



Overview

Product name	TE253 single
Principle	Test chart to determine the resolution of a digital camera based on a sinusoidal Siemens star. The Siemens star comply to ISO 12233.

Features

Siemens stars

Type of pattern	1 sinusoidal Siemens star with 16 surrounding gray patches			
Modulation	H	~91%		
	S	~94%		
Cycles	144			
Diameter stars	250 mm			
Diameter registration marks	H	5 mm		
	S	12 mm		
Gray steps	The contrast of the gray scale complies to the contrast of the Siemens star. Please refer to Acceptance protocol for exact densities of each step.			
Reference data	Individually measured Production tolerance: allowed variation of linearity of gray patches of 15% (remission) max.			
Sample rate* [MP]		minimum	maximum	
	H	8	140	(> 8K)**
	S	2	35	(HDTV – 8K)**



General description hardware

Type	Reflective (A)		
Aspect ratio	~1:1		
Chart size [W x H x D]	W [mm]	H [mm]	D [mm]
	P280	334	271
		2.1	
Picture size	W [mm]	H [mm]	
	P280	290	271
Material	H: Photographic paper, matt finishing, resolution 9-10 LP/mm S: Specific matt paper, resolution 3-4 LP/mm		
Mounting	Polystyrene		
Edge protection	None		
Chart size tolerances	Up to +/- 0.5 mm as they are handmade in-house and no edge protection 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, cardboard box, acceptance protocol		

Miscellaneous

Evaluation / Assessment	supported by iQ-Analyzer
Reference data iQ-Analyzer-X	Not applicable
Measurement device	X-Rite eXact (reflective charts) https://www.image-engineering.de/content/products/charts/IE_reference_data_accuracy.pdf
Standards	ISO 12233 Resolution and special frequency responses
Terms & Conditions	image-engineering.de/terms-and-conditions

* if chart fills 1/3 of the image height the chart can be used with a camera of minimum/maximum sample rate, stated in mega pixel (MP)

** HDTV ~ 2.1 MP, 4K ~ 8.3 MP, 8K ~ 33 MP