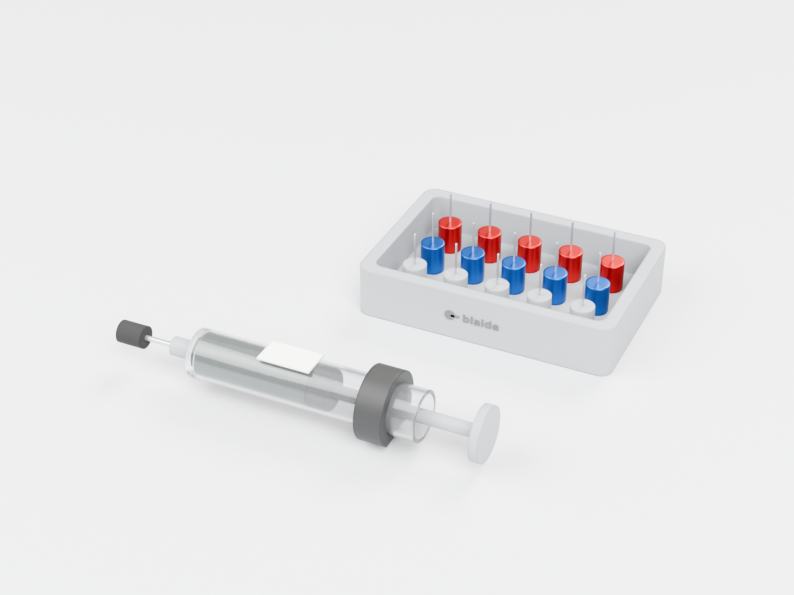
Solder mask kit: Specification

MSK | Blaide product line | 17 November 2026 | Design only: nothing built or tested



Requirements

- Covers traces, leaves every pad open
- No new hardware: existing dispenser and 405 nm laser
- User can find the finest mask strip their ink holds

Specification

Parameter	Target
Mask film	25 um target
Nozzle	0.25 mm
Opening growth	0.05 to 0.10 mm beyond each pad
Finest mask strip between pads	needs a 0.4 mm pad gap at 0.10 mm growth, 0.3 mm at 0.05 mm (calculated)
Cure	405 nm laser raster, 0.12 mm pitch, about 6 % duty at 40 mm/s for 300 mJ/cm2
Cure time	20.8 s per cm2
Ink per 40 x 30 mm board	27 uL

Design summary

- Mask area = board minus pad openings (from the mask layer, or pads grown 0.1 mm)
- Cure by laser raster at 0.12 mm line pitch
- Calibration coupon: five pad pairs with gaps from 0.2 to 0.6 mm
- Cartridge identity 22 k selects laser cure and a 25 micron film

All figures are design targets, calculations or planning values.