



SOLCERA

Advanced Materials



Opt for a stable transparent ceramic CERA4VIEW® (non-hygroscopic)



Up to 87% transmission,
• Constant even after brazing
• Stable transparency after exposure to 1000°C



Integrate without process change, by any method: gluing, etc.



High temperature brazed hermetic assembly Ti-Spinel, KOVAR®-spinel: Resistance up to 700°C and vacuum conditions in space



Lower Emissivity Than Sapphire
• Less glare and parasitic radiation
• Compatible with AR coatings for improved contrast

Benefits of CERA4VIEW® Transparent ceramics



Easier Polishing of Complex Curved Shapes thanks to its isotropic polycrystalline structure and to the high initial roughness



Benefit from a greater intrinsic mechanical strength > 450 MPa, stable up to 1000°C



Ensure better protection in hostile environments than glass (sand erosion, acid attack, high temperature, etc.)



Net-Shape Freedom with polycrystalline CERA4VIEW®, rather than single crystal like sapphire



Transparent from UV (300nm) to MWIR (5500nm)



Isotropic Spinel - No Birefringence, superior image quality compared to sapphire or anisotropic crystals



Beyond Transparency - Functional Optical Solutions
• EMI/EMC shielding
• Heated windows
• Optical filtering & AR coatings
• Protective coatings
One window, multiple integrated functions



Young's Modulus: Spinel ≈ 270 GPa vs sapphire/alumina ≈ 400 GPa, making spinel less rigid → Lower assembly stress and better vibration tolerance



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OPTICAL GRADE (INFRARED)

- Magnesium fluoride >99.8% MgF_2
- Alumina Al_2O_3 min. 99.99%
- Spinel 100% $MgAl_2O_4$
- Zinc sulfide 100% ZnS , FLIR and CLEAR
- IG Glasses **VITRON**
IG-Glasser · Glaswerkstoffe · High-Tech · Leisungen

RF GRADE (ELECTRO-MAGNETIC)

- Silica 99% SiO_2
- Silicon nitride 100% Si_3N_4

SPINEL CERA4VIEW® BRAZED WINDOWS



SPINEL CERA4PROTECT® BALLISTIC SHIELD



CERAMIC-METAL, SAPPHIRE-METAL,
GLASS-METAL AND METAL-METAL

BRAZING BONDING GLUING
SEALING TECHNOLOGIES

