

INTERNATIONAL STANDARD



Laser display devices –
Part 5-2: Optical measuring methods of speckle contrast



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**Laser display devices –
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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references.....	6
3 Terms, definitions and abbreviations	6
3.1 Terms and definitions	6
3.2 Abbreviations	6
4 Standard measuring conditions	7
4.1 General.....	7
4.2 Standard measuring environmental conditions	7
4.3 Measurement coordinate system	7
4.4 Darkroom conditions	8
4.5 Standard conditions of measuring equipment.....	8
4.5.1 General	8
4.5.2 Adjustment of LDD	9
4.5.3 Conditions of measuring equipment.....	9
4.6 Screen conditions	10
4.6.1 General	10
4.6.2 Report	10
5 Measuring methods of speckle contrast.....	10
5.1 Speckle contrast measurement of still image	10
5.1.1 Purpose	10
5.1.2 Measuring conditions	10
5.1.3 Measuring the monochromatic speckle contrast of front projection	10
5.1.4 Measuring the monochromatic speckle contrast of rear projection	12
5.2 Calibration and diagnosis for the LMD.....	12
5.2.1 General	12
5.2.2 Calibration procedure and diagnosis for the highest C_S	13
5.2.3 Calibration procedure and diagnosis for the lowest C_S	13
Annex A (informative) Spectral behaviour of the LD	15
A.1 Spectral behaviour of a single-longitudinal mode LD	15
A.2 Spectral behaviour of a multi-longitudinal mode LD.....	15
Annex B (informative) Recommendation on imaging sensor pixel size	16
Annex C (informative) Fundamental formulation of speckle contrast and the effects of measurement variables.....	18
C.1 Fundamental formulation	18
C.2 Effect of observation distance and iris radius	18
Annex D (informative) Possible errors and their sources	20
Bibliography	21
Figure 1 – Coordinate system for projection direction and viewing direction.....	8
Figure 2 – Example of measurement geometries for monochromatic speckle contrast of front projection.....	11
Figure 3 – Example of measurement geometries for monochromatic speckle contrast of rear projection	12
Figure 4 – Example of measurement geometries for C_S calibration.....	13

Figure A.1 – Example of spectral behaviour of a single-longitudinal mode LD.....	15
Figure A.2 – Example of spectral behaviour of a multi-longitudinal mode LD	15
Figure B.1 – Minimum subjective speckle grain size as a function of the F-number.....	17
Figure C.1 – Measurement result of C_S by changing $NA_{\text{screen-Iris}}$	19
Table B.1 – Example of s_{subj}	16

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LASER DISPLAY DEVICES –

Part 5-2: Optical measuring methods of speckle contrast

FOREWORD

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International Standard IEC 62906-5-2 has been prepared by IEC technical committee 110: Electronic display devices.

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

FDIS	Report on voting
110/760/FDIS	110/768/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.

A list of all parts in the IEC 62906 series, published under the general title *Laser display devices*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

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- withdrawn,
- replaced by a revised edition, or
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LASER DISPLAY DEVICES –

Part 5-2: Optical measuring methods of speckle contrast

1 Scope

This part of IEC 62906 specifies the standard measurement conditions and measurement methods for determining the monochromatic speckle contrast of laser display devices (LDDs). The LDDs may include hybrid types using both a laser or lasers, and spontaneous emission-based light sources, such as LEDs.

NOTE The monochromatic speckle contrast measurements do not include image quality issues.

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 60825-1, *Safety of laser products – Part 1: Equipment classification and requirements*

IEC 62906-1-2:2015, *Laser display devices – Part 1-2: Vocabulary and letter symbols*

3 Terms, definitions and abbreviations

For the purposes of this document, the terms and definitions given in IEC 62906-1-2, as well as the following apply.

3.1 Terms and definitions

3.1.1

fully developed speckle FDS

speckle when the speckle contrast ratio is equal to one ($C_s = 1$)

[SOURCE: Goodman:2006] [1]¹

3.2 Abbreviations

DN	digital number
DU	device under test
LD	laser diode
LMD	light measuring device
MTF	modulation transfer function
NA	numerical aperture
PPUT	projection plane under test
PSF	point spread function

¹ Numbers square brackets refer to the bibliography.