

DIN ISO 15529:2010-11 (E)

Optics and photonics - Optical transfer function - Principles of measurement of modulation transfer function (MTF) of sampled imaging systems (ISO 15529:2010)

Contents		Page
National foreword		3
National Annex NA (informative) Bibliography		3
Introduction		4
1	Scope	5
2	Normative references	5
3	Terms, definitions and symbols	5
3.1	Terms and definitions	5
3.2	Symbols	8
4	Theoretical relationships	9
4.1	Fourier transform of the image of a (static) slit object	9
4.2	Fourier transform of the output from a single sampling aperture for a slit object scanned across the aperture	10
4.3	Fourier transform of the average LSF for different positions of the slit object	12
5	Methods of measuring the MTFs associated with sampled imaging systems	12
5.1	General	12
5.2	Test azimuth	13
5.3	Measurement of system MTF, $T_{\text{sys}}(r)$ of a sampled imaging device or complete system ..	13
5.4	Measurement of the MTF of the sampling aperture, T_{ap}	19
6	Method of measuring the aliasing function, the aliasing ratio and the aliasing potential ...	19
Annex A (informative) Background theory		21
Annex B (informative) Aliasing in sampled imaging systems		24
Bibliography		29