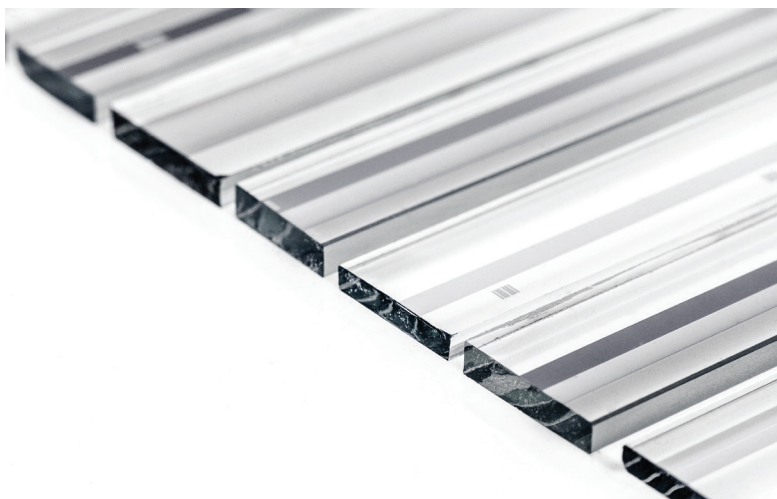
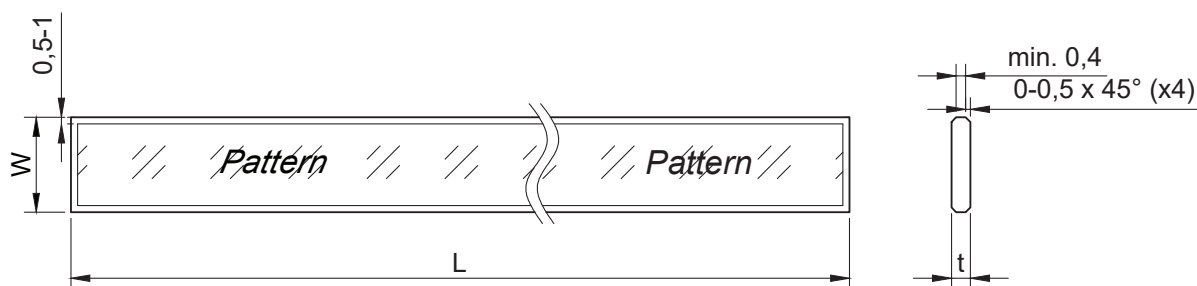




LINEAR SCALES



Linear scales are available in lengths of up to 3400 mm! Wide selection of substrate material includes float glass, BK7, optical glass, ceramics, aluminium oxide, as well as low coefficient of thermal expansion options like quartz glass, borosilicate, robax, zerodur and others. Depending on the industry and application, different specifications can be selected to better suit customer needs.



L - Scale length (10-3400mm); W - Scale width (3-50mm); t - thickness (0,5-8mm)

MATERIAL

Substrate material	float glass, BK7 optical glass, ceramics, aluminium oxide and others. Low CTE: quartz glass, borosilicate, Robax, Zerodur.	Graduation line's width max. tolerance	$\pm 5\%$
Thickness of substrate	0,5 - 8 mm	Accuracy grades	$\pm 1; \pm 2; \pm 3 \mu\text{m}$ ($L < 1\text{m}$); $\pm 2; \pm 3; \pm 5 \mu\text{m}$ ($L < 3.4 \text{m}$)
Max. scale length	3400 mm	Graduation parallelism to glass edge	$< 0.1 \text{ mm/m}$
Max. measuring length	3360 mm	Shape of graduation line	Rectangular if $L > 400 \text{ mm}$; any if $L < 400 \text{ mm}$
Processing	Scribed and broken, laser cutting	Max. available height of graduation pattern	32 mm
Outbreaks on edges	$< 0.1 \text{ mm}$, edges linearity 0.1 mm/m	Variation of light transmission of incremental scale pattern	$\pm 3\%$
Grinded, polished glass	Edges linearity up to 0.015 mm/m		
Coating	Aluminium, silica, chrome, anti-reflective chrome and others on request		

PATTERN

Incremental track;
Incremental track with fixed or variable pitch and track with reference mark; distance-coded marks.
Incremental and absolute tracks + reference mark and aphodisation.
Labels and different shaped marks.

Other glass types, glass thicknesses and shapes of graduations lines can be provided. Please contact us with your ideas, drawings, needed specifications and other information and we will talk about the options.