

Australian Standard<sup>®</sup>

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**International electrotechnical  
vocabulary**

**Chapter 845: Lighting**

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This Australian Standard was prepared by Committee TE/13, Symbols, Units and Quantities for Electrotechnology. It was approved on behalf of the Council of Standards Australia on 21 December 1988 and published on 14 April 1989.

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## PREFACE

This Standard was prepared by Standards Australia's Committee on Symbols, Units and Quantities for Electrotechnology, under the authority of both the Telecommunications and Electronics Standards Board and the Electrical Standards Board. This Standard supersedes AS 1852(45)—1970, *International electrotechnical vocabulary Chapter 45: Lighting*, which was withdrawn in July 1985.

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This Standard is one of the AS 1852 series of Standards. In the past, this series has consisted of direct endorsements of the IEC 50 series of the International Electrotechnical Vocabulary. In future, newly issued parts of IEC 50, where appropriate, will be issued as Australian Standards, i.e. not endorsements. The full text of the definitions in English, French and Russian, and for this Chapter also German, has been included as some definitions are considered to be incomplete when produced in one language.

The purpose of the AS 1852 series is to provide a glossary of terms used in electrical engineering. The series lists terms in English, French and Russian, and in some cases Spanish. It is intended that other Australian Standards will refer to AS 1852 and not repeat any definitions.

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STANDARDS AUSTRALIA

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**Australian Standard**

**International electrotechnical vocabulary**

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Chapter 845—Lighting

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SECTION 845-01 — RADIATION, QUANTITIES AND UNITS

A. GENERAL TERMS

**845-01-01**

**rayonnement (électromagnétique); radiation (électromagnétique)**

1. Emission ou transport d'énergie sous forme d'ondes électromagnétiques avec les photons associés.
2. Ces ondes électromagnétiques ou ces photons.

*Note.* — En français, le terme *radiation* s'applique de préférence à l'élément simple de tout rayonnement, caractérisé par une longueur d'onde ou une fréquence (voir 845-01-07).

**(electromagnetic) radiation**

1. Emission or transfer of energy in the form of electromagnetic waves with the associated photons.
2. These electromagnetic waves or these photons.

*Note.* — The French term "radiation" applies preferably to a single element of any radiation, characterized by one wavelength or one frequency (see 845-01-07).

**(elektromagnetische) Strahlung**

1. Aussendung oder Übertragung von Energie in Form von elektromagnetischen Wellen nebst den zugeordneten Photonen.
2. Diese elektromagnetischen Wellen oder diese Photonen.

*Anmerkung.* — Die französische Bezeichnung «radiation» gilt vorzugsweise für den durch eine einzige Wellenlänge oder Frequenz gekennzeichneten jeweiligen Anteil einer Strahlung (siehe 845-01-07).

**(электromagnитное) излучение**

1. Испускание или распространение электромагнитных волн (фотонов).
2. Электромагнитные волны (фотоны).

*Примечание.* — Французский термин «radiation» чаще применяется для определения единичной составляющей какого-либо излучения, которая характеризуется одной какой-либо длиной волны или частотой (см. 845-01-07).

**845-01-02**

**rayonnement optique**

Rayonnement électromagnétique dont les longueurs d'onde sont comprises entre le domaine de transition vers les rayons X ( $\lambda \approx 1 \text{ nm}$ ) et le domaine de transition vers les ondes radioélectriques ( $\lambda \approx 1 \text{ mm}$ ).

**optical radiation**

Electromagnetic radiation at wavelengths between the region of transition to X-rays ( $\lambda \approx 1 \text{ nm}$ ) and the region of transition to radio waves ( $\lambda \approx 1 \text{ mm}$ ).

**optische Strahlung**

Elektromagnetische Strahlung, deren Wellenlängen zwischen dem Übergangsbereich zu den Röntgenstrahlen ( $\lambda \approx 1 \text{ nm}$ ) und dem Übergangsbereich zu den Radiowellen ( $\lambda \approx 1 \text{ mm}$ ) liegen.

**оптическое излучение**

Электromagnetное излучение с длинами волн, лежащими в пределах между областью перехода к рентгеновским лучам ( $\approx 1 \text{ nm}$ ) и областью перехода к радиоволнам ( $\approx 1 \text{ mm}$ ).

845-01-03

**rayonnement visible**

Rayonnement optique susceptible de produire directement une sensation visuelle.

*Note.* — Il n'y a pas de limites précises pour le domaine spectral du rayonnement visible; ces limites dépendent du flux énergétique qui atteint la rétine et de la sensibilité de l'observateur. La limite inférieure est prise généralement entre 360 nm et 400 nm et la limite supérieure entre 760 et 830 nm.

**visible radiation**

Any optical radiation capable of causing a visual sensation directly.

*Note.* — There are no precise limits for the spectral range of visible radiation since they depend upon the amount of radiant power reaching the retina and the responsivity of the observer. The lower limit is generally taken between 360 nm and 400 nm and the upper limit between 760 nm and 830 nm.

**sichtbare Strahlung**

Jede optische Strahlung, die unmittelbar eine Gesichtsempfindung hervorzurufen vermag.

*Anmerkung.* — Es gibt keine genauen Grenzen für den Spektralbereich der sichtbaren Strahlung, da diese von dem Betrag der Strahlungsleistung, die die Netzhaut erreicht, und von der Augenempfindlichkeit des Beobachters abhängen. Die untere Grenze wird im allgemeinen zwischen 360 nm und 400 nm, die obere Grenze zwischen 760 nm und 830 nm angenommen.

**видимое излучение**

Оптическое излучение, которое может непосредственно вызвать зрительное ощущение.

*Примечание.* — Не существует точных пределов спектрального диапазона видимого излучения, так как они зависят от мощности достигающего сетчатки излучения и чувствительности наблюдателя. За нижний предел обычно принимается диапазон от 360 нм до 400 нм, а за верхний предел диапазон между 760 нм и 830 нм.

845-01-04

**rayonnement infrarouge**

Rayonnement optique dont les longueurs d'onde sont supérieures à celles du rayonnement visible.

*Note.* — Pour le rayonnement infrarouge, le domaine entre 780 nm et 1 mm est généralement divisé en :

IR-A	780 . . . . .	1400 nm
IR-B	1,4 . . . . .	3 $\mu\text{m}$
IR-C	3 $\mu\text{m}$ . . . . .	1 mm

**infrared radiation**

Optical radiation for which the wavelengths are longer than those for visible radiation.

*Note.* — For infrared radiation, the range between 780 nm and 1 mm is commonly subdivided into :

IR-A	780 . . . . .	1400 nm
IR-B	1,4 . . . . .	3 $\mu\text{m}$
IR-C	3 $\mu\text{m}$ . . . . .	1 mm



**infrarote Strahlung**

Optische Strahlung, deren Wellenlängen grösser sind als die der sichtbaren Strahlung.

*Anmerkung.* — Der Bereich der infraroten Strahlung zwischen 780 nm und 1 mm wird gewöhnlich unterteilt in :

IR-A	780 . . . . .	1400 nm
IR-B	1,4 . . . . .	3 µm
IR-C	3 µm . . . . .	1 mm

**инфракрасное излучение**

Оптическое излучение, у которого длины волн больше длин волн видимого излучения.

*Примечание.* — Для инфракрасного излучения диапазон между 780 нм и 1 мм обычно подразделяется на поддиапазоны :

ИК-A	780 . . . . .	1400 нм
ИК-B	1,4 . . . . .	3 мкм
ИК-C	3 мкм . . . . .	1 мм

845-01-05

**rayonnement ultraviolet**

Rayonnement optique dont les longueurs d'onde sont inférieures à celles du rayonnement visible.

*Note.* — Pour le rayonnement ultraviolet, le domaine entre 100 nm et 400 nm est généralement divisé en :

UV-A	315 . . . . .	400 nm
UV-B	280 . . . . .	315 nm
UV-C	100 . . . . .	280 nm

**ultraviolet radiation**

Optical radiation for which the wavelengths are shorter than those for visible radiation.

*Note.* — For ultraviolet radiation, the range between 100 nm and 400 nm is commonly subdivided into :

UV-A	315 . . . . .	400 nm
UV-B	280 . . . . .	315 nm
UV-C	100 . . . . .	280 nm

**ultraviolette Strahlung**

Optische Strahlung, deren Wellenlängen kleiner sind als die der sichtbaren Strahlung.

*Anmerkung.* — Der Bereich der ultravioletten Strahlung zwischen 100 nm und 400 nm wird gewöhnlich unterteilt in :

UV-A	315 . . . . .	400 nm
UV-B	280 . . . . .	315 nm
UV-C	100 . . . . .	280 nm

**ультрафиолетовое излучение**

Оптическое излучение, у которого длины волн меньше длин волн видимого излучения.

*Примечание.* — Для ультрафиолетового излучения диапазон между 100 нм и 400 нм обычно разбивается на поддиапазоны :

УФ-A	315 . . . . .	400 нм
УФ-B	280 . . . . .	315 нм
УФ-C	100 . . . . .	280 нм

845-01-06

**lumière**

1. Lumière perçue (voir 845-02-17).
2. Rayonnement visible (voir 845-01-03).

*Notes 1.* — Le mot *lumière* est parfois employé dans le sens 2 pour des rayonnements optiques s'étendant en dehors du domaine visible, mais cet usage n'est pas recommandé.

2. — Les termes «light» en anglais et «Licht» en allemand sont aussi utilisés, particulièrement en signalisation visuelle, pour certains dispositifs d'éclairage et pour certains signaux lumineux.

**light**

1. Perceived light (see 845-02-17).
2. Visible radiation (see 845-01-03).

*Notes 1.* — The word *light* is sometimes used in sense 2 for optical radiation extending outside the visible range, but this usage is not recommended.

2. — The terms “light” in English and “Licht” in German are also used, especially in visual signalling, for certain lighting devices and for light signals.

**Licht**

1. Wahrgenommenes Licht (siehe 845-02-17).
2. Sichtbare Strahlung (siehe 845-01-03).

*Anmerkungen 1.* — Die Bezeichnung *Licht* wird in ihrer 2. Bedeutung manchmal für optische Strahlung ausserhalb des sichtbaren Bereichs verwendet, doch wird dieser Sprachgebrauch nicht empfohlen.

2. — Die Bezeichnungen «light» im Englischen und «Licht» im Deutschen werden, insbesondere bei der Signalgebung mit sichtbarer Strahlung, auch für gewisse lichttechnische Geräte und für Leuchtfeuer verwendet.

**свет**

1. Воспринимаемый свет (см. 845-02-17).
2. Видимое излучение (см. 845-01-03).

*Примечания 1.* — Вариант определения 2 иногда используется для оптического излучения, распространенного за пределы видимого диапазона, но такое использование не рекомендуется.

2. — Английский термин «light» и немецкий «Licht» применяются также, особенно в визуальной сигнализации, для определения световых приборов и световых сигналов.

**845-01-07****radiation monochromatique; rayonnement monochromatique**

Rayonnement caractérisé par une seule fréquence. Dans la pratique, rayonnement s'étendant sur un très petit domaine de fréquences et pouvant être caractérisé par l'indication d'une seule fréquence.

*Note.* — La longueur d'onde dans l'air ou dans le vide est aussi utilisée pour caractériser une radiation monochromatique.

**monochromatic radiation**

Radiation characterized by a single frequency. In practice, radiation of a very small range of frequencies which can be described by stating a single frequency.

*Note.* — The wavelength in air or *in vacuo* is also used to characterize a monochromatic radiation.

**monochromatische Strahlung**

Strahlung, die durch eine einzige Frequenz gekennzeichnet ist. In der Praxis Strahlung eines sehr kleinen Frequenzbereiches, der durch Angabe einer einzigen Frequenz beschrieben werden kann.

*Anmerkung.* — Die Wellenlänge in Luft oder Vakuum wird ebenfalls zur Charakterisierung einer monochromatischen Strahlung verwendet.

**монохроматическое излучение**

Излучение, характеризующееся одной частотой. На практике, излучение очень малого диапазона частот, которое может быть описано установлением одной частоты.

*Примечание.* — Для описания монохроматического излучения используется также длина волны, измеренная в воздухе или вакууме.