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**Ergonomics—Accessible design—
Specification of age-related
luminance contrast for coloured
light**

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Foreword

This translation has been made based on the original Japanese Industrial Standard revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law.

Consequently **JIS S 0031**:2004 is replaced with this Standard.

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Ergonomics—Accessible design— Specification of age-related luminance contrast for coloured light

Introduction

This Japanese Industrial Standard has been prepared based on the first edition of **ISO 24502** published in 2010 without any modifications of technical contents.

The portions with dotted underlines are the matters not given in the corresponding International Standard.

This Standard was established in 2004. And then based on it **ISO 24502** has been published in 2010 as the first edition of the International Standard.

Although the proportion of older people is increasing in many countries, the care for better visibility of signs and displays is not sufficiently taken for those older people. This prevents older people from actively being involved in social activities, as well as from living their life safely and comfortably. This Standard provides a method of calculating age-related luminance contrast that can be used for assessing and designing signs and displays in our visual environment, so that they are clearly visible to older people. This method calculates age-related luminance contrast for people in a wide age range based on age-related photopic spectral luminous efficiency of the eye.

This Standard adopts the principles of accessible design given in JIS Z 8071 and amplified in **ISO/TR 22411**.

1 Scope

This Standard specifies the age-related luminance contrast of any two lights of different colour seen by a person at any age, by taking into account the age-related change of spectral luminous efficiency of the eye.

This Standard provides a basic method of calculation that can be applied to the design of lighting, visual signs and displays. It applies to light, self-luminous or reflected, in visual signs and displays seen under moderately bright conditions called photopic vision and whose spectral radiance is known or measurable. It does not apply to light seen under darker conditions called mesopic or scotopic vision.

This Standard specifies the luminance contrast for people aged from 10 to 79 years who have had no medical treatment or surgery on their eyes that may affect their spectral luminous efficiency. For the people with various colour vision different from those of majority of people among subjects, alternative luminance contrast need to be defined according to each spectral luminous efficiency. For the people with low vision, other appropriate visual evaluation guidance depending on the luminance contrast is desirable to be defined with consideration for various visual features other than colour vision.

NOTE : The International Standard corresponding to this Standard and the symbol of degree of correspondence are as follows.