Process Platform: Silicon Optical Bench

- High precision VG with 45° or 54.7° slope
- Potential to integrate with thin-film resistor, metal trace, and solder

54.7° V-groove

45° V-groove

U-groove

Optional metal layers
54.7° VG Dimension:
- Groove Depth (Dg): target ± 5um
- Groove Width (Wg): target ± 5um
- Groove Pitch (P): target ± 0.5um
- Groove Angle (A): 70.6 ± 0.5 degree

45° VG/UG Dimension:
- Depth variation of UG1: ± 10%
- Depth variation of UG2: ± 10%
- Width variation of UG1: STD~3%
- Width variation of UG2: STD~5%
- Width variation of Metal: ± 10%
Thin Film Resistor (TaAl):

- TFR max. sheet resistance \(Rs\): 50 ohm/sq
- TFR min. width \(Z\)/length \(Y\): 10um / 70um
- UBM min. width \(U\)/length \(V\): 150um / 150um
- Min. width of overlay \(W\): 10um
- Resistance calculation: \(\frac{(Y-2*W)}{U} * Rs\)