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Solar thermal electric plants -
Part 3-5: Laboratory reflectance measurement of solar reflectors

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Solar thermal electric plants - Part 3-5: Laboratory reflectance measurement of solar reflectors

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IEC 62862-3-5 has been prepared by IEC technical committee TC 117: Solar thermal electric plants. It is an International Standard.

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

Draft	Report on voting
117/253/FDIS	117/255/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.

A list of all parts in the IEC 62862 series, published under the general title *Solar thermal electric plants*, can be found on the IEC website.

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 at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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– reconfirmed,
– withdrawn, or
– revised.

1 Scope

This document specifies laboratory methods to measure reflectance of all types of reflectors for use in concentrating solar thermal (CST) plants.

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.

IEC 60904-3, *Photovoltaic devices - Part 3: Measurement principles for terrestrial photovoltaic (PV) solar devices with reference spectral irradiance data*

IEC TS 62862-1-1, *Solar thermal electric plants - Part 1-1: Terminology*

ISO/IEC Guide 98-3:2008, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

ISO 4628-2:2016, *Paints and varnishes — Evaluation of degradation of coatings — Designation of quantity and size of defects, and of intensity of uniform changes in appearance — Part 2: Assessment of degree of blistering*

ISO 9488:2022, *Solar energy — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 9488:2022, IEC TS 62862-1-1 and the following 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 Solar definitions

3.1.1
direct solar radiation
G_b
solar radiation incident on a given plane, and originating from a small solid angle centred on the sun's disk

[SOURCE: ISO 9488:2022 [1], 3.2.17.]

3.2 Collector components

3.2.1
reflector
optical device made of several materials, suitably chosen and arranged to make a surface with proper reflectance (3.4.1) features

Note 1 to entry: The term "mirror" is typically used as a synonym of reflector.