



International Commission on Illumination  
Commission Internationale de l'Eclairage  
Internationale Beleuchtungskommission

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**PRESS RELEASE**

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**Joint ISO/CIE Standard  
ISO/CIE 11664-4:2019**

**Colorimetry – Part 4: CIE 1976 L\*a\*b\* colour space**

This document was prepared by the International Commission on Illumination (CIE) in cooperation with Technical Committee ISO/TC 274, *Light and lighting*.

This first edition of ISO/CIE 11664-4 cancels and replaces ISO 11664-4:2008 | CIE S 014-4:2007, of which it constitutes a minor revision. The document has been editorially revised as per current ISO and CIE rules and the references have been updated.

The document specifies a method of calculating the coordinates of the CIE 1976 L\*a\*b\* colour space, including correlates of lightness, chroma and hue. It includes two methods for calculating Euclidean distances in this space to represent the perceived magnitude of colour differences.

The document is applicable to tristimulus values calculated using colour-matching functions of the CIE 1931 standard colorimetric system or the CIE 1964 standard colorimetric system. This document can be used for the specification of colour stimuli perceived as belonging to a reflecting or transmitting object, where a three-dimensional space more uniform than tristimulus space is required.

The document does not apply to colour stimuli perceived as belonging to an area that appears to be emitting light as a primary light source, or that appears to be specularly reflecting such light.

The document is applicable to self-luminous displays, such as cathode ray tubes, if they are being used to simulate reflecting or transmitting objects and if the stimuli are appropriately normalized.

Calculating the reverse transformation is shown in Annex A.

The publication is written in English. It consists of 8 pages and is readily available from the [CIE Webshop](#) or from the National Committees of the CIE.

The price of this publication is EUR 72,- (Members of a National Committee of the CIE receive a 66,7 % discount on this price – please approach your NC for information on accessing this discount).