

# **KATANA™ Zirconia**

**YML** *Yttria Multi Layered*

Revolutionary All-In-One\* Disc Design  
Excellent Balance Between Strength And Translucency

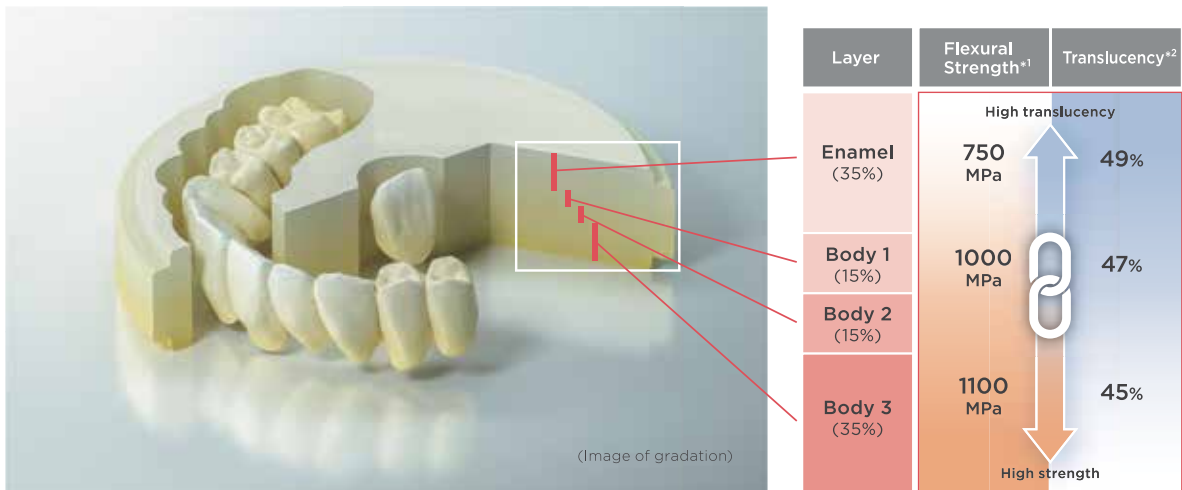
**All-In-One\* Disc**  
**One-Day Completion**



\* See "Versatility of application range" section

## Explore New Possibilities with KATANA™ Zirconia

KATANA™ Zirconia YML is redefining zirconia in esthetic dentistry. This product is characterized by a unique raw material combination of highly translucent zirconia and high strength, integrated together by advanced manufacturing technology.



Measurement Conditions: Evaluated by base material (white color)

\*1 According to ISO 6872: 2015, Sample Size: 3 x 4 x 40mm

\*2 All Light Transmittance, Illuminant: D65, Thickness of Sample: 1.0mm

Percentage is the thickness of each in a disc

Data Source: Kuraray Noritake Dental Inc.  
The numerical value varies according to the conditions.

KATANA™ Zirconia YML is the latest KATANA™ multi layered disc with a well-balanced combination of color / translucency and flexural strength gradation. Thanks to Kuraray Noritake Dental's proprietary multi layered technology, this latest development has been realized by matching three raw materials with different yttria components.

These layers are perfectly harmonized to each other due to the fact that all fundamental production steps, including purification, refining of the zirconia raw material and the addition of essential components such as yttria, are all processed in-house by Kuraray Noritake Dental. Combined with a proprietary zirconia pressing technique as well as our refined pre-sintering process, the new KATANA™ Zirconia YML adapts harmoniously to the KATANA™ family.

As an "All-In-One Disc Solution", KATANA™ Zirconia YML offers exceptional design flexibility from long-span full-arch monolithic bridges to highly esthetic anterior monolithic crown restorations.

# High-Speed Sintering up to 3-unit Bridges

Outstanding quality paired with velocity is an absolutely unique feature of KATANA™ Zirconia over all competitive products. The innovative pressing and pre-sintering technique allows our customers to realize restorations of up to 3-unit bridges without any compromise in terms of esthetics or mechanical properties using the 90-minute high-speed sintering process.

\*The material is removed from the furnace at 800°C. A furnace with a configurable YML firing program is required.

## KATANA™ Zirconia YML FOR 90-MINUTE SINTERING



KATANA™ Zirconia YML displays superior optical properties after 90-minute sintering as compared to discs of major competitors\*.

\*This sintering program is not recommended for competitors' zirconia discs.

## SINTERING PROGRAM

	Temp.1	Rate of Temp. Increase °C/°F min	Temp.2	Rate of Temp. Increase °C/°F min	Temp.3	Rate of Temp. Increase °C/°F min	Temp.4	Hold Time	Rate of Temp. Decrease °C/°F min	Temp.5
<b>90-minute</b>	Room Temp.	50°C/90°F	1400°C/2552°F	4°C/7°F	1500°C/2732°F	10°C/18°F	1560°C/2840°F	16-min.	-50°C/90°F	800°C/1472°F
<b>7-hour</b>	Room Temp.	10°C/18°F	1550°C/2822°F	-	-	-	-	2-hour	-10°C/18°F	RT.

The above sintering recommendation is only a guideline; some adjustments may be required depending on each individual furnace. In the case of 90-minute sintering, if it cannot be set according to the schedule, it cannot be sintered.

# Versatility of Application Range

Expect exceptional design flexibility – from veneers to full-arch restorations. In each case, you may choose a monolithic, cut-back, or framework design with the appropriate fabrication procedure depending on individual needs.

## ALL-IN-ONE SOLUTION



- ✓ Laminate Veneer
- ✓ Inlay, Onlay
- ✓ Anterior / Posterior Crown
- ✓ Long-span Bridge
- ✓ Framework

## Natural Color and Translucency

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KATANA™ Zirconia YML was developed to accurately express the lifelike color and translucency of natural teeth.

### SEAMLESS COLOR AND TRANSLUCENCY



#### Enamel Layer

Provides high translucency that harmonizes with the anterior teeth.

#### Body Layer 1

Provides seamless color and translucency towards the Enamel Layer.

#### Body Layer 2, 3

Provides deep and vivid color while reducing whitening.

## Controlled Firing Deformation

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KATANA™ Zirconia YML, which contains different composition layers, achieves high precision shrinkage and stable CTE values by controlling the whole process from refining to molding. Additionally, extensive quality control, i.e. optimizing all the process steps and the unique in-house developed raw materials, delivers our best KATANA™ material of all time.



Kuraray Noritake Dental distinguishes itself by its proprietary in-house production of zirconia raw materials. Many years of expertise in manufacturing the company's own powder have brought the material quality of KATANA™ Zirconia to new dimensions. It is a controlled degree of purity and particle sizes and an optimal balance of binders, color pigments, stabilizers, and other ingredients. In this way Kuraray Noritake Dental guarantees our customers a consistently reliable material.

**“We control every detail.”**

# Revolutionary All-In-One Disc Design



Based on KATANA™ Zirconia YML A3 with CERABIEN™ ZR FC Paste Stain  
Photo Courtesy of DT Marco Stoppaccioli - L'Aquila

## Features

### FAST PROCESSING

1

### ALL-IN-ONE SOLUTION

2

### SIMPLE ESTHETICS

3

### CONTROLLED FIRING DEFORMATION

4

## Benefits

High-speed sintering (90-minute) offers completely new possibilities. Waiting time is reduced to a minimum. For re-make and rush cases, it is now possible to finish the work easily within one day. In addition, the minimized over-night-sintering cycles enable **shorter delivery time** to increase your business efficiency.

Due to the high translucency and high strength combined within one disc, the entire indication spectrum can be covered. This **minimizes your inventory** of different zirconia discs.

A seamless multi layered technology eliminates visible transition lines, emphasizes natural color and translucency, and ensures a simplified, **time-saving** procedure.

Improving the fitting accuracy of restorations after the final sintering process reduces risk of re-manufacturing, an added benefit for dental labs. **No wasted time or materials.**

# Making The Most of KATANA™ YML's Features

Advanced properties of high translucency and high strength deliver excellent characteristics.

## Reduction Capability for Thinner Restorations

Comparison with high translucency zirconia



KATANA™ Zirconia  
YML A3

KATANA™ Zirconia  
STML A3

Shade Guide A3

**0.4mm**  
(44%)

Thickness of  
Body Layer  
(Translucency\*)

**0.8mm**  
(41%)

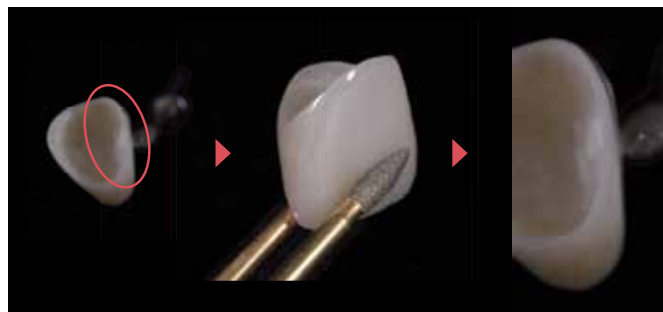
KATANA™ Zirconia YML and STML are shown here with body layer thickness adjusted to 0.4\*mm for YML, and 0.8\*mm for STML. The body layer of YML can be adjusted thinner than that of high translucency zirconia, increasing its translucency even more.

\* This is the minimum thickness recommended by the manufacturer.

\* Test conditions: All light transmittance, Illuminant: D65, Thickness of YML (Body3): 0.4mm, STML (Body3): 0.8mm

## Marginal Stability and Enhanced Fitting Accuracy

KATANA™ Zirconia YML shows sharp margins and less chipping even in thinner restorations, thereby resulting in better marginal fit.



Even if the restoration margins have been milled to a very thin profile, they still show smooth margins without any chipping.

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Before using this product, read the Instructions For Use supplied. The specifications and appearance of the product are subject to change without notice. Printed color can be slightly different from actual shades.

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