

SAPPHIRE OPTICAL CRYSTAL

- 2" STANDARD SAPPHIRE INGOT -

| Item | Description | Specification | | | Remark |
|------|---|---|-----------|---------------------|-------------------------|
| | | Nominal | Tolerance | Units | |
| 1 | Sapphire Materials | High Purity > 99.995%, Monocrystalline Al ₂ O ₃ | | | |
| 2 | Surface Orientation | C-plane (0001) | | | |
| | M-axis Orientation Tolerance | 0.0 | +/- 0.1 | deg. | |
| | A-axis Orientation Tolerance | 0.0 | +/- 0.1 | deg. | |
| 3 | Primary Flat Location, A-plane (11-20) | 0.0 | +/- 0.15 | deg. | |
| 4 | Primary Flat Length | 16 | +/- 0.8 | mm | |
| 5 | M-axis Tilting Angle | 0.0 | +/- 0.1 | deg. | |
| 6 | Ingot Diameter | 50.8 | +/-0.1 | mm | |
| 7 | Ingot Length - minimum | 60 | - | mm | <60mm is also available |
| 8 | Ingot Length - maximum | 200 | - | mm | |
| 9 | Circularity | 0 | +/- 0.02 | mm | |
| 10 | Edge Chipping/Crack | <3 | - | mm | Sum of both facets |
| 11 | EPD (Etching Pits Density) | <1000 | - | pcs/cm ² | |
| 12 | Length Exclusion (Bubble, defects, etc) | <10 | - | % | Marked on ingot |
| 13 | M-axis Orientation | parallel to Primary A-Flat | | | |
| 14 | Surface Roughness | Fine ground | | | Apply to each surface |
| 15 | Coloration | No coloration | | | |
| 16 | Crystal Quality Grade | Optical grade 1-3 | | | |
| 17 | Polarization Inspection | Perfect crystal | | | |
| 18 | Material Documentation | Traceable Lot ID | | | |

Remarks:

- Length Exclusion: Allowance as noted. Exclusive areas will be identified and marked on individual cores. Exclusive areas will not be billed.
- Material Documentation: A unique and traceable Lot ID will be marked on each core.
- Customised specification is available upon customers' requirement.

INGOT ILLUSTRATION

