Dispersive glasses for strectching laser pulses in TeWaTi Lab, Production of optical beams and slabs

ALL surfaces are optically polished except marked as ‚frosted':=fine grinded

- Cleanliness: 10-5 (S-D) for all optical surfaces
- Flatness: minimum L/5@632nm (L/20 best effort expected)
- Parallelism 30' (coated S) or 60' (uncoated S)
- Tolerances: normal according to ISO10110
- Clear aperture better to be 90% at least
- Mechanical attributes (incl. optical surfaces) as follows:

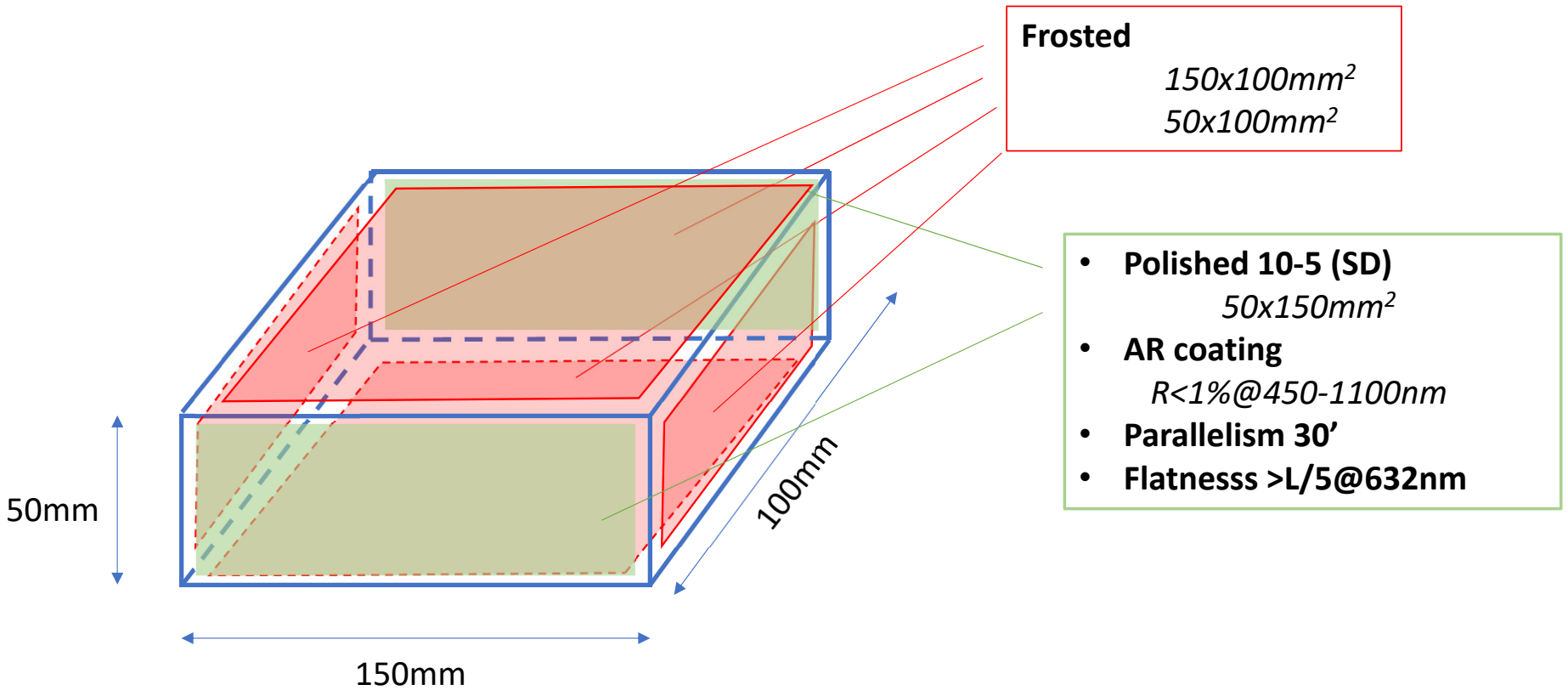
Complete set of optics	
#item	QTY (pcs)
01. BEAM P-SK57 or equivalent	1
02. SLAB N-BK7 Grade1	1

Associated LASER parameters

- *Central wavelength: 795nm*
- *Bandwidth (full width at half maximum): 50 nm*
- *Bottom-bottom spectra: 700-900nm*
- *Pulse energy: typical: 2mJ, occasional: 3 mJ*
- *Pulse duration: typical: 25 fs, occasional: 18fs*
- *Beam diameter (clear perture): 40 mm*
- *Beam profile: supergaussian (exponential: ~4)*

Task 1) BEAM

Material: P-SK57 or equivalent



Task 2) SLAB

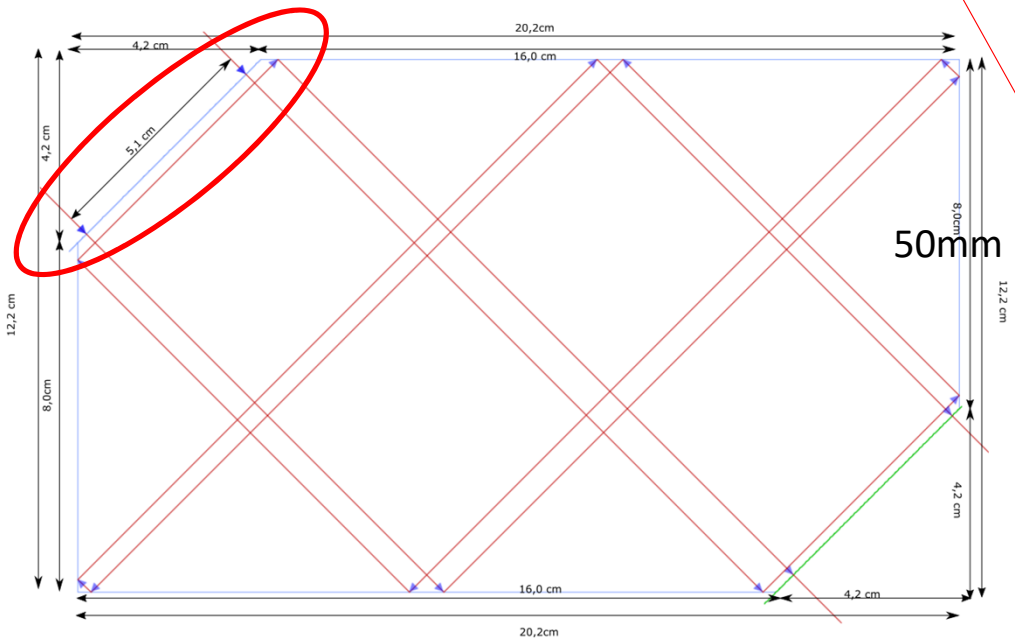
Material: N-BK7 Grade1

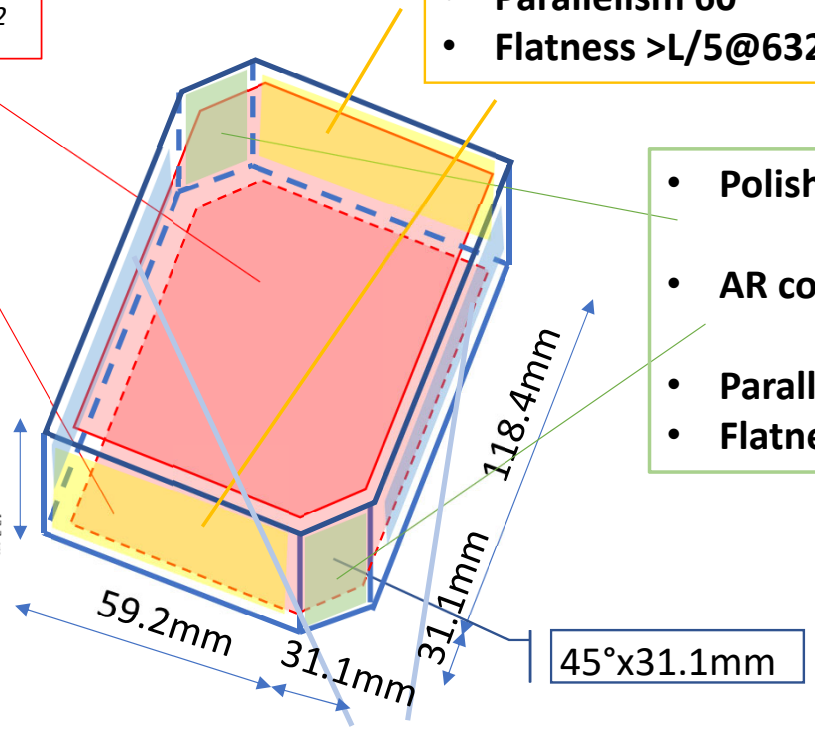
Frosted

149.5x90.3mm²

- **Polished 10-5 (SD)**
  50mmx59.2mm²
- **Uncoated**
- **Parallelism 60'**
- **Flatness >L/5@632nm**

- **Polished 10-5 (SD)**
  50x31.1mm²
- **AR coating**
  R<1%@450-1100nm
- **Parallelism 30'**
- **Flatnesss >L/5@632nm**





- **Polished 10-5 (SD)**
  50x118.4mm²
- **Uncoated**
- **Parallelism 60'**
- **Flatness >L/5@632nm**

schematics of the beam propagation and clear dimensions