



SLOVENSKI STANDARD
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**Polprevodniški elementi - Preskušanje na ravni čipa za avtonomna vozila - 6. del:
Naprave za vizualno slikanje**

Semiconductor devices - Chip-scale testing for autonomous vehicles - Part 6: Visual imaging devices

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Mr Cheolung Cha

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☐ NOT SUBMITTED FOR CENELEC PARALLEL VOTING

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TITLE:

Semiconductor devices - Chip-scale testing for autonomous vehicles - Part 6: Visual Imaging devices

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Semiconductor devices – Chip-scale testing for autonomous vehicles - Part 6: Visual imaging devices

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IEC 63551-6 has been prepared by IEC technical committee TC47: Semiconductor devices. It is an International Standard.

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

Draft	Report on voting
XX/XX/FDIS	XX/XX/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

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156 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are
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- 161 • reconfirmed,
- 162 • withdrawn,
- 163 • replaced by a revised edition, or
- 164 • amended.

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Semiconductor devices – Chip-scale testing for autonomous vehicles

Part 6: Visual imaging devices

1 Scope

This part of IEC 63551 specifies the standard testing conditions and testing methods that can be used to evaluate and determine the performance of visual imaging devices used in autonomous vehicles. This document applies to the performance testing for visual imaging devices used in autonomous vehicles.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

ISO 12233:2023, *Photography – Electronic still picture imaging – Resolution and spatial frequency responses*

ISO 15739:2013, *Photography – Electronic still-picture imaging – Noise measurements*

3 Terms, definitions and abbreviations

For the purposes of this document, the following terms and definitions apply.

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

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

3.1 Terms and definitions

3.1.1

visual imaging devices

essential photoelectric conversion components in autonomous vehicles, transforming environmental visible - light signals into digital image data. As fundamental sensing units, they provide raw visual inputs for environmental perception systems and are typically implemented through visible - light - sensitive CMOS or CCD sensor arrays. With the advancement of packaging technology, devices that integrate lenses with CMOS or CCD sensor arrays in a single package are also considered as visual imaging devices.

3.1.2

effective pixel

pixel that captures image data

3.1.3

signal-to-noise ratio

SNR

ratio of the output signal to the mean noise level, at a particular signal level

3.1.4

LED flicker

flicker in the image of a pulsed light source or objects illuminated by a pulsed light source because the exposure time of the visual imaging module does not coincide with the pulses of the light source