INTERNATIONAL STANDARD

IEC 60728-6

Second edition
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Cable networks for television signals, sound signals and interactive services –

Part 6:
Optical equipment

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

CABLE NETWORKS FOR TELEVISION SIGNALS, SOUND SIGNALS AND INTERACTIVE SERVICES –

Part 6: Optical equipment

FOREWORD

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International Standard IEC 60728-6 has been prepared by technical area 5: Cable networks for television signals, sound signals and interactive services, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

This second edition cancels and replaces the first edition published in 2001 of which it constitutes a technical revision.

The text of this standard is based on

FDIS	Report on voting
100/680/FDIS	100/697/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.

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

The committee has decided that this publication remains valid until 2006. At this date, in accordance with the committee's decision, the publication will be:

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

INTRODUCTION

Standards of the IEC 60728 series deal with cable networks for television signals, sound signals and interactive services including equipment, systems and installations:

- for headend-reception, processing and distribution of sound and television signals and their associated data signals, and
- for processing, interfacing and transmitting all kinds of interactive multimedia signals using all applicable transmission media.

They cover all kinds of networks that convey modulated RF carriers such as

- CATV-networks;
- MATV-networks and SMATV-networks;
- individual receiving networks;

and all kinds of equipment, systems and installations installed in such networks.

The scope of these standards extends from antennas and special signal source inputs to headend or other interface points, to networks as a whole up through system outlets, or terminal inputs where no system outlet exists.

The standardization of any user terminals (i.e. tuners, receivers, decoders, multimedia terminals, etc.) is excluded.

CABLE NETWORKS FOR TELEVISION SIGNALS, SOUND SIGNALS AND INTERACTIVE SERVICES –

Part 6: Optical equipment

1 Scope

This part of IEC 60728 lays down the measuring methods, performance requirements and data publication requirements of optical equipment of cable networks for television signals, sound signals and interactive services.

This standard

- applies to all optical transmitters, receivers, amplifiers, directional couplers, isolators, multiplexing devices, connectors and splices used in cable networks;
- covers the frequency range 5 MHz to 3 000 MHz;

  NOTE The upper limit of 3 000 MHz is an example, but not a strict value. The frequency range or ranges, over which the equipment is specified, shall be published.
- identifies guaranteed performance requirements for certain parameters;
- lays down data publication requirements with guaranteed performance;
- describes methods of measurement for compliance testing.

All requirements and published data relate to minimum performance levels within the specified frequency range and in well-matched conditions as might be applicable to cable networks for television signals, sound signals and interactive services.

2 Normative references

The following referenced documents are indispensable for the application 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, *Environmental testing. Part 1: General and guidance*

IEC 60068-2, (all parts) *Environmental testing – Part 2: Tests*

IEC 60169-2, *Radio-frequency connectors – Part 2: Coaxial unmatched connector*

IEC 60169-24, *Radio-frequency connectors – Part 24: Radio-frequency coaxial connectors with screw coupling, typically for use in 75 ohm cable distribution systems (Type F)*

IEC 60417-DB:2002[*], *Graphical symbols for use on equipment*

IEC 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 60617 (all parts) [DB]*, *Graphical symbols for diagrams*

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[*] “DB” refers to the IEC on-line database.

IEC 60728-1, *Cabled distribution systems for television and sound signals – Part 1: Methods of measurement and system performance*

IEC 60728-2, *Cabled distribution systems for television and sound signals – Part 2: Electromagnetic compatibility of equipment*

IEC 60728-3, *Cabled distribution systems for television and sound signals – Part 3: Active coaxial wideband distribution equipment*

IEC 61280-2-2, *Fibre optic communication subsystem basic test procedures – Part 2-2: Test procedures for digital systems – Optical eye pattern, waveform, and extinction ratio*

IEC 61280-4-2, *Fibre optic communication subsystem basic test procedures – Part 4-2: Fibre optic cable plant – Single-mode fibre optic cable plant attenuation*

IEC 61282-4, *Fibre optic communication system design guides – Part 4: Guideline to accommodate and utilize nonlinear effects in single-mode fibre optic systems*

IEC 61290-1-3, *Optical fibre amplifiers – Basic specification – Part 1-3: Test methods for gain parameters – Optical power meter*

IEC 61290-3, *Optical fibre amplifiers – Basic specification – Part 3-1: Test methods for noise figure parameters*

IEC 61290-3-2, *Optical fibre amplifiers – Part 3-2: Test methods for noise figure parameters – Electrical spectrum analyzer*

IEC 61290-5, *Optical fibre amplifiers – Basic specification – Part 5: Test methods for reflectance parameters*

IEC 61291-1, *Optical fibre amplifiers – Part 1: Generic specification*

IEC 61931, *Fibre optics – Terminology*

IEC 80416, *Basic principles for graphical symbols for use on equipment*

ITU G.692, *Optical interfaces for multichannel systems with optical amplifiers*

EN 300019-1-3, *Environmental Engineering (EE); Environmental conditions and environmental tests for telecommunications equipment; Part 1-3: Classification of environmental conditions; Stationary use at weatherprotected locations*