## Technical Data

- Glass material: Soda-lime glass
- Thermal expansion coefficient: $8.5 \times 10^{-6} / \mathrm{K}$
- Accuracy (at $20^{\circ} \mathrm{C}$ ): $(1.5+2 \mathrm{~L} / 1000) \mu \mathrm{m}$, $L=$ Measured length (mm)


## Working Standard Scales SERIES 182

- These standard scales can be used to calibrate various measuring instruments and to confirm traceability to upper-level calibration devices and reference instruments. For example, they can be used in daily and periodic inspections of profile projector/microscope stages and of optical length measurement systems.
- These scales are manufactured using high-accuracy lithographic technologies. Mitutoyo has developed these technologies at the dedicated underground facility which was custom-built to produce highly accurate scales. Various sizes are available for each type to suit the application.



## SPECIFICATIONS

| Metric |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Order No. | Range (mm) | Graduation (mm) | $\begin{aligned} & \text { Length } \\ & (\mathrm{mm}) \end{aligned}$ | $\begin{array}{\|c} \hline \begin{array}{c} \text { Inspection pitch } \\ (\mathrm{mm}) \end{array} \\ \hline \end{array}$ | Graduation line thickness ( $\mu \mathrm{m}$ ) | $\begin{aligned} & \text { Mass } \\ & (\mathrm{kg}) \\ & \hline \end{aligned}$ |
| 182-511-10 | 50 | 0.1 | 75 | 5 | 20 | 0.23 |
| 182-512-10 | 100 |  | 125 | 10 |  | 0.24 |
| 182-513-10 | 150 |  | 175 |  |  | 0.25 |
| 182-514-10 | 200 |  | 225 |  |  | 0.26 |
| 182-521-10 | 100 | 0.5 | 130 |  | 50 | 0.27 |
| 182-522-10 | 200 |  | 230 | 20 |  | 0.32 |
| 182-523-10 | 300 |  | 330 |  |  | 0.57 |
| 182-524-10 | 400 |  | 430 |  |  | 0.71 |
| 182-525-10 | 500 |  | 530 |  |  | 0.86 |
| 182-531-10 | 250 | 1 | 280 | 25 | 100 | 0.55 |
| 182-532-10 | 500 |  | 530 |  |  | 1.22 |
| 182-533-10 | 750 |  | 780 |  |  | 0.23 |
| 182-534-10 | 1000 |  | 1030 |  |  | 1.54 |

Note: An inspection certificate produced by a standard scale automatic calibration system is supplied as standard.
DIMENSIONS


