



Multilayers of:  
\*\*\*Shade, Translucence & Strength\*\*\*

| XTCERA ZIRCONIA FAMILY                 | 3D MULTILAYER                           |
|--|---|
| Transmittance (Translucency)           | 55% (Incisal) - 43% (Cervical)          |
| Available Shades                       | VITA Classic 16 Shades A1-D4            |
| Powder                                 | High quality Chinese                    |
| Manufacturing Type                     | Axial Press->Isostatic Press->Sintering |
| Physical Property                      | Physical Property                       |
| Bending Strength                       | INCISAL ≥750MPa - CERVICAL ≥1100MPa     |
| Pre-Sintered Density                   | 3.06g/cm <sup>3</sup>                   |
| Sintered Density                       | ≥6.0g/cm <sup>3</sup>                   |
| Vickers Hardness                       | 1250HV                                  |
| Chemical Solubility                    | <100μg/cm <sup>2</sup>                  |
| CTE                                    | 9.91x10 K                               |
| Thermal Shock Resistance (YY0301-1998) | Complied                                |
| Chemical Composition                   | Chemical Composition                    |
| ZrO <sub>2</sub> +HfO <sub>2</sub>     | >94.0%                                  |
| Y <sub>2</sub> O <sub>3</sub>          | 4.5-6.0wt%                              |
| Al <sub>2</sub> O <sub>3</sub>         | <0.5wt%                                 |
| Other Oxides                           | < 0.5wt%                                |

**Layer Transitions**

| Layer              | Proportion | Vickers Hardness (HV) | Strength (MPa) | Color | Translucency |
|--------------------|------------|-----------------------|----------------|-------|--------------|
| Layer 1 (Incisal)  | 30%        | ≥1250                 | ≥750MPa        | Light | 55%          |
| Layer 2            | 15%        |                       | ↓              | ↓     | ↓            |
| Layer 3            | 15%        |                       | ↓              | ↓     | ↓            |
| Layer 4            | 20%        |                       | ↓              | ↓     | ↓            |
| Layer 5 (Cervical) | 20%        |                       | ≤1250MPa       | Dark  | 43%          |



Multilayers of:  
\*\*\*Translucence & Strength\*\*\*

| XTCERA ZIRCONIA FAMILY                 | 3D White (MODE 3D)                      |
|--|---|
| Transmittance (Translucency)           | 55% (Incisal) - 43% (Cervical)          |
| Available Shades                       | Color Liquids                           |
| Powder                                 | High quality Chinese                    |
| Manufacturing Type                     | Axial Press->Isostatic Press->Sintering |
| Physical Property                      | Physical Property                       |
| Bending Strength                       | INCISAL ≥750MPa - CERVICAL ≥1100MPa     |
| Pre-Sintered Density                   | 3.06g/cm <sup>3</sup>                   |
| Sintered Density                       | ≥6.0g/cm <sup>3</sup>                   |
| Vickers Hardness                       | 1250HV                                  |
| Chemical Solubility                    | <100μg/cm <sup>2</sup>                  |
| CTE                                    | 9.91x10 K                               |
| Thermal Shock Resistance (YY0301-1998) | Complied                                |
| Chemical Composition                   | Chemical Composition                    |
| ZrO <sub>2</sub> +HfO <sub>2</sub>     | >94.0%                                  |
| Y <sub>2</sub> O <sub>3</sub>          | 4.5-6.0wt%                              |
| Al <sub>2</sub> O <sub>3</sub>         | <0.5wt%                                 |
| Other Oxides                           | < 0.5wt%                                |

**Layer Transitions**

| Layer              | Proportion | Vickers Hardness (HV) | Strength (MPa) | Color                  | Translucency |
|--------------------|------------|-----------------------|----------------|------------------------|--------------|
| Layer 1 (Incisal)  | 30%        | ≥1250                 | ≥750MPa        | Color Liquid s VITA 16 | 55%          |
| Layer 2            | 15%        |                       | ↓              |                        | ↓            |
| Layer 3            | 15%        |                       | ↓              |                        | ↓            |
| Layer 4            | 20%        |                       | ↓              |                        | ↓            |
| Layer 5 (Cervical) | 20%        |                       | ≤1250MPa       |                        | 43%          |



\*\*\*Multilayer Shaded Discs\*\*\*

| XTCERA ZIRCONIA FAMILY                 | SHT Multilayer                          |
|--|---|
| Transmittance (Translucency)           | 47%                                     |
| Available Shades                       | VITA Classic 16 Shades A1-D4            |
| Powder                                 | High quality Chinese                    |
| Manufacturing Type                     | Axial Press->Isostatic Press->Sintering |
| Physical Property                      | Physical Property                       |
| Bending Strength                       | ≥1050MPa                                |
| Pre-Sintered Density                   | 3.06g/cm <sup>3</sup>                   |
| Sintered Density                       | ≥6.0g/cm <sup>3</sup>                   |
| Vickers Hardness                       | 1250HV                                  |
| Chemical Solubility                    | <100μg/cm <sup>2</sup>                  |
| CTE                                    | 9.91x10 K                               |
| Thermal Shock Resistance (YY0301-1998) | Complied                                |
| Chemical Composition                   | Chemical Composition                    |
| ZrO <sub>2</sub> +HfO <sub>2</sub>     | >94.0%                                  |
| Y <sub>2</sub> O <sub>3</sub>          | 4.5-6.0wt%                              |
| AL <sub>2</sub> O <sub>3</sub>         | <0.5wt%                                 |
| Other Oxides                           | < 0.5wt%                                |

| Color Transition   |            |                       |                |       |              |
|--------------------|------------|-----------------------|----------------|-------|--------------|
| Layer              | Proportion | Vickers Hardness (HV) | Strength (MPa) | Color | Translucency |
| Layer 1 (Incisal)  | 30%        | ≥1250                 | ≥1050          | Light | 47%          |
| Layer 2            | 15%        |                       |                | ↓     |              |
| Layer 3            | 15%        |                       |                | ↓     |              |
| Layer 4            | 20%        |                       |                | ↓     |              |
| Layer 5 (Cervical) | 20%        |                       |                | Dark  |              |



\*\*\*Mono Pre-Shaded Disc\*\*\*

| XTCERA ZIRCONIA FAMILY                 | SHT Pre-Shaded                          |
|--|---|
| Transmittance (Translucency)           | 47%                                     |
| Available Shades                       | VITA Classic 16 Shades A1-D4            |
| Powder                                 | High Quality Chinese                    |
| Manufacturing Type                     | Axial Press->Isostatic Press->Sintering |
| Physical Property                      | Physical Property                       |
| Bending Strength                       | ≥900MPa                                 |
| Pre-Sintered Density                   | 3.06g/cm <sup>3</sup>                   |
| Sintered Density                       | 6.05±0.05g/cm <sup>3</sup>              |
| Vickers Hardness                       | 1293HV                                  |
| Chemical Solubility                    | 63μg/cm <sup>2</sup>                    |
| CTE                                    | 10 +/- 0.5                              |
| Thermal Shock Resistance (YY0301-1998) | Complied                                |
| Chemical Composition                   | Chemical Composition                    |
| ZrO <sub>2</sub> +HfO <sub>2</sub>     | >94.0%                                  |
| Y <sub>2</sub> O <sub>3</sub>          | 4.5-6.0wt%                              |
| AL <sub>2</sub> O <sub>3</sub>         | <0.5wt%                                 |
| Other Oxides                           | < 0.5wt%                                |



\*\*\*White Un-shaded Disc\*\*\*

| XTCERA ZIRCONIA FAMILY                 | SHT White                               |
|--|---|
| Transmittance (Translucency)           | 47%                                     |
| Available Shades                       | Color Liquids                           |
| Powder                                 | High quality Chinese                    |
| Manufacturing Type                     | Axial Press->Isostatic Press->Sintering |
| Physical Property                      | Physical Property                       |
| Bending Strength                       | ≥1050MPa                                |
| Pre-Sintered Density                   | 3.06g/cm <sup>3</sup>                   |
| Sintered Density                       | ≥6.03g/cm <sup>3</sup>                  |
| Vickers Hardness                       | 1293HV                                  |
| Chemical Solubility                    | 63μg/cm <sup>2</sup>                    |
| CTE                                    | 10 +/- 0.5                              |
| Thermal Shock Resistance (YY0301-1998) | Complied                                |
| Chemical Composition                   | Chemical Composition                    |
| ZrO <sub>2</sub> +HfO <sub>2</sub>     | >94%                                    |
| Y <sub>2</sub> O <sub>3</sub>          | 4.5-9.5wt%                              |
| AL <sub>2</sub> O <sub>3</sub>         | <0.5wt%                                 |
| Other Oxides                           | < 0.5wt%                                |



\*\*\*White Un-shaded Disc\*\*\*

| XTCERA ZIRCONIA FAMILY                 | TT White (TT-Plus)                      |
|--|---|
| Transmittance (Translucency)           | 55%                                     |
| Available Shades                       | Color Liquids                           |
| Powder                                 | High-Quality Chinese                    |
| Manufacturing Type                     | Axial Press->Isostatic Press->Sintering |
| Physical Property                      | Physical Property                       |
| Bending Strength                       | ≥750MPa                                 |
| Pre-Sintered Density                   | 3.06g/cm <sup>3</sup>                   |
| Sintered Density                       | ≥6.01g/cm <sup>3</sup>                  |
| Vickers Hardness                       | 1250HV                                  |
| Chemical Solubility                    | <61μg/cm <sup>2</sup>                   |
| CTE                                    | 10 +/- 0.5                              |
| Thermal Shock Resistance (YY0301-1998) | Complied                                |
| Chemical Composition                   | Chemical Composition                    |
| ZrO <sub>2</sub> +HfO <sub>2</sub>     | >94.0%                                  |
| Y <sub>2</sub> O <sub>3</sub>          | 4.5-6.0wt%                              |
| AL <sub>2</sub> O <sub>3</sub>         | <0.5wt%                                 |
| Other Oxides                           | < 0.5wt%                                |

# Xtcera Zirconia Indications

| Indication                      | Model   | 3D Multilayer | 3D White | TT Multilayer | SHT Multilayer | TT White TT Preshaded | SHT White SHT Preshaded | HT White |
|---------------------------------|---|---------------|----------|---------------|----------------|-----------------------|-------------------------|----------|
| Aesthetic Full Contour Anterior |    | ✓             | ✓        | ✓             | ○              | ✓                     | ○                       | ○        |
| Full Contour Posterior          |    | ✓             | ✓        | ✓             | ✓              | ✓                     | ✓                       | ✓        |
| Coping                          |    | ✓             | ✓        | ✓             | ✓              | ✓                     | ✓                       | ✓        |
| Coping Bridge (3-4 Units)       |    | ✓             | ✓        | ○             | ✓              | ○                     | ✓                       | ✓        |
| Crown & Bridge (3-4 Units)      |    | ✓             | ✓        | ○             | ✓              | ○                     | ✓                       | ✓        |
| Coping Bridge (5-7 Units)       |    | ○             | ○        | ✗             | ✓              | ✗                     | ✓                       | ✓        |
| Crown & Bridge (5-7 Units)      |    | ✓             | ✓        | ✗             | ✓              | ✗                     | ✓                       | ✓        |
| Coping Bridge Full Arch         |  | ○             | ○        | ✗             | ○              | ✗                     | ✓                       | ✓        |
| Full Arch Full Contour          |  | ○             | ✓        | ✗             | ○              | ✗                     | ✓                       | ✓        |
| Post & Core                     |  | ✓             | ✓        | ✓             | ✓              | ✓                     | ✓                       | ✓        |
| Inlay / Onlay                   |  | ✓             | ✓        | ✓             | ✓              | ✓                     | ✓                       | ✓        |
| Veneer                          |  | ✓             | ✓        | ✓             | ○              | ✓                     | ○                       | ○        |
| Abutment                        |  | ✓             | ✓        | ✓             | ✓              | ✓                     | ✓                       | ✓        |
| Telescope                       |  | ✓             | ✓        | ✓             | ✓              | ✓                     | ✓                       | ✓        |
| Maryland Bridge                 |  | ✓             | ✓        | ○             | ○              | ○                     | ✓                       | ✓        |
| Implant Bridge                  |  | ○             | ○        | ✗             | ○              | ✗                     | ✓                       | ✓        |

Suggested: ✓ Non-suggested: ○ Contradiction: ✗

**Chart 1. Crowns and bridges (5 units OR LESS) (HT/SHT/SHT PRE-SHADE/SHT MULTILAYER)**

| STAGE   | HEAT RATE (°C/MIN) | TARGET TEMPERATURE (°C) | HOLD TIME (MIN) |
|---------|--------------------|-------------------------|-----------------|
| Stage 1 | 15°C/MIN           | 900°C                   | 5 MIN           |
| Stage 2 | 5°C/MIN            | 1300°C                  | 0 MIN           |
| Stage 3 | 5°C/MIN            | 1530°C                  | 120 MIN         |
| Stage 4 | 10°C/MIN           | 300°C                   | 0 MIN           |

**Chart 2. Bridges (5 units OR MORE) (HT/SHT/SHT PRE-SHADE/SHT MULTILAYER)**

| STAGE   | HEAT RATE (°C/MIN) | TARGET TEMPERATURE (°C) | HOLD TIME (MIN) |
|---------|--------------------|-------------------------|-----------------|
| Stage 1 | 8°C/MIN            | 900°C                   | 10 MIN          |
| Stage 2 | 3°C/MIN            | 1300°C                  | 0 MIN           |
| Stage 3 | 5°C/MIN            | 1530°C                  | 120 MIN         |
| Stage 4 | 8°C/MIN            | 300°C                   | 0 MIN           |

**Chart 2. FULL ARCH - (HT/SHT/SHT PRE-SHADE/SHT MULTILAYER)**

| STAGE   | HEAT RATE (°C/MIN) | TARGET TEMPERATURE (°C) | HOLD TIME (MIN) |
|---------|--------------------|-------------------------|-----------------|
| Stage 1 | 3°C/MIN            | 900°C                   | 30 MIN          |
| Stage 2 | 2°C/MIN            | 1300°C                  | 0 MIN           |
| Stage 3 | 2°C/MIN            | 1530°C                  | 120 MIN         |
| Stage 4 | 2°C/MIN            | 300°C                   | 0 MIN           |

**Chart 3. Crowns and bridges (3 units OR LESS) (TT/TTML)**

| STAGE   | HEAT RATE (°C/MIN) | TARGET TEMPERATURE (°C) | HOLD TIME (MIN) |
|---------|--------------------|-------------------------|-----------------|
| Stage 1 | 10°C/MIN           | 900°C                   | 8 MIN           |
| Stage 2 | 3°C/MIN            | 1300°C                  | 0 MIN           |
| Stage 3 | 5°C/MIN            | 1450°C                  | 120 MIN         |
| Stage 4 | 10°C/MIN           | 300°C                   | 0 MIN           |

**Chart 4. Crowns and bridges (3D ML/3D White)**

| STAGE   | HEAT RATE (°C/MIN) | TARGET TEMPERATURE (°C) | HOLD TIME (MIN) |
|---------|--------------------|-------------------------|-----------------|
| Stage 1 | 8°C/MIN            | 900°C                   | 10 MIN          |
| Stage 2 | 3°C/MIN            | 1300°C                  | 0 MIN           |
| Stage 3 | 5°C/MIN            | 1500°C                  | 120 MIN         |
| Stage 4 | 8°C/MIN            | 300°C                   | 0 MIN           |

**Note:** While Xtcera sintering instructions recommend an opening temperature of 800°C, we at Zubler USA have opted for a more cautious sintering strategy. Please be aware that sintering times, temperatures and heat rates can vary from oven to oven.

## SPECIAL FULL ARCH SINTERING

(NO SUPPORT STRUCTURE FOR USE WITH MIHM VOGT OVENS AND SINTERGRANULATE IN A COVERED SINTERING DISH – For: (HT/SHT/SHT PRE-SHADE/SHT MULTILAYER)

| STAGE   | HEAT RATE (°C/MIN) | TARGET TEMPERATURE (°C) | HOLD TIME (MIN) |
|---------|--------------------|-------------------------|-----------------|
| Stage 1 | 2°C/MIN            | 150°C                   | 60 MIN          |
| Stage 2 | 2°C/MIN            | 900°C                   | 30 MIN          |
| Stage 3 | 2°C/MIN            | 1550°C                  | 120 MIN         |
| Stage 4 | 30°C/MIN           | 400°C                   | 0 MIN           |

