

Length, Bulgaria, BIM (Bulgarian Institute of Metrology)

Calibration or Measurement Service			Measurand Level or Range			Measurement Conditions/Independent Variable		Expanded Uncertainty					NMI Internal Service Identifier	Comments
Class	Instrument or Artifact: Measurand	Instrument Type or Method	Minimum value	Maximum value	Units	Parameter	Specifications	Value	Units	Coverage Factor	Level of Confidence	Is the expanded uncertainty a relative one?		
Laser radiations	Frequency stabilized laser: vacuum wavelength	Optical beat frequency	633	633	nm			0.05	fm	2	95%	No	1	Approved on 22 March 2005
Laser radiations	Frequency stabilized laser: vacuum wavelength	Optical beat frequency	474	474	THz			34	kHz	2	95%	No	1	Approved on 22 March 2005
Laser radiations	Frequency stabilized laser: vacuum wavelength λ_0	Optical beat frequency	633	633	nm			$1E-09 \lambda_0$	nm	2	95%	No	2	Approved on 22 March 2005
Length instruments	1D measuring machine: displacement L	Length comparator with incremental line scale	0	200	mm	Orientation	horizontal	$Q[0.26, 4.1L], L$ in m	μm	2	95%	No	3	Approved on 22 March 2005
End standards	Gauge block: central length L	Interferometry: exact fractions (Kr lamp, He lamp)	0.5	100	mm	Orientation	vertical	$Q[20, 0.3L], L$ in mm	nm	2	95%	No	4	Approved on 22 March 2005
End standards	Gauge block: central length L	Mechanical comparison	0.5	100	mm	Orientation	vertical	$Q[50, 0.5L], L$ in mm	nm	2	95%	No	5	Approved on 22 March 2005
End standards	Long gauge block: central length L	Mechanical comparison	100	1000	mm	Orientation	horizontal	$Q[100, 1L], L$ in mm	nm	2	95%	No	7	Approved on 22 March 2005
Line standards	Line scale: line spacing L	Fringe counting interferometer and microscope	1	1000	mm			$Q[60, 0.24L], L$ in mm	nm	2	95%	No	8	Approved on 22 March 2005
Line standards	(surveyor, engineer) tape: line spacing L	Interferometry	0	20	m			$Q[0.34, 3L], L$ in m	μm	2	95%	No	9	Approved on 22 March 2005
Angle by circle dividers	Optical polygons: face angle	Index table and autocollimator	10	360	°	Number of faces	3 to 36	1	"	2	95%	No	10	Approved on 02 August 2013
Angle by circle-dividers	Indexing tables: index angle	Optical polygon and autocollimator	0	360	°			0.7	"	2	95%	No	11	Approved on 02 August 2013

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Angle instruments	Autocollimator: error of indicated angle	Small angle generator	0	±1200	"			0.5	"	2	95%	No	12	Approved on 02 August 2013
Angle instruments	Electronic level: error of indicated inclination angle	Small angle generator	0	±1200	"			1.5	"	2	95%	No	13	Approved on 02 August 2013
Angle instruments	Bubble level: error of indicated inclination angle	Small angle generator	0	±1200	"			2.5	"	2	95%	No	14	Approved on 02 August 2013
Angle by circle dividers	Rotary table, heads and goniometers: angle	Optical polygon and autocollimator	0	360	°			4	"	2	95%	No	15	Approved on 02 August 2013
Angle instruments	Clinometers	Optical dividing head	0	360	°			6	"	2	95%	No	16	Approved on 02 August 2013
Angle artefacts	Angle blocks: included angle	Goniometer	0	360	°			5	"	2	95%	No	17	Approved on 02 August 2013
Angle instruments	Bevel protractor	Angle blocks	0	180	°			5	'	2	95%	No	18	Approved on 02 August 2013
End standard	Length bar (long gauge block): central length L	Interferometry, fringe counting and white light	100	1000	mm	Orientation	horizontal	$Q[150, 0.82L], L$ in mm	nm	2	95%	No	6	Approved on 12 September 2016