National Institute of Metrology (Thailand)

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Price List

Item No.	Description	Range	Accuracy / Uncertainty	Price (THB)	Remark	Code
Calibration Fee						
Dimensional Metrology						
1	Iodine Stabilized He-Ne laser	633 nm	5.0E-11	36,000/piece	Beat measurement mehod with Iodine stabilized He-Ne laser	08011 - 10101
2	Stabilized He-Ne laser	633 nm	1.0E-9	22,530/piece	Beat measurement mehod with Iodine stabilized He-Ne laser	08011 - 10201
3	Stabilized He-Ne laser	500 - 1000 nm and 1560 nm	1.0E-12	45,000/piece	Beat measurement mehod with optical comb	08011 - 10202
4	Stabilized He-Ne laser	532 nm	4.0E-8	22,530/piece	Beat measurement mehod with Iodine stabilized Nd:YAG laser	08011 - 10203
5	Dual frequency stabilized He-Ne laser	633 nm	1.0E-09	25,000	Beat measurement mehod with Iodine stabilized He-Ne laser	08011 - 10204
6	Nonstabilized Laser	633 nm	1.0E-7	22,530/piece	Beat measurement mehod with Iodine stabilized He-Ne laser	08011 - 10301
7	Nonstabilized Laser	350 - 1100 nm	1.7E-7	21,280/piece	Direct measurment method by wavelength meter	08011 - 10401
8	Wavelength meter	532 - 1064 nm	4.0E-8	25,000/piece	Direct measurment method by stabilized light source	08011 - 10503
9	Rectangular Gauge Block, Material : Steel	0.5 mm to 125 mm	Q[26 nm, 0.35E-6 L]	2,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10101
10	Rectangular Gauge Block, Material : Ceramic	0.5 mm to 125 mm	Q[26 nm, 0.29E-6 L]	2,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10101
11	Rectangular Gauge Block, Material : Tungsten Carbide	0.5 mm to 125 mm	Q[26 nm, 0.18E-6 L]	2,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10101
12	Rectangular Gauge Block, Material : Chromium Carbide	0.5 mm to 125 mm	Q[26 nm, 0.27E-6 L]	2,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10101
13	Rectangular Gauge Block, Material : Steel	< 0.5 mm	Q[26 nm, 0.35E-6 L]	3,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10102
14	Rectangular Gauge Block, Material : Ceramic	< 0.5 mm	Q[26 nm, 0.29E-6 L]	3,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10102
15	Rectangular Gauge Block, Material : Tungsten Carbide	< 0.5 mm	Q[26 nm, 0.18E-6 L]	3,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10102

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16	Rectangular Gauge Block, Material : Chromium Carbide	< 0.5 mm	Q[26 nm, 0.27E-6 L]	3,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10102
17	Rectangular Gauge Block, Material : Steel, Ceramic, Tungsten Carbide, Chromium Carbide - Variation in length	0.5 mm to 125 mm	0.020 um	2,200/piece	Optical Interferometry method, Variation (fo, fu) in length measurement. Measuring faces inspection without lapping.	08021 - 10103
18	Rectangular Gauge Block, Material : Steel, Ceramic, Tungsten Carbide, Chromium Carbide - Flatness	0.5 mm to 125 mm	35 nm	2,200/piece	Optical Interferometry method, Flatness measurement	08021 - 10104
19	Rectangular Gauge Block, according to Euramet cg-2/v.02 (03/2011)	0.5 mm to 100 mm	26 nm	2,500/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 10201
20	Rectangular and Square Gauge Block (Metric), Material : Steel, Tungsten Carbide, Chromium Carbide - Deviation from central length	0.5 mm to 100 mm	Q[50 nm, 0.50E-06 *L*]	750/piece	Comparison method, *Dlc* , Deviation from central length , Variation *(fo, fu)* Measuring faces inspection without lapping	08021 - 10301
21	Rectangular and Square Gauge Block (Metric), Material : Steel, Tungsten Carbide, Chromium Carbide - Deviation from central length	>100 mm to 125 mm	Q[50 nm, 0.50E-06 *L*]	3,030/piece	Comparison method, *Dlc* , Deviation from central length , Variation *(fo, fu)* Measuring faces inspection without lapping	08021 - 10302
22	Rectangular and Square Gauge Block (Metric), Material : Ceramic - Deviation from central length	0.5 mm to 100 mm	Q[70 nm, 0.50E-06 *L*]	750/piece	Comparison method, *Dlc* , Deviation from central length , Variation *(fo, fu)* Measuring faces inspection without lapping	08021 - 10301
23	Rectangular and Square Gauge Block (Metric), Material : Ceramic - Deviation from central length	>100 mm to 125 mm	Q[70 nm, 0.50E-06 *L*]	3,030/piece	Comparison method, *Dlc* , Deviation from central length , Variation *(fo, fu)* Measuring faces inspection without lapping	08021 - 10302
24	Rectangular and Square Gauge Block (Metric), Material : Steel, Ceramic, Tungsten Carbide, Chromium Carbide - Difference in central length	0.01 - 25 mm	47 nm	1,905/pair	Direct Measurement by gauge block comparator, Difference in central length, variation in length and measuring face inspection without lapping.	08021 - 10303
25	Rectangular and Square Gauge Block (inch), - Deviation from central length Material : Steel, Tungsten Carbide, Chromium Carbide	0.005 inch to 4 inch	Q[50 nm, 0.50E-06 *L*]	750/piece	Comparison method, *Dlc* , Deviation from central length , Variation *(fo, fu)* Measuring faces inspection without lapping	08021 - 10501

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26	Rectangular and Square Gauge Block (inch), - Deviation from central length Material : Ceramic	0.005 inch to 4 inch	Q[70 nm, 0.50E-06 *L*]	750/piece	Comparison method, *Dlc* , Deviation from central length , Variation *(fo, fu)* Measuring faces inspection without lapping	08021 - 10501
27	Long Gauge Block (Metric Rectangular, Square) Material : Steel	125 mm to 500 mm	Q[50 nm, 0.80E-6 *L*]	3,380/piece	Comparison Method, *Dlc* , Deviation from central length, Variation *(fo, fu)* Measuring faces inspection without lapping.	08021 - 10601
28	Long Gauge Block (Metric Rectangular, Square) Material : Steel	600 mm to 1000 mm	Q[50 nm, 0.80E-6 *L*]	6,750/piece	Comparison Method, *Dlc* , Deviation from central length, Variation *(fo, fu)* Measuring faces inspection without lapping.	08021 - 10603
29	Length Bar	Up to 800 mm	Q[50 nm, 0.80E-6 *L*]	3,380/piece	Comparison Method, *Dlc* , Deviation from central length, Variation *(fo, fu)* Measuring faces inspection.	08021 - 10701
30	Ball Bar / Nest Bar	up to 800 mm	1.2 µm	3,780/piece	Direct measurement by ULM and laser interferometer	08021 - 10703
31	Long Gauge Block (Metric Rectangular) Material : Steel	>150 mm to 500 mm	Q[20 nm, 0.44E-6 L]	10,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection and lapping. Both side wringing	08021 - 10801
32	Long Gauge Block (Metric Rectangular) Material : Steel	600 mm to 1000 mm	Q[20 nm, 0.44E-6 L]	15,000/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection and lapping. Both side wringing	08021 - 10802
33	Square Gauge Block Material : Steel	0.5 mm to 125 mm	Q[28 nm, 0.35E-6 *L*]	1,730/piece	Optical Interferometry method, Deviation from central length Measuring faces inspection without lapping. Both side wringing	08021 - 11001
34	Step Master ; Material : Steel	Up to 300 µm	0.028 µm	12,500	Optical Interferometry method, Length difference	08021 - 11101
35	Step Master ; Material : Ceramic	Up to 300 µm	0.030 µm	12,500	Optical Interferometry method, Length difference	08021 - 11102
36	Autocollimator (Analog, Digital)	± 1000"	0.2"	25,000/piece	Calibration by standard autocollimator	08031 - 10101
37	Autocollimator (Analog, Digital)	± 1500"	0.15"	25,000/piece	Calibration by Self calibration angle system	08031 - 10103
38	Rotary Encoder	0 - 360 degree	0.06"	25,000/piece	Calibration by self calibration angle system (SCMS-127)	08031 - 10201
39	Rotary Encoder	0 - 360 degree	0.11"	25,000/piece	Calibration by self calibration angle system (SCMS-107)	08031 - 10202
40	Rotary Encoder	0 - 360 degree	7"	25,000/piece	Calibration by self calibration angle system	08031 - 10203
41	Polygon	3 to 72 faces	0.2"	1,000/face	Calibration by one autocollimator	08031 - 10301
42	Polygon	3 to 72 faces	0.25"	750/face	Calibration by two autocollimator	08031 - 10305
43	Polygon	3 to 72 faces	0.2"	1,000/face	Calibration by self calibration rotray encoder system	08031 - 10309
44	Angle Gauge Block	Up to 90 degree	0.33"	1,500/piece	Calibration by autocalimator	08031 - 10401

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45	Indexing Table	Up to 360 degree	0.2"	1,000/position	Calibration by one autocollimator	08031 - 10501
46	Electronic Inclinometer	±1000"	0.35"	15,000/range	Calibration by autocollimator	08031 - 10901
47	Electronic Level	±60o	0.002o	5,000	Calibration by rotary encorder	08031 - 10902
48	Cylindrical Square	Up to 400 mm	2.3 µm	5,000/side	Calibration by Master Square	08031 - 11101
49	Standard Square	Up to 400 mm	2.3 µm	5,000/side	Calibration by Master Square and Measuring Probe	08031 - 11201
50	Squareness Tester	Up to 400 mm	2.0 µm	5,000	Calibration by Master Square	08031 - 11301
51	Precision Square	Up to 400 mm	2.5 µm	5,000	Calibration by Master Square & Gauge Blocks	08031 - 11401
52	Square and Squareness Tester	Up to 1000 mm	0.4 µm	10,000 (For up to 10 points) + 1,000/point	Calibration by using reversal method	08031 - 11501
53	Small Angle Generator	±5,000 µm/m	2 µm/m	15,000	Calibration by autocollimator	08031 - 11901
54	Sine Bar	up to 45o	0.0021o	5,000	Calibration by Gauge Blocks and Angle Gauge Blocks	08031 - 12001
55	Straightedge	Up to 3,000 mm	1.4 µm	5,000	Calibration straighness measuring machine	08031 - 12201
56	Straightness Measuring Machine	up to 2,500 mm	(1.6E-3 *L*) µm	5,000	Calibration by standard autocollimator	08031 - 12202
57	Straightness Measuring Machine and Straightedge	up to 3,000 mm	1.0 µm	10,000/m	Calibration by using reversal method	08031 - 12203
58	Plain Ring Gauge	0.1 to 100 mm	Q[0.37 µm, 1.3E-06 D]	2,410/piece	Calibration by Small Internal Diameter Measurement (IDM)	08041 - 10101
59	Plain Ring Gauge	0.5 mm to 300 mm	Q[0.25 µm, 1.8E-06 D]	4,410/piece	Compare measurement method with setting plain ring gauge	08041 - 10102
60	Plain Ring Gauge (Hole)	2.5 mm - 160 mm	1.5 µm	5,000/piece	Contact scanning with measuring probe	08041 - 10103
61	Go - No Go Plain Ring Gauge	0.1 to 100 mm	Q[0.37 µm, 1.3E-06 D]	2,410/side	Calibration by Small Internal Diameter Measurement (IDM)	08041 - 10201
62	Taper Plain Ring Gauge	Pitch 0.45 mm to 8 mm	2.0 µm	2,410/piece	Cal. by Universal length measuring Machine	08041 - 10301
63	Go - No Go Taper Plain Ring Gauge	Pitch 0.45 mm to 8 mm	2.0 µm	2,410/side	Cal. by Universal length measuring Machine	08041 - 10401
64	Plain Plug Gauge	0.1 to 300 mm	Q[0.20 µm, 1.0E-06 D]	2,410/piece	Cal. by Universal length measuring Machine	08041 - 10501
65	Plain Plug Gauge (Shaft)	1 mm - 150 mm	1.5 µm	5,000/piece	Contact scanning with measuring probe	08041 - 10502
66	Go-No Go Plain Plug Gauge	0.1 to 300 mm	Q[0.20 µm, 1.0E-06 D]	2,410/side	Cal. by Universal length measuring Machine	08041 - 10601

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67	Sphere	dia. Up to 300 mm	Q[0.20 µm, 1.0E-06 D]	2,410/piece	Cal. by Universal length measuring Machine	08041 - 10801
68	3-Wire Unit	All sizes	Q[0.20 µm, 1.0E-06 D]	2,820/set	Cal. by Universal length measuring Machine	08041 - 10901
69	Taper Plain Plug Gauge	from pitch 0.45 - 8 mm	2.0 µm	3,500/piece	Cal. by Universal length measuring Machine and T-Ball Sttylus	08041 - 11501
70	Parallel Thread Ring Gauge	from pitch 0.45 - 8 mm	1.5 µm	3,500/piece	Cal. by Universal length measuring Machine and T-Ball Sttylus	08041 - 11701
71	Parallel Thread Ring Gauge	2.5 mm - 160 mm	2.5 µm	5,000/piece	Contact scanning with measuring probe	08041 - 11702
72	Go - No Go Parallel Thread Ring Gague	from pitch 0.45 - 8 mm	1.5 µm	3,500/piece	Cal. by Universal length measuring Machine and T-Ball Sttylus	08041 - 11801
73	Taper Thread Ring Gauge	from pitch 0.45 - 8 mm	2.0 µm	3,500/piece	Cal. by Universal length measuring Machine and T-Ball Sttylus	08041 - 11901
74	Parallel Thread Plug Gauge	from pitch 0.2 - 6 mm	1.5 µm	3,500/piece	Cal. by Universal length measuring Machine and 3-Wires	08041 - 12101
75	Parallel Thread Plug Gauge	1 mm - 150 mm	2.5 µm	5,000/piece	Contact scanning with measuring probe	08041 - 12102
76	Go - No Go Parallel Thread Plug Gauge	from pitch 0.2 - 6 mm	1.5 µm	3,500/piece	Cal. by Universal length measuring Machine and 3-Wires	08041 - 12201
77	Taper Thread Plug Gauge	from pitch 0.45 - 8 mm	2.0 µm	3,500/piece	Cal. by Universal length measuring Machine and T-Ball Sttylus	08041 - 12301
78	Taper Thread Plug Gauge	1 mm - 150 mm	2.5 µm	5,000/piece	Contact scanning with measuring probe	08041 - 12302
79	Taper Thread Ring Gauge	2.5 mm - 160 mm	2.5 µm	5,000/piece	Contact scanning with measuring probe	08041 - 12303
80	Pitch	0.1 mm - 20 mm	1 µm	5,000/piece	Contact scanning with measuring probe	08041 - 12304
81	Thread Angle	7° - 180°	0.12°	5,000/piece	Contact scanning with measuring probe	08041 - 12305
82	Taper	0 - 0.5	0.0024	5,000/piece	Contact scanning with measuring probe	08041 - 12306
83	Pitch of thread gauge	0 mm to 120 mm	2.3 µm	2,030/piece	Cal. By Contour Measuring Machine	08041 - 12501
84	X-Axis Contour Measuring Machine	0 mm to 120 mm	1.3 µm	10,030/piece	Compare with standard glass scale	08041 - 12502
85	Included angle of thread gauge	0-90 degree	0.06 degree	2,030/piece	Cal. By Contour Measuring Machine	08041 - 12601
86	Contour specimen - x-axis (pitch)	up to 200 mm	2.3 µm	5,000/5 points + 1,000/point	Direct measurement by using Contour Measuring Machine	08041 - 12701
87	Contour specimen - z-axis (step, height)	up to 20 mm	1.6 µm	5,000/5 points + 1,000/point	Direct measurement by using Contour Measuring Machine	08041 - 12702
88	Check Master/ Step Gauge	0 to 300 mm	Q[0.20 µm, 7.7E-06 *L*]	10,660/piece	Cal. By Laser Interferometer	08051 - 10201

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89	Check Master/ Step Gauge	0 to 600 mm	Q[0.20 µm, 7.7E-06 *L*]	13,160/piece	Cal. By Laser Interferometer	08051 - 10202
90	Check Master/ Step Gauge	0 to 1020 mm	Q[0.20 µm, 7.7E-06 *L*]	15,660/piece	Cal. By Laser Interferometer	08051 - 10203
91	Gear standard Spur gear : Profile slope deviation	25 to 400 mm	1.0 to 3.0 µm	7,880/piece	Cal. by Coordinate Measuring Machine	08051 - 10301
92	Gear standard Spur gear : Profile slope deviation	up to 45°	1.0 to 2.0 µm	7,880/piece	Cal. by Coordinate Measuring Machine	08051 - 10401
93	Spur gear : Pitch	up to 400 mm	2.0 µm	7,880/piece	Cal. by Coordinate Measuring Machine	08051 - 10501
94	Bevel Gear : form deviation	up to 300 mm	2.0 µm	7,880/piece	Cal. by Coordinate Measuring Machine	08051 - 10601
95	Ball Plate	up to 1000 mm	Q[0.26 µm, 1.9E-06 *L*]	36,000/piece	Cal. by Coordinate Measuring Machine with Laser Interferometer	08051 - 10701
96	2-D Coordinate (Hole Plate)	Up to 1000 mm	Q[0.25 µm, 0.42E-6L]	106,250/piece	Swing-round method and laser interferometer integrated with CMM	08051 - 10702
97	Depth Micro-Checker	0 to 150 mm	Q[0.68 µm, 1.1E-06 *L*]	9,000/piece	Cal. by Coordinate Measuring Machine	08051 - 10801
98	Depth Micro-Checker	0 to 300 mm	Q[0.68 µm, 1.1E-06 *L*]	11,250/piece	Cal. by Coordinate Measuring Machine	08051 - 10802
99	Depth Micro-Checker	0 to 150 mm	Q[0.48 µm, 0.67E-06 *L*]	10,625/piece	Cal. by substitution method using CMM	08051 - 10803
100	Inside Micro-Checker	0 to 300 mm	Q[0.20 µm, 7.7E-07 *L*]	10,660/piece	Cal. by Laser Interferometer	08051 - 10901
101	Inside Micro-Checker	0 to 600 mm	Q[0.20 µm, 7.7E-07 *L*]	13,160/piece	Cal. by Laser Interferometer	08051 - 10902
102	Inside Micro-Checker	0 to 1020 mm	Q[0.20 µm, 7.7E-07 *L*]	15,660/piece	Cal. by Laser Interferometer	08051 - 10903
103	Caliper Checker/ Vernier Checker	0 to 300 mm	Q[0.20 µm, 7.7E-06 *L*]	10,660/piece	Cal. by Laser Interferometer	08051 - 11001
104	Caliper Checker/ Vernier Checker	0 to 600 mm	Q[0.20 µm, 7.7E-06 *L*]	13,160/piece	Cal. by Laser Interferometer	08051 - 11002
105	Caliper Checker/ Vernier Checker	0 to 1020 mm	Q[0.20 µm, 7.7E-06 *L*]	15,660/piece	Cal. by Laser Interferometer	08051 - 11003
106	3-D Artifacts	Up to X×Y×Z (1200×1000×700) mm	Q[0.70 µm, 2.30E-6 *L*]	2,500 + 900/parameter or depend on drawing	Direct measurement by CMM	08051 - 11011
107	Laser Tracker	Up to 30 m	Q[3.9 µm, 1.0E-06*L*]	87,500	ISO 10360-10: 2021	08051 - 11051
108	Optical Flat	max. dia. 60 mm	20 nm	2,500/piece	Cal. by Flatness Interferometer	08061 - 10201
109	Optical Flat	max. dia. 300 mm	Q[37 nm, 2E-09 *F*]	7,500/piece	Cal. by Non-contact measurement using Flatness Interferometer	08061 - 10202
110	Transmission Flat/Reference Flat	max. dia. 300 mm	Q[25 nm, 2.0E-06 *F*]	11,500/piece	Absolute Flatness calibration by 3-Flat Test method	08061 - 10203

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111	Glass Hemisphere Roundness specimen (High precision)	dia. Up to 355 mm	Q[8.0 nm, 8.0E-03 R]	11,500/piece	Error seperation technique by multistep method (Stylus-on-spindle) where *R* representing roundness value Soft file of measurement result charge +2500 baht/file	08061 - 10301
112	Roundness of specimen/workpiece	dia. Up to 355 mm	Q[11.1 nm, 1.1E-02 *R*]	7,530/piece	Soft file of measurement result charge +2500 baht/file where *R* representing measured value of roundness	08061 - 10401
113	Cylinder/Cylindrical standard - Cylindricity	Height up to 500 mm Diameter up to 300 mm Maximum runout: 2.06 mm	Q[0.16 µm, 1.17E-06 *H*]	7,530	Direct measurement by Roundness Measuring Instrument where *H* representing measured height of the cylinder	08061 - 10402
114	Cylinder/Cylindrical standard - Straightness	Height up to 500 mm Diameter up to 300 mm Maximum runout: 2.06 mm	Q[77 nm, 0.10E-06 *L*]	7,530	Direct measurement by Roundness Measuring Instrument based on Reversal method where *L* representing travel length	08061 - 10403
115	Cylinder/Cylindrical standard - Parallelism	Height up to 500 mm Diameter up to 300 mm Maximum runout: 2.06 mm	Q[0.16 µm, 1.2E-06 *H*]	7,530	Direct measurement by Roundness Measuring Instrument where *H* representing measured height of the cylinder	08061 - 10404
116	Cylinder/Cylindrical standard - Squareness	Height up to 500 mm Diameter up to 300 mm Maximum runout: 2.06 mm	Q[0.40 µm, 1.2E-06 *H*]	7,530	Direct measurement by Roundness Measuring Instrument where *H* representing measured height of the cylindrical square	08061 - 10405
117	Harmonic Standard	Up to 80 mm (Diameter up to 300 mm, Height up to 500 mm)	Q[53 nm, 8.0E-3 R]	7,530/range	Direct measurement by roundness measuring instrument (TR595H machine)	08061 - 10406
118	Roughness Specimen (Type A), Step Height	25 nm to 32 um	Q[6.7 nm, 5.6E-03 Zm]	5,030/step	Contact measurement by Roughness (stylus) Measuring Instrument where *d* representing depth	08061 - 10501
119	Roughness Specimen (Type A), Step Height	10 nm to 0.1 um	Q[6.0 nm, 0.20 *Zm*]	6,280/step	Non-contact measurement using Interference Microscope where *d* representing depth	08061 - 10502
120	Roughness Specimen (Type C or Type D), Roughness Specimen	25 nm to 32 um	*Ra* : Q[9 nm, 5.6E-03 Zm]	7,530/range	Contact measurement by Roughness (stylus) Measuring Instrument where *Ra* , *Rz* and *Sm* representing roughness value	08061 - 10601
121	Roughness Specimen (Type C or Type D), Roughness Specimen	25 nm to 32 um	*Rz* : Q[21 nm, 8.8 E-03 Zm]	7,530/range	Contact measurement by Roughness (stylus) Measuring Instrument where *Ra* , *Rz* and *Sm* representing roughness value	08061 - 10602
122	Roughness Specimen (Type C or Type D), Roughness Specimen	25 nm to 32 um	*Rsm* : Q[0.58 um, 20E-03 *Sm*]	7,530/range	Contact measurement by Roughness (stylus) Measuring Instrument where *Ra* , *Rz* and *Sm* representing roughness value	08061 - 10603
123	Roughness Specimen (Type C or Type D), Roughness Specimen	25 nm to 32 um	*Rq* : Q[11 nm, 4.2E-03 Zm]	7,530/range	Contact measurement by Roughness (stylus) Measuring Instrument where Zm representing measured value	08061-10604
124	Roughness specimen (Areal parameter)	0.01 um to 3 um	*Sa* : Q[30 nm, 7.3E-03 *Zm*]	7,530/range	Non-contact measurement using Interference Microscope where *Zm* representing measured value	08061 - 10611
125	Roughness specimen (Areal parameter)	0.01 um to 3 um	*Sq* : Q[31 nm, 7.3E-03 *Zm*]	7,530/range	Non-contact measurement using Interference Microscope where *Zm* representing measured value	08061 - 10612

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126	Roughness specimen (Areal parameter)	0.01 um to 7 um	*Sa* : Q[52 nm, 7.3E-3 *Zm*]	7,530/range	Non-contact and Direct measurement using 3D Measuring Laser Microscope where *Zm* representing measured value	08061 - 10621
127	Roughness specimen (Areal parameter)	0.01 um to 7 um	*Sz* : Q[166 nm, 1.1E-2 *Zm*]	7,530/range	Non-contact measurement using 3D Measuring Laser Microscope where *Zm* representing measured value	08061 - 10622
128	Step height / depth standard	1 nm to 100 nm	Q[0.73 nm, 1.8E-06 *Zm*]	11,500/piece	Measurement by Metrological Nanomeasuring and Nanopositioning Machine	08061 - 10901
129	Pitch standard	0.1 um to 100 um	Q[3.4 nm, 2.9E-3 P*m*]	11,500/piece	Measurement by Metrological Nanomeasuring and Nanopositioning Machine	08061 - 11001
130	Radius of curvature	up to 600 mm	Q[0.75 um, 2.2E-05 *L*]	2,530	Non-contact measurement using Fizeau interferometer where *L* representing measured radius of curvature	08061 - 11101
131	Sphericity and form error of spherical part	F/#: 10.7	23 nm	7,530/piece	Non-contact measurement using Fizeau interferometer	08061 - 11102
132	Lens : Sag	Aperture: 100 mm	1 um	2,530/piece	Non-contact measurement using Fizeau interferometer	08061 - 11103
133	Lens : Focal length	Concave radius: up to 600 mm Convex radius: up to 600 mm	(7.87 + 0.47E-03 *F*) um	3,780/piece	Non-contact measurement using Fizeau Interferometer where *F* representing calculated focal length Reflective Index (n) of a lens is required	08061 - 11201
134	Lens : Opthalmic power	Concave radius: up to 600 mm Convex radius: up to 600 mm	(0.0006 + 0.0005 *D*) m-1	3,780/piece	Non-contact measurement using Fizeau Interferometer where *D* representing calculated ophthalmic power Reflective Index (*n*) of a lens is required	08061 - 11202
135	Lens : Prism Diopter	up to 0.3	Q[0.008, 6.6E-04 Δ]	5,000/piece	Prism diopter calibration using Mechanical-Bearing Rotary Stage Reflective Index (*n*) of a lens is required	08061 - 11203
136	Lens |Back focal length|	33 mm to 250 mm (Diameter up to 100mm)	Q[0.032 mm, 2.5E-6 F^2]	2,530/piece	Non contact method by Fizeau inteferometer with a sliding	08061 - 11204
137	Lens |Lens power|	4 m-1 to 30 m-1 (Diameter up to 100mm)	Q[0.003 m-1, 2.7E-5 P^2]	2,530/piece	Non contact method by Fizeau inteferometer with a sliding	08061 - 11205
138	Angular deviation of a centerline of cylindrical lens	Up to 30′	1.8′	2,530/piece	Direct measurement with a calibrated CCD camera using a standard glass scale	08061 - 11206
139	Refractive Index of Spherical Lens	1.524 to 1.526	0.00033	7,500/piece	Non-contact measurement using Fizeau Interferometer. Abbe number is required.	08061 - 11207
140	Setting Zero Rod	Up to 1000 mm	(0.2^2 + 2.3 L^2) um	2,030/piece	Cal. by ULM	08071 - 10601
141	Dial Gauge Tester (Scale, Digital)	0 mm to 25 mm	Q[0.13 um, 8.0E-6 *L*]	6,750/piece	Cal. by Standard linear gauge	08071 - 10901
142	Dial Gauge Tester (Scale, Digital)	0 mm to 60 mm	Q[0.13 um, 8.0E-6 *L*]	8,780/piece	Cal. by Standard linear gauge	08071 - 10902
143	Dial Gauge Tester (Scale, Digital)	0 mm to 100 mm	Q[0.20 um, 8.0E-6 *L*]	10,030/piece	Cal. by Standard linear gauge	08071 - 10903
144	Calibration Tester	Up to 5 mm	Q[0.13 um, 4.8E-6 *L*]	7,880/piece	Cal. by Laser interferometer	08071 - 10801

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145	Indicator Checker	up to 100 mm	Q[0.050 µm, 1.7E-6 L]	15,000/piece	Cal. by Laser interferometer	08071 - 10802
146	Electronic Comparator (Mu-Checker / Millitron) (Include: Probe and display unit) Analog M-Checker	0 mm to 5 mm	0.2 um	4,500/piece	Comparison with Laser Hologauge	08071 - 11201
147	Electronic comparator: Error of indication	up to 1 mm	Q[0.17 µm, 1.8E-4 L]	4,500/piece	Direct measurement by I-checker	08071 - 11202
148	Calibration Gauge for Seam Metal	0 to 5 mm	0.30 um	2,530/piece	Cal. By NIMT Line scale interferometer system	08071 - 11301
149	Laser Hologauge / Linear gauge	0 to 10 mm	Q[0.05 um, 1.7E-6*L*]	11,250/piece	Cal. by Gauge Block	08071 - 11401
150	Laser Hologauge / Linear gauge	0 to 50 mm	Q[0.05 um, 1.7E-6*L*]	15,750/piece	Cal. by Gauge Block	08071 - 11402
151	Linear Gauge: Error of indication	up to 100 mm	Q[0.20 µm, 8.0E-6 *L*]	5,625/piece	Direct measurement by I-checker	08071 - 11403
152	Thickness of specimen/ feeler gauge	up to 10 mm	Q[0.5 um, 9.1E-6 *L*]	750/point	Cal. by length gauge	08071 - 11801
153	Laser Scan Micrometer (Display Unit, Measuring Unit)	Up to 100 mm	0.5 µm	11,250/piece	Cal. by Standard plug gauge	08071 - 11901
154	Magnification calibrator / Magnification Checker	0 mm to 0.4 mm	0.2 um	5,630/piece	Direct measurement by linear gauge	08071 - 12401
155	Calibration block	V1	0.01 mm	4,500/piece	Cal. by QV *Depend on the quality of artifact	08071 - 12601
156	Calibration block	V2	0.01 mm	3,380/piece	Cal. by QV *Depend on the quality of artifact	08071 - 12602
157	Calibration block	LSW	0.01 mm	3,380/piece	Cal. by QV *Depend on the quality of artifact	08071 - 12603
158	Scale lupe : Line spacing	0 - 30 mm	Q[0.0003 mm, 1.7E-6 L]	2,820/piece + 500 / nex function	Cal. by NIMT Line Scale interferometer system	08071 - 12701
159	Scale lupe : Diameter/Ellipse	Up to 20 mm	Q[0.0005 mm, 3.21E-6 L]	2,820/piece + 500 / nex function	Cal. By QV	08071 - 12702
160	Scale lupe : Angle	0 to 360 degree	1 minute	2,820/piece + 500 / nex function	Cal. By QV	08071 - 12703
161	Objective/Stage micrometer : Line spacing	0 - 10 mm	Q[0.0003 mm, 1.7E-6 L]	2,820/piece + 500 / nex function	Cal. by NIMT Line Scale interferometer system	08071 - 12711
162	Objective/Stage micrometer : Angle	0 to 360 degree	1 minute	2,820/piece + 500 / nex function	Cal. By QV	08071 - 12712
163	Objective/Stage micrometer : Diameter/Ellipse	Up to 5 mm	Q[0.0005 mm, 3.21E-6 L]	2,820/piece + 500 / nex function	Cal. By QV	08071 - 12713
164	Specimens : Line spacing	0 - 300 mm	Q[0.0003 mm, 1.7E-6 L]	3,000 /piece + 500 / nex function	Cal. by NIMT Line Scale interferometer system	08071 - 12721
165	Specimens : Angle	0 to 360 degree	1 minute	3,000 /piece + 500 / nex function	Cal. By QV	08071 - 12722

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166	Specimens : Diameter/Ellipse	Up to 300 mm	Q[0.0005 mm, 3.21E-6 L]	3,000 /piece + 500 / nex function	Cal. By QV	08071 - 12723
167	Test sieve	0.020 - 125 mm	0.012 - 0.025 mm	5,000/piece	Cal. By QV	08071 - 12901
168	Standard Glass Scale	0 mm to 300 mm	Q[41 nm, 0.1E-6 *L*]	15,750/piece	Cal. by Line Scale Interferometer	08081 - 10103
169	Standard Glass Scale	>300 mm to 500 mm	Q[41 nm, 0.1E-6 *L*]	18,000/piece	Cal. by Line Scale Interferometer	08081 - 10104
170	Standard Metal Scale	0 mm to 1000 mm	8 μm + 2.3E-6*L*	4,500/piece	Cal. By NIMT QV	08081 - 10201
171	Glass scale	0 mm to 200 mm	Q[0.0006 mm + 1.7E-6 *L]*	3,380/piece	Cal. By NIMT Line scale interferometer (Price per 10 measuring points) *Depend on the quality of glass scale	08081 - 10301
172	Glass scale	0 mm to 400 mm	Q[0.0006 mm + 1.7E-6 *L]*	5,630/piece	Cal. By NIMT Line scale interferometer (Price per 10 measuring points) *Depend on the quality of glass scale	08081 - 10302
173	Glass scale	0 mm to 500 mm	Q[0.0003 mm, 1.0E-6 *L*]	6,750/piece	Cal. By QV	08081 - 10303
174	Glass scale	0 mm to 1000 mm	Q[0.0005 mm, 1.0E-6 *L*]	7,880/piece	Cal. By QV	08081 - 10304
175	Standard Glass Scale/ Working Standard Scale/Glass scale	0 mm to 200 mm	Q[0.11 um, 2.9E-6 *L*]	6,650/piece	Cal. by Line Scale Interferometer	08081 - 10305
176	Standard Glass Scale/ Working Standard Scale/Glass scale	>200 mm to 500 mm	Q[0.11 um, 2.9E-6 *L*]	10,140/piece	Cal. by Line Scale Interferometer	08081 - 10306
177	Calibration Grid	100x100 mm	0.0003 mm	4,500/piece	Cal. by QV *Depend on the quality of artifact	08081 - 10501
178	Calibration Grid	200x200 mm	0.0003 mm	5,400/piece	Cal. by QV *Depend on the quality of artifact	08081 - 10502
179	Calibration Grid	300x300 mm	0.0005 mm	6,300/piece	Cal. by QV *Depend on the quality of artifact	08081 - 10503
180	Calibration Grid	> 300 mm	0.0007 mm	10,800/piece	Cal. by QV *Depend on the quality of artifact	08081 - 10504
181	Linear Scale	Up to 1000 mm	7 μm	5,630/piece	Cal. by laser interferometer	08081 - 10801
182	3D non-contact	x- and y-axis up to 500 mm	Q[0.00015 mm, 0.16E-6 *L]*	14,500/piece	Cal by glass scale, angle gauge, standard square and gauge blocks	08081 - 30803
183	3D non-contact	z-axis up to 100 mm	Q[0.0012 mm, 4.5E-6 *L]*	14,500/piece	Cal by glass scale, angle gauge, standard square and gauge blocks	08081 - 30803
184	Measuring Microscope	Up to 500 mm	1 um	6,750/piece	Cal. by standard glass scale	08081 - 10901
185	Laser Distance Meter	Up to 20,000 mm	1 mm	5,000/piece	Compare to the laser interferometer with the standard 40-m Rail System	08101 - 10001

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186	Distance	up to 20 m	Q[1.2 µm,3.2E-07 L]	35,000/distance (for up to 10 points) + 1,000/additional point	Comparison with the readings from the standard laser interferometer	08101 - 10002
187	Electronic Distance Meter (EDM)	40 m	5 ppm	40,000/piece	Comparison with the readings from the standard 40-m Rail System	08101 - 10003
188	Electronic Distance Meter (EDM): Distance	4 Distances: 10m., 20m., 30m. and 40m.	-	5,000/piece	Verification of EDM using 40-m Rail System	08101 - 10004
189	Non-contact probe	Length up to 20 um for Dynamic mode	0.2 um + 1.2E-05 *L*	11,500/piece	Direct measurement using Dynamic mode, and camparing its reading with laser interferometer	08061 - 11301
190	Non-contact probe	Length up to 4 mm for Static mode	0.5 um + 4.6E-05 *L*	7,530/piece	Direct measurement using Static mode, and camparing its reading with laser interferometer	08061 - 11302
	On-site Calibration					
191	Universal Length Measuring Machine (ULM)	Up to 500 mm	Q[0.050 um, 0.80E-6 *L*]	30,000/piece (10 points) + 1,000/point	Direct measurement with gauge block	08021 - 30901
192	Universal Length Measuring Machine (ULM)	>500 mm to 1000 mm	Q[0.060 um, 0.80E-6 *L*]	30,000/piece (10 points) + 1,000/point	Direct measurement with gauge block	08021 - 30901
193	Universal Length Measuring Machine (ULM)	Up to 2000 mm	Q[0.040 um, 0.40E-6 *L*]	40,000/piece (10 points) + 1,000/point	Direct measurement with Laser Interferometer	08021 - 30902
194	Rotary encoder	0-360 degree	5"	30,000	Comparative measurement using reference encoder	08031 - 30201
195	Profile projector	Up to 500 mm	Q[0.0015 mm, 0.15E-3 *L*]	12,530/piece	Cal by Glass Scale, Angle Gauge Block.	08071 - 30601
196	3D non-contact	x- and y-axis up to 500 mm	Q[0.00015 mm, 0.16E-6 *L]*	14,500/piece	Cal by glass scale, angle gauge, standard square and gauge blocks	08081 - 30803
197	3D non-contact	z-axis up to 100 mm	Q[0.0012 mm, 4.5E-6 *L]*	14,500/piece	Cal by glass scale, angle gauge, standard square and gauge blocks	08081 - 30803
198	Measuring Microscope	Up to 500 mm	1 um	6,750/piece	Cal by standard glass scale	08081 - 30901
199	Scale Calibrator	Up to 1000 mm	Q[0.006 mm, 15E-06 *L*]	5,630/piece	Cal by glass scale *Depend on the quality of artifact	08081 - 30911
200	Scale Calibrator	>1000 to 2000 mm	Q[0.0085 mm, 21E-06 *L*]	8,445/piece	Cal by glass scale *Depend on the quality of artifact	08081 - 30912
201	Roundness Measuring Instrument - Magnification of probe deviation	Gauge range up to 2 mm, Diameter up to 300 mm, Height up to 500 mm	0.02 um + 6.5E-04 *L*	7,530/piece	Stylus probe of roundness measuring instrument calibrated by a pair of gauge block (slip gauge) / flick standard	08061 - 30901
202	Roundness Measuring Instrument - Spindle radial deviation	Gauge range up to 2 mm, Diameter up to 300 mm, Height up to 500 mm	0.05 um + 8.2E-03 *L*	7,530/piece	A spindle of roundness measuring instrument calibrated by glass hemisphere standard	08061 - 30902
203	Roundness Measuring Instrument - Spindle axial deviation	Gauge range up to 2 mm, Diameter up to 300 mm, Height up to 500 mm	0.05 um	7,530/piece	A spindle of roundness measuring instrument calibrated by glass hemisphere standard/ optical flat	08061 - 30903

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204	Roundness Measuring Instrument - Straightness column deviation	Gauge range up to 2 mm, Diameter up to 300 mm, Height up to 500 mm	0.24 um + 9.1E-07 *L*	7,530/piece	An optical flat/master cylinder traced by the stylus of roundness measuring instrument in column axis	08061 - 30904
205	Roundness Measuring Instrument - Straightness arm deviation	Gauge range up to 2 mm, Diameter up to 300 mm, Height up to 500 mm	0.24 um + 1.34E-06 *L*	7,530/piece	An optical flat traced by the stylus of roundness measuring instrument in arm axis	08061 - 30905
	PT and Inter-laboratory comparison only					
206	Gauge Block Comparator	0.5 mm to 100 mm	37 nm	25,000/piece	Cal. by 11 Gauge Blocks 0.5 to 100 mm Euramet cg-2/v.02 (03/2011)	08021 - 30801
207	Precision Level	Full range	5.4 μm/m	5,630/piece	Calibration by autocollimator	08031 - 11001
208	Bevel protractor	0° to 360°	1.3'	5,000	Cal. By angle gauge block	08031 - 11501
209	Surface plate	250x160 mm to 2,500x1,600 mm	0.5 to 5.5 um	15,000	Cal by Inclinometer	08031 - 12301
210	Pin Gauge	0.1 to 1 mm	Q[0.20 μm, 1.0E-06 D]	2,410/piece	Cal. by Universal length measuring Machine	08041 - 10701
211	Pin Gauge	1 to 100 mm	Q[0.20 μm, 1.0E-06 D]	2,410/piece	Cal. by Universal length measuring Machine	08041 - 10702
212	Pin Gauge	100 to 300 mm	Q[0.20 μm, 1.0E-06 D]	2,410/piece	Cal. by Universal length measuring Machine	08041 - 10703
213	Height Master (analog/digital)	0 to 300 mm	0.3 μm + 3E-6 *L*	13,500/piece	Cal. by Gauge block or Length Bar	08051 - 10101
214	Height Master (analog/digital)	0 to 600 mm	0.3 μm + 3E-6 *L*	22,500/piece	Cal. by Gauge block or Length Bar	08051 - 10102
215	Optical Parallel : Flatness	max. dia. 60 mm	0.02 um	1,600/piece	Cal. by Flatness Interferometer, Universal Length Measuring Machine (ULM) and/or Gauge Block Comparator (GBC)	08061 - 10101
216	Optical Parallel : Parallelism	max. dia. 60 mm	ULM : Q[0.060 um, 6.48E-06 *P*] GBC : 0.080 um	1,600/piece	Cal. by Flatness Interferometer, Universal Length Measuring Machine (ULM) and/or Gauge Block Comparator (GBC) where *P* representing measured parallelism of the optical parallel	08061 - 10101
217	Optical Parallel : Thickness	max. dia. 60 mm	0.15 um	1,600/piece	Cal. by Flatness Interferometer, Universal Length Measuring Machine (ULM) and/or Gauge Block Comparator (GBC) where *L* representing nominal thickness of the optical parallel	08061 - 10101
218	Holtest / 3- point internal micrometer	up to 100 mm	1.5 μm + 1.5E-6 *d*	2,250/piece	Cal. by Ring gauge	08071 - 12001

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219	Vernier Caliper: Partial surface contact error and Shift error	up to 600 mm	Partial surface contact error: Q[13 um, 1.33E-5 *L*] Shift error (Internal measuring faces): Q[13 um, 1.33E-5 *L*] Shift error (Depth and Step measuring faces): Q[13 um, 1.33E-5 *L*]	3,380/piece	Cal. by Gauge block and Ring gauge	08071 - 10201
220	Vernier Caliper: Partial surface contact error and Shift error	600 mm to 1000 mm	Partial surface contact error: Q[14 um, 1.33E-5 *L*] Shift error (Internal measuring faces): Q[13 um, 1.33E-5 *L*] Shift error (Depth and Step measuring faces): Q[13 um, 1.33E-5 *L*]	3,380/piece	Cal. by Gauge block and Ring gauge	08071 - 10202
221	Height Measuring Station	0 mm to 300 mm	Q[0.70 µm, 1.0E-06 *D*]	11,250/piece	Cal. by Gauge Block	08071 - 10301
222	Height Measuring Station	0 mm to 600 mm	Q[0.70 µm, 1.0E-06 *D*]	12,600/piece	Cal. by Gauge Block	08071 - 10302
223	2D Scanning Thread Measuring Machine (2D-STMM)	X-axis = 90 mm Y-axis = 180 mm	Q[0.13 µm, 2.2E-06 *L*]	40,000/piece	Direct measurement using Laser Interferometer	08071 - 10303
224	Height Gauge	0 mm to 600 mm	Q[13 um, 1.3E-5*L*]	9,000/piece	Cal. by Gauge block and Electronic comparator	08071 - 10401
225	Height Gauge	0 mm to 1000 mm	Q[14 um, 1.3E-5*L*]	12,600/piece	Cal. by Gauge block and Electronic comparator	08071 - 10402
226	External Micrometer	>25 mm to 225 mm	Q[0.6 um, 1.36E-5*L*]	2,820/piece	Cal. by Gauge Block	08071 - 10501
227	External Micrometer	>225 mm to 300 mm	Q[0.7 um, 1.42E-5*L*]	3,380/piece	Cal. by Gauge Block	08071 - 10502
228	External Micrometer (Resolution : < 0.001 mm)	0 mm to 25 mm	Q[0.1 um, 1.35E-5 *L*]	3,380/piece	Cal. by Gauge Block	08071 - 10504
229	Dial gauge (analog/digital)	0-10 mm	Q[2.6 um, 1.8E-4 L]	2,820/piece	Cal. by dial gauge tester	08071 - 10602
230	Dial gauge (analog/digital)	0-25 mm	Q[2.6 um, 1.8E-4 L]	3,380/piece	Cal. by dial gauge tester	08071 - 10603
231	Dial gauge (analog/digital)	0-50 mm	Q[2.6 um, 1.8E-4 L]	5,660/piece	Cal. by dial gauge tester	08071 - 10604
232	Dial gauge (analog/digital)	0-10 mm	Q[0.34 um, 4.5E-5 L]	2,820/piece	Cal. by ULM	08071 - 10605
233	Dial gauge (analog/digital)	0-25 mm	Q[0.34 um, 4.5E-5 L]	3,380/piece	Cal. by ULM	08071 - 10606

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234	Dial gauge (analog/digital)	0-50 mm	Q[0.34 um, 4.5E-5 L]	5,660/piece	Cal. by ULM	08071 - 10607
235	Dial test indicator	up to 1.6 mm	0.8 µm	2,820/piece	Cal. by calibration tester	08071 - 10608
236	Laser displacement sensor	0-50 mm	Q[12 um, 1.7E-4 *L*]	3,380/piece	Cal. by dial gauge tester	08071 - 10609
237	Laser displacement sensor	0-100 mm	Q[1.2 um, 4E-4 *L*]	5,660/piece	Cal. by gauge block	08071 - 10610
238	Dial gauge (analog/digital)	up to 10 mm	Q[0.34 um, 1.8E-4 *L*]	2,820/piece	Direct measurement by I-checker	08071 - 10611
239	Dial gauge (analog/digital)	up to 25 mm	Q[0.34 um, 1.8E-4 *L*]	3,380/piece	Direct measurement by I-checker	08071 - 10612
240	Dial gauge (analog/digital)	up to 50 mm	Q[0.34 um, 1.8E-4 *L*]	5,660/piece	Direct measurement by I-checker	08071 - 10613
241	Dial test indicator	up to 1 mm	Q[0.60 µm, 1.8E-4 *L*]	2,820/piece	Direct measurement by I-checker	08071 - 10614
242	Micrometer Head	0 mm to 25 mm	Q[0.8 um, 8E-6 *L*]	3,380/piece	Direct measurement by length gauge	08071 - 10701
243	Micrometer Head	0 mm to 50 mm	Q[0.8 um, 8E-6 *L*]	4,500/piece	Direct measurement by length gauge	08071 - 10702
244	NIMT Reference Wall	Up to 8.5 m	Q[3.52 um, 0.22E-6 L]	112,550/Set	Interferometer	08051 - 11021
245	Calibration of Standard of Arm CMM (Sphere Ball Beam)	Up to 2.0 m	Q[0.98 um, 2.01E-06L]	27,550/piece	Re-position measurement by CMM	08051 - 11031
246	Articulated Arm Coordinate Measuring Machines, (AACMM) using tactile probes verification	Up to 2.5 m	0.06 um, for probing test Q[1.00 um, 2.32E-06L] for length measurement erro	75,050/piece	ISO10360-12	08051 - 11051
247	Scale Calibrator	Up to 1000 mm	Q[0.006 mm, 15E-06 *L*]	5,630/piece	Cal by glass scale *Depend on the quality of artifact	08081 - 30913
248	Scale Calibrator	>1000 to 2000 mm	Q[0.0085 mm, 21E-06 *L*]	8,445/piece	Cal by glass scale *Depend on the quality of artifact	08081 - 30914
249	Steel Tape	up to 1800 mm	Class 1: Q[0.033 mm, 4.4E-06 *L*]	3,000/piece	Cal by scale calibrator	08081 - 30915
	Instrument/measuring system/specimen/TRM					
250	Flatness Tester		≥ 40 nm	200,000/ea.	The flatness tester system, reference flat, software, including training	08061 - 10701
251	Monodisperse Polystyrene Particle	Diameter 150 nm	10 mL	5,000/ea.	TRM-M-9001	08091 - 10101
252	Monodisperse Polystyrene Particle	Diameter 100 nm	10 mL	5,000/ea.	TRM-M-9002	08091 - 10102

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Price List

Item No.	Description	Range	Accuracy / Uncertainty	Price (THB)	Remark	Code
253	Monodisperse Polystyrene Particle	Diameter 1.5 um	10 mL	5,000/ea.	TRM-M-9003	08091 - 10103
254	Monodisperse Polystyrene Particle	Diameter 300 nm	10 mL	5,000/ea.	TRM-M-9004	08091 - 10104
255	Monodisperse Polystyrene Particle	Diameter 500 nm	10 mL	5,000/ea.	TRM-M-9005	08091 - 10105
256	Monodisperse Polystyrene Particle	Diameter 1.0 um	10 mL	5,000/ea.	TRM-M-9006	08091 - 10106