



# ZIRCONIA

( ZIRCONIUM DIOXIDE)

Zirconia (Zirconium Dioxide,  $ZrO_2$ ) had always been known for its very high strength (around 1,200 mPa) such as the early generations from Nobel Procera and 3M's Lava.

It was mainly used as copings for crowns or abutments/frameworks on implants. The traditional Zirconia cannot be used as Full Contour restorations because of its high opacity.



## CAD/CAM Material

Zirconia has to be manufactured by CAD/CAM processes, partly because of the dimension change during sintering where high strength is attained. With advancement in computerization and hardware, modern laboratories like Vanguard can produce accurately fitting, strong and aesthetic restorations locally and speedily.



## New ZIRCONIA

New generation of cubical Zirconia has improved the translucency tremendously. While maintaining high enough strength. Super-high Translucent Multi Layer (STML) Zirconia is fast becoming the material of choice for dental crowns, bridges and even implant restorations.



## Advantages of Super Translucent Zirconia

- Natural tooth like translucency
- Very high flexural strength ( 850-1150 MPa )
- Less tooth removal for preparation
- Versatile - can be used as Full Contour restorations for crowns, or implant prostheses
- Single or multiple units
- CAD CAM compatible - can be used in model-less Digital Workflow with Intra-oral Scanners
- Modifiable with size, shape and colour by staining or layering with porcelain
- Can withstand wear and tear
- Biocompatible
- Can be cemented traditionally with Glass Ionomer luting cement

