian Standard
Methods of Measurement of Colour
Television Picture Tubes
(*First Revision*)

ICS No. : 31.100

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LITD 04: Electronic Display Devices and
systems Sectional Committee

Last Date for Comments: 28 Sept 2024

NATIONAL FOREWORD

(Formal clauses will be added later)

This Draft Indian Standard (First Revision) which is identical to IEC 60151-28:1978 'Measurements of the electrical properties of electronic tubes - Part 28: Methods of measurement of colour television picture tubes' issued by the International Electrotechnical Commission (IEC) *will be* adopted by the Bureau of Indian Standards on the recommendation of the Electronic Display Devices and systems Sectional Committee and approval of the Electronics and Information Technology Division Council.

This standard was originally published in 1983 and assistance has been derived from the IEC Pub 151-28. The first revision aligns this Indian Standard with IEC 60151-28:1978, there is a need to align the formatting and appearance of the standard as per the current practice.

The following changes have been required in the standards under this revision:

- a) Adding Front cover page.
- b) Addition of Hindi Title.
- c) National foreword to be written as current practice.
- d) UDC Number to be changed to ICS code.

The text of IEC Standard *will be* approved as suitable for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'
- b) Comma (,) has been used as a decimal marker, while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appears to certain International Standards for which Indian Standards also exist. The corresponding Indian Standards, which are to be substituted in their respective places, are listed below along with their degree of equivalence for the editions indicated. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

| International standards | Corresponding Indian standards | Degree of Equivalence |
|--|--|------------------------------|
| IEC 60050-531:1974 International Electrotechnical Vocabulary (IEV) - Part 531: Electronic tubes | IS 18123: 2023 Electro technical Vocabulary: Electronic tubes | Identical |
| IEC 60151-0:1966 Measurements of the electrical properties of electronic tubes and valves - Part 0: Precautions relating to methods of measurement of electronic tubes and valves | IS 4147: 1981 Methods of measurements for electron tubes - Receiving and transmitting tubes (First Revision) | Technically Equivalent |
| ISO 25862:2019 Ships and marine technology — Marine magnetic compasses, binnacles and azimuth reading devices | IS 4579: 1968 Methods of measurements on television picture tubes | Technically Equivalent |

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 2022 'Rules for rounding off numerical values (second

revision)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Scope of IEC 60151-28:1978

“IEC 60151-28:1978 specifies the procedures and methods for measuring the electrical properties of color television picture tubes (CRT). The standard is intended to ensure that measurements are conducted in a consistent and accurate manner, allowing for reliable assessment of CRT performance and quality. Key aspects covered under this scope include:

Measurement Techniques: Detailed methods for assessing both static and dynamic electrical characteristics of color television picture tubes. This encompasses various parameters essential for evaluating the tube's performance, such as cathode, anode, and focus voltages.

Test Conditions: Guidelines on the conditions under which measurements should be performed, including environmental factors (e.g., temperature and humidity) and operational states of the CRT (e.g., stabilized or operating).

Calibration Requirements: Instructions for calibrating measurement equipment to ensure accuracy in the recorded data. This includes the calibration of voltmeters, oscilloscopes, and other relevant instruments.

Safety Protocols: Safety guidelines for handling high-voltage components of the CRT and conducting measurements to prevent electrical hazards and ensure operator safety.

Data Interpretation: Guidance on how to interpret measurement results in the context of the CRT's overall performance, image quality, and reliability.

Documentation and Reporting: Requirements for recording and reporting measurement data, which is crucial for quality control, troubleshooting, and ensuring adherence to performance standards.

Quality Assurance: Procedures for using measurement data to evaluate and control the quality of color television picture tubes, ensuring that they meet specified performance criteria.”

Note: The Technical content of this document has not been enclosed as these are identical with the corresponding IEC Standard. For details, please refer IEC 60151-28:1978 or kindly contact.

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