ISO/TR 17321-5:2021 (E)

Graphic technology and photography — Colour characterization of digital still cameras (DSCs) — Part 5: Colour targets including saturated colours for colour characteristic evaluation test for colorimetric image capture

Contents

Foreword

Introduction

1 Scope

2 Normative references

3 Terms and definitions

4 Highly-saturated colour targets

4.1 General
4.2 Extension of real existing spectra using eigenvector method
4.2.1 General
4.2.2 Selection of spectra database
4.2.3 Spectral reconstruction from the eigenvectors
4.2.3.1 General
4.2.3.2 Boundary colour generation
4.2.3.3 Saturated-colour generation using the reference spectra distribution set
4.3 Artificial (LED-based) spectra whose wavelength peak is on colour-difference-sensitive wavelength (CDSW)
4.3.1 General
4.3.2 The method to define the colour-difference-sensitive wavelength (CDSW)
4.3.3 Selection of LED for CDSW targets

5 FOM metric for evaluation of overall sensor spectral sensitivities, used in the digital cameras

5.1 General
5.2 Evaluation metrics for OSSS
5.3 Advantages and disadvantages of ΔE (deltaE) evaluation
5.4 How 17321-5 datasets can be used for FOMs
5.5 Worked examples

Annex A (informative) Selection and eigenvectors of spectral distribution set

A.1 Selection of spectral distribution set
A.2 Eigenvectors of selected spectral distribution set

Annex B (informative) Colour gamut of boundary colour

Annex C (informative) Worked example for spectral distribution generation of Pointer's surface colours

C.1 General
C.2 Calculation of objective colour chroma and C c * C r * ratio
C.3 Calculation of maximum C c * C r * ratio
C.4 Generation of spectral distribution candidates

Annex D (informative) Background information for defining CDSW

Annex E (informative) Additional 410nm to colour-difference-sensitive wavelengths (CDSW)

Annex F (informative) Colour differences of patches of CDSW target

Annex G (informative) Spectral distribution of CDSW target for ITU-R BT.2020

Annex H (informative) Spectral distribution dataset for users to download

Page count: 35