

STANDARD INCREMENTAL SCALES

SPECIFICATIONS:

Material:

- Selected floatglass, scratched and fractured
- Planeness: 10 $\mu\text{m}/100 \times 100 \text{ mm}$
- Coefficient of expansion $\alpha \approx 8.5 \times 10^{-6}/\text{K}$
- Glass-thickness: 2.0 +0/-0.2 mm
- Max. glass length: 3 300 mm
- Chippings: $\leq 0.1 \text{ mm}$

Grating:

- Sputtered chromium on glass
- Chromium plating thickness: $> 70 \text{ nm}$
- Reflexion ($\lambda = 850 - 900 \text{ nm}$): $> 60 \%$
- Grating pitches: 10 : 10 μm
20 : 20 μm
- Line : width ratio = 1 : 1
- Line width: $\pm 10 \%$ ($\leq 10 \mu\text{m}$)
 $\pm 1.5 \mu\text{m}$ ($> 10 \mu\text{m}$)
- Accuracy: $\leq \pm 3 \mu\text{m}/1000 \text{ mm}$
- Max. grating length: 3 150 mm

Allowed defects within structures:

- Defects (pinholes or chromium spots): max. $\emptyset 200 \mu\text{m} \triangleq 0.03 \text{ mm}^2$
- Max. number of defects: 3/1000 mm
- Min. distance between defects: 20 mm
- Not critical defects: $< \emptyset 50 \mu\text{m} \triangleq 0.002 \text{ mm}^2$
- One scratch with a width of $< 20 \mu\text{m}$ on both sides allowed

Allowed defects outside structures:

- Defects (pinholes or chromium spots): max. $\emptyset 300 \mu\text{m} \triangleq 0.07 \text{ mm}^2$
- Max. number of defects: 6/1000 mm
- Not critical defects: $< \emptyset 50 \mu\text{m} \triangleq 0.002 \text{ mm}^2$
- Three scratches with a width of $\leq 25 \mu\text{m}$ on both sides allowed

On request:

- Other glass types
- Other glass-thicknesses
- Other coatings
- Other grating pitches

DIMENSIONS:

