

# High resolution Laser photo plots

KOENEN is supplier of high resolution laser photo plots. Resolutions of up to 25,400 dpi are produced in the company's own air-conditioned clean room. For higher resolutions KOENEN utilizes the competency of experienced partners.

- Resolution: max. 25,400 dpi
- Min. line: 10 µm
- Max. film format: 813 x 711 mm<sup>2</sup>
- Positioning accuracy ± 4 µm over the entire plot area



## Thermal expansion coefficient of the film material:

- 18 µm per °C on 1 m film length
- 12 µm per % air humidity on 1 m film length

## Controlled climate conditions to minimise film distortion:

- 21°C ± 1°C
- 50% ± 5% relative humidity

## Laser photo plots for „Fine-Line-Printing“

A resolution between 16,000 and 25,400 dpi is quite sufficient for the accurate position manufacture of "Fine-Line-Printing" screens. Higher resolutions yield no quality improvement and are not economical.



Laser photo plot with 8,000 dpi resolution

\*Subject to technical changes

## Laser photo plots for "special applications"

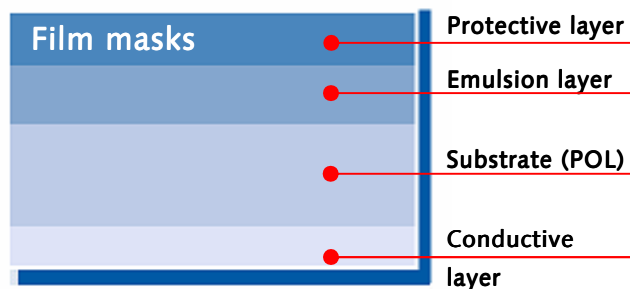
In connection with special applications, (*angle encoding screens*) KOENEN also offers Laser photo plots with a resolution of up to 100,000 dpi and glass master with 100,000 and 200,000 dpi.



Laser photo plot with 20,000 dpi resolution

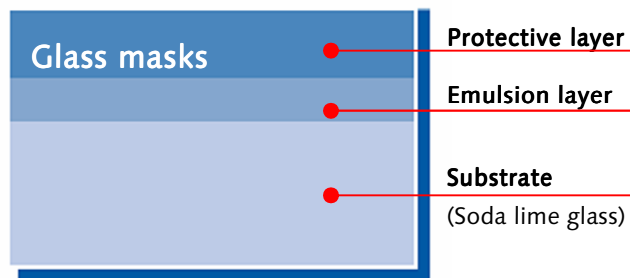
# Film-, Glass- and Chrome masks

	Film mask	Glass mask		Chrome mask
		<i>Standard</i>	<i>High resolution</i>	<i>2-layer low reflection</i>
<b>Substrate</b>	Polyester	Soda lime glass	Soda lime glass	Soda lime glass, crystal glass
<b>Substrate thickness</b>	0.18 mm	1.6 - 5 mm	1.6 - 5 mm	1.6 – 4.8 mm
<b>Emulsion</b>	Silver halide	Silver halide	Silver halide	Chrome coating
<b>min. line width</b>	10 µm (± 2 µm)	30 µm (± 3 µm)	10 µm (± 2 µm)	5 µm (± 0,8 µm)
<b>Length deviations</b>	± 15 µm	± 10 µm	± 3 µm	± 2 µm



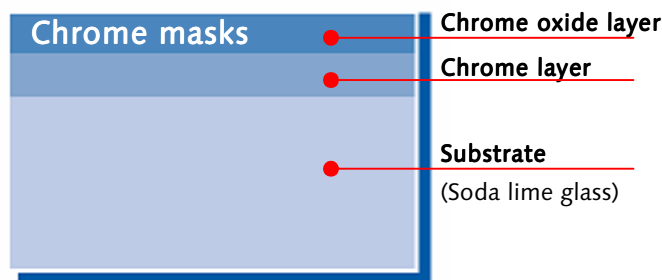
**Characteristics:**

- Economical
- Simple handling
- Space saving storage
- Simple exposure check



**Characteristics:**

- Good dimensional accuracy
- No charge through air humidity
- High resolution
- Good structural accuracy
- High accuracy during exposure process



**Characteristics:**

- Very good dimensional accuracy
- No size affected through air humidity
- Very good structural accuracy
- Long service life (hard chrome coating)
- High heat soak during exposure
- High accuracy during exposure process
- Optimum UV resistance
- Crystal glass also available as substrate

*\*Subject to technical changes*