



Overview

Product name	TE270X V2
Principle	Transparent gray scale test chart with variable center density to determine the OECF, noise, SNR and dynamic range of cameras that only offer auto-exposure and auto-focus functions (e. g. mobile devices)

Features

OECF

Type/s of pattern	gray scale, circular arranged (most optical systems are rotationally symmetric so all patches will be affected in the same way by shading)
Contrast	10 000:1 (80 dB, 13 f-stops) 100 000:1 (100 dB, 16.5 f-stops) 1 000 000:1 (120 dB, 20 f-stops)
Size of OECF patch [mm]	16.5 x 16.5
Quality	X-version*
Number of steps	20
Arrangement of steps	according to ISO 14524
Density / Reflection	Individually measured values are provided in a separate Acceptance Protocol. Production tolerance is ± 0.03 OD
Surface finish	The film patches of transparent charts may show scratches. This issue does not affect the test chart's function, as the scratches are not visible under standard illumination geometry. We also recommend recording the OECF chart slightly out of focus to obtain a stable average value in the result.



General description hardware

Type	Transmissive (D)		
Aspect ratio	16:9 (can be used for other aspect ratios without restrictions)		
Chart size [W x H x D]		W [mm]	H [mm]
	D280	360	280
Picture size	16:9		
		W [mm]	H [mm]
	D280	280	157.5
Material	Photographic film (gray patches and background) Polarizing filter (center with variable density)		
Mounting	Embedded between black anodized aluminum metal frames		
Edge protection	Fabric tape, might have influence to chart thickness tolerance		
Chart size tolerances	Up to +/- 2 mm as they are handmade in-house and fabric tape is used		
Service life	3 years		
Storage	Dark, dry, and free from harmful gas (e.g., formaldehyde or ozone). 20 °C and 25 °C with a humidity of 60% – 65% and no direct sunlight at any time.		
Scope of delivery	Test chart, stable cardboard envelope to store the chart, air blower, acceptance protocol		

Miscellaneous

Evaluation / Assessment	Supported by iQ-Analyzer
Reference data iQ-Analyzer-X	Individual reference file provided
Standards	ISO 14524:2009 Methods for measuring opto-electronic conversion functions (OECFs) ISO 15739:2013 Noise measurements ISO 12232:2006 Determination of exposure index, ISO speed ratings, standard output sensitivity, and recommended exposure index
Accessories	PCR Krochmann Radiolux 111: luminance meter (tele-luminance meters can only be used in combination with a mask that covers the whole chart except the measured patch).
Related Products	LG3, LE7
Terms & Conditions	image-engineering.de/terms-and-conditions

* gray patches are made from continuous tones/material without any raster