

天科合达试片级 SiC 晶体标准
Silicon Carbide (SiC) Ingot Specification, Dummy grade

| | 2" | 3" | 4" | 6" |
|---|---|--|--|------------------------------------|
| 晶型 Polytype | 4H/6H | 4H/6H | 4H/6H | 4H |
| 直径 Diameter | 50.80mm±0.38mm | 76.2mm±0.38mm | 100.0mm±0.5mm | 150.0mm±0.2mm |
| 载流子类型 Carrier Type | N 型 N-type | N 型 N-type | N 型 N-type | N 型 N-type |
| 电阻率 Resistivity | 0.015~0.028 ohm-cm (4HN) 0.02~0.1 ohm-cm (6HN) | 0.015~0.028 ohm-cm(4HN) 0.02~0.1 ohm-cm (6HN) | 0.015~0.028 ohm-cm(4HN) 0.02~0.1 ohm-cm (6HN) | 0.015~0.028 ohm-cm |
| 基准面晶向 Orientation | 4.0°/0.0°±0.5° | 4.0°/0.0°±0.5° | 4.0°/0.0°±0.5° | 4.0°±0.5° |
| 主定位边方向 Primary Flat Orientation | {10-10} ±5.0° | {10-10} ±5.0° | {10-10}±5.0° | {10-10}±5.0° |
| 主定位边长度 Primary Flat Length | 15.9mm±1.7 mm | 22.2 mm±3.2mm | 32.5mm±2.0 mm | 47.5mm±2.5 mm |
| 次定位边方向 Secondary Flat Orientation | C-face:90° ccw. from orientation flat ± 5° | | | N/A |
| | Si-face:90° cw. from orientation flat ± 5° | | | N/A |
| 次定位边长度 Secondary Flat Length | 8.0mm±1.7 mm | 11.2 mm±1.5 mm | 18.0mm±2.0 mm | N/A |
| 裂纹(强光灯观测) Cracks by high intensity light | 径向深度小于 2mm ≤2mm in radial depth | 径向深度小于 3mm ≤3mm in radial depth | 径向深度小于 4mm ≤4mm in radial depth | 径向深度小于 4mm ≤4mm in radial depth |
| 六方空洞 (强光灯观测) Hex Plates by high intensity light | 累积面积<5% Cumulative area<5% | 累积面积<5% Cumulative area<5% | 累积面积<5% Cumulative area<10% | 累积面积<10% Cumulative area<10% |
| 多型(强光灯观测) Polytype Areas by high intensity light | ≤10 % area | ≤10% area | ≤10% area | ≤10% area |