Laser Cut Stencils
# レーザーメタルマスク

ASAHTEC *The Stencil People!*

Realizing high-quality solder printing

ASAHITECH's metal masks, laser-processed according to your configuration requirements, can realize high-stability, high-precision solder printing on printed circuit boards, etc.,

■ **Min. hole diameter; Φ 120µm [for stencil thickness 100µm]**
Can process with the hole diameter precision of within ±5µm

■ **High pitch precision: Within ±20µm [per pitch 200mm]**
Due to high pitch precision, we can provide masks with comprehensively high configuration precision.

■ **Uniform, Stable solder applied volume**
Due to extremely smooth processing surface and high dimensional precision. The solder applied volume can be uniform and stable. At your request, we can add F2 polishing [special secondary polishing] to further smoothen the processing surface.
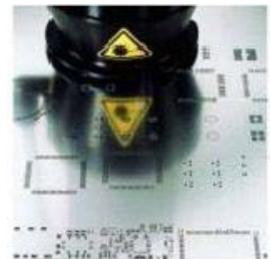
Flexibly meeting your production and delivery requirements
Since SUS material is directly processed on a laser processing machine, only what we need is your data for processing and film is no longer required. With our flexible production system, we can be punctual to your specified time of delivery.

Supporting various data formats
We can process your configuration data in various formats, such as Gerber and DXF. Also, we can convert data from films and boards.

Complete quality assurance system
Through data comparison inspection on an appearance inspection machine, our quality assurance system becomes complete.

Supporting other various types of stencils masks
In addition to etching metals masks, additive metal masks, etc., we are also handling glass masks and screen masks.

APPLICATIONS

Solder resin filling
Surface mounting of electronic parts
Bumping on semiconductors
Water level CSP pumbing

F2 Polishing, the best suitable for lead-free solder paste application

Laser cut stencil specifications

Item	
Stencil material	SUS-3O4
Max. processing area	600mm x 600mm
Max. stencil thickness	O.400 mm
Opening precision	±5µm Within ±5µm [Stencil thickness 50µm, round hole
Pitch dimensional precision	+2Oµm Within ±20µm [per pitch 2 0 mm]
Min.hole diameter	Φ120µm [for stencil thickness 100mm]

### Secondary processing: F2 polishing [¤Patent applied]

AT your request, we can add the special F2 [Flat & Flash] polishing to further smoothen the processing wall surfaces. The F2 polished stencils can improve the solder penetrability and solder volume uniformity compared with the normal masks.

Before processing

After processing

With out F2 Polish

With F2 Polish
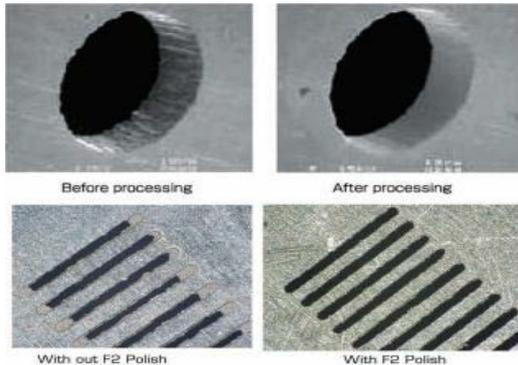
Cross-sectional photo of opening

Opening diameter
Φ0.150mm
Board
thickness
0.040mm

Processing Precision

Taper configuration
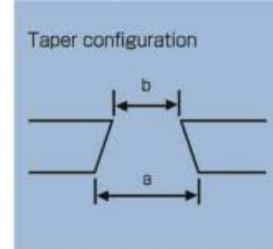
Opening precision
±5µm [Stencil thickness 50µm]
Chamfering dimensions:
±1Oµm [L ≤ 150 mm]
±2Oµm [L ≤ 1 5 0 mm<L≤ 3OOmm]
To be separately agreed
[300mmL]
Stencil thickness: Within ± 5 % [Min:2µm]
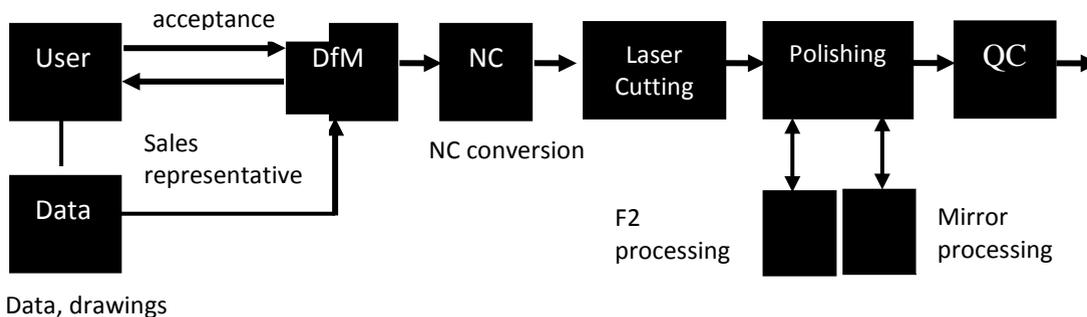Taper amount: 0.1µm<a-b   ≤ 15µm

Handling data

Date Format
Gerber (including RS274 expansion),
GDS II, DXF

Applicable Media
DVD, CD, MO, FD
Flash memory, various
memory cards

Data delivering/ receiving means E-mail, Miline [ADSL] ...DWG, Medium delivery/receipt, etc.,

data@asahitec.in

Process Flow

User → acceptance → DfM → NC → Laser Cutting → Polishing → QC

Sales representative

Data

NC conversion

F2 processing

Mirror processing

Data, drawings