



Mixed composition layered zirconia that is newly designed in KZR series

New Combination of Strength and Aesthetics

KZR-CAD Zr
Loxio



Manufacturer

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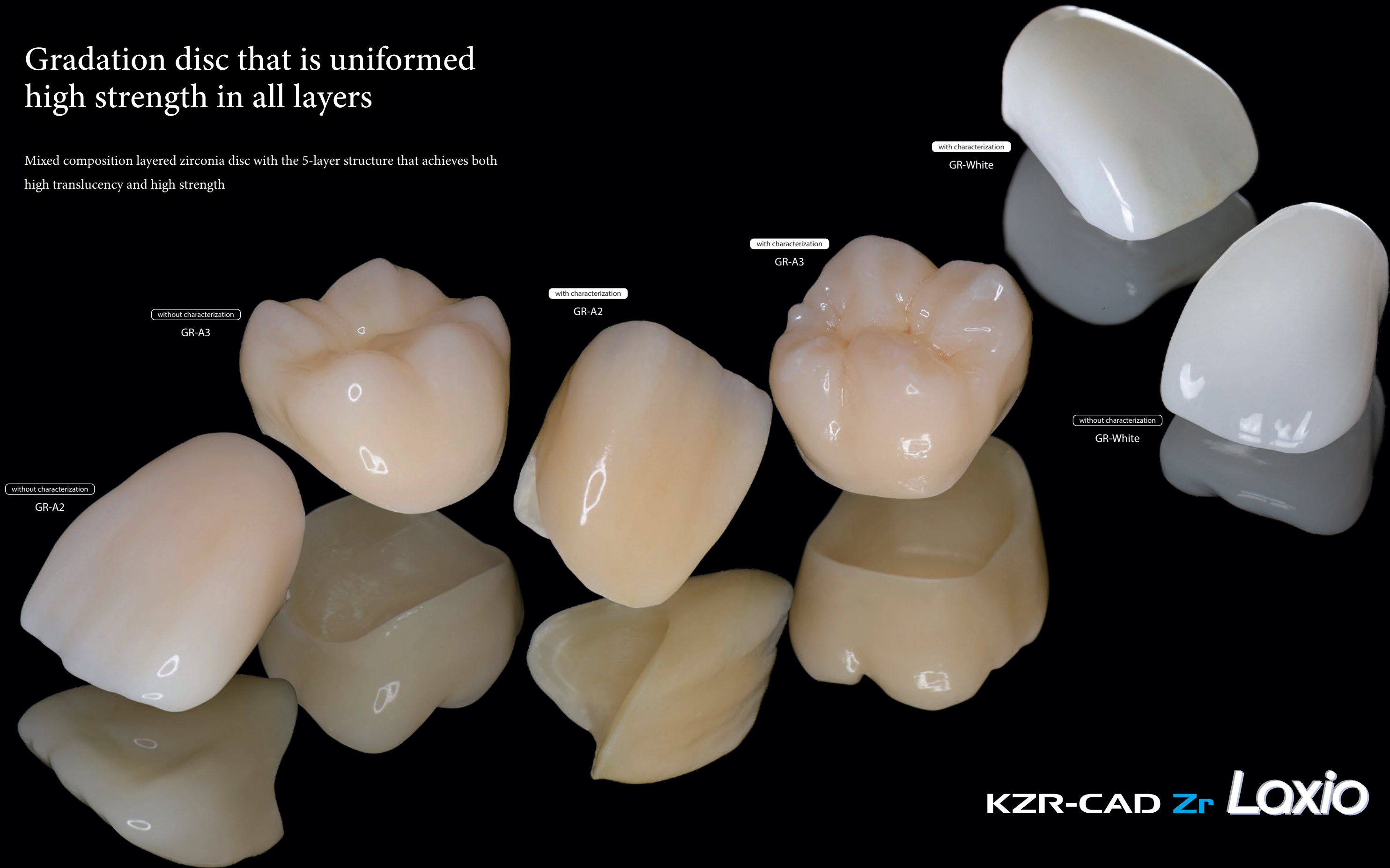
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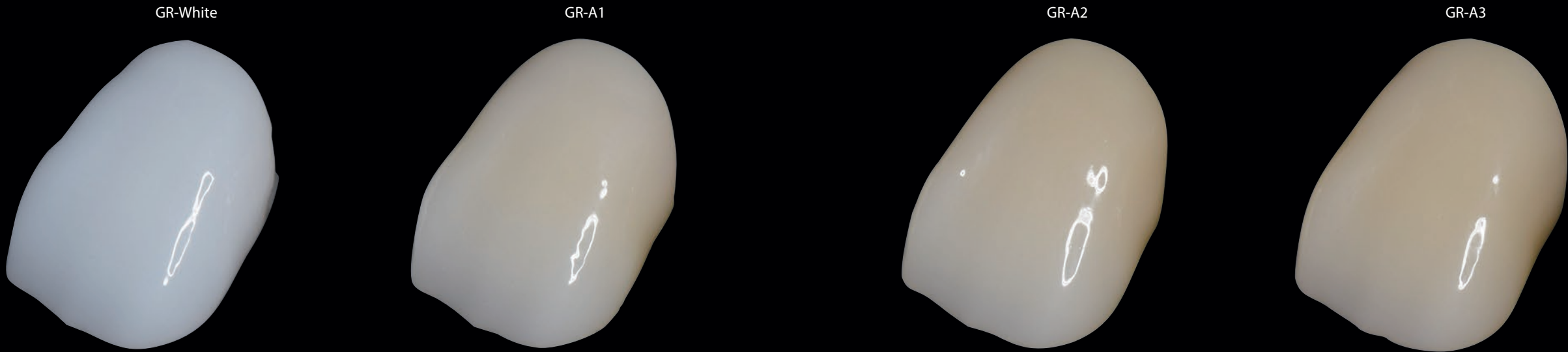
Gradation disc that is uniformed high strength in all layers

Mixed composition layered zirconia disc with the 5-layer structure that achieves both high translucency and high strength



KZR-CAD **Zr** Loxio

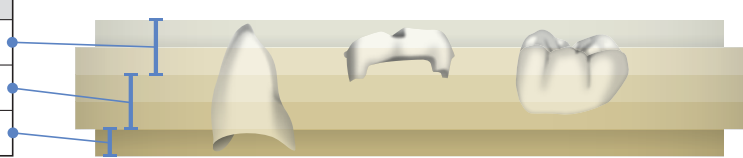
Shade Concept with Excellent Aesthetic Properties



Achieve both high translucency and high strength of the incisal part

By mixing the optimal amount of Tosoh Corporation's new raw material "Zpex Smile.m®", high strength (1,100 MPa) is achieved uniformly in all layers while achieving gradations with excellent aesthetics. High transparency and high strength of the incisal edge are achieved.

	Three point flexural strength*1	Light transmission*2
Incisal area	1 100 MPa	46 %
Middle area		44 %
Cervical area		42 %



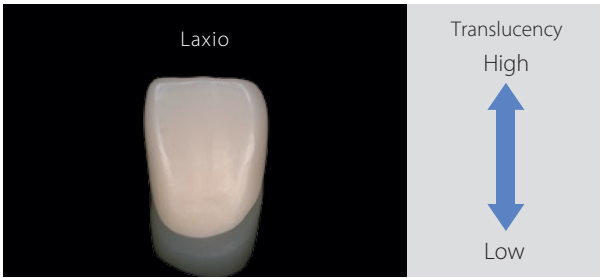
Measured with GR-White.
*1 According to ISO 6872: 2024 (typical value)
*2 In-house test: specimen thickness 1 mm (typical value)

Since the strength is same at any position on the disc, dental restorations can be placed according to the translucency required in each case. A single disc can be used for a wide range of cases; from inlays, onlays, laminate veneers and 14-tooth full bridges which require high strength.



Transition of translucency from the incisal area to the cervical area

The incisal part is designed to be highly translucent and the cervical part is designed to be low translucency, making it less affected by the color tone of the abutment tooth material or resin cement.



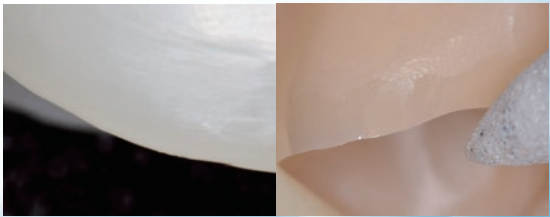
Low deformation (warpage)

Thanks to optimize the ratio of zirconia powder, molding pressure, and presintering temperature, "warpage" is technically controlled, resulting in a good fit.



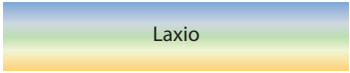

Chipping is less likely to occur

The disc is designed as high strength at all positions within the disc, and is easy to proceed with the milling process. It can be used safely in thin areas that are prone to chipping, such as at the incisal part, or in inlay cases where there is a margin around the entire circumference.



YAMAKIN's zirconia lineup

Structure chart

Mixed composition layered type (5 layers)	
Single composition monochromatic type	
Zirconia composition	High strength Ce-TZP/Al ₂ O ₃ ← 3Y-HA 3Y 4Y → High translucency 5Y

Physical properties and main applications

		NANOZR	Laxio
Light transmission (%) ^{*1}	Incisal area	0	46
	Middle area		44
	Cervical area		42
Three point flexural strength (MPa) ^{*2}	Incisal area	1,110	1,100
	Middle area		
	Cervical area		
Fracture toughness (MPa・m ^{1/2}) ^{*3}		12.1	-
Intended use		Crown to 14-teeth bridge frame (suitable for implant cases ^{*4})	Inlays, onlays, laminate veneers, anatomical crowns for anterior/posterior and 14-teeth bridges (suitable for implant cases ^{*4})

Light transmission and flexural strength are representative values measured for colorless zirconia.

^{*1} In-house test (specimen thickness 1 mm)

^{*2} According to three point flexure test ISO 6872: 2024

^{*3} According to SEPB method ISO 15732:2003

^{*4} Less susceptible to the color tone of metal abutments

KZR-CAD Zr Laxio Sintering Program

	Heat Rate	Heat Rate	Hold	Cooling
Temperature (°C)	1,000	1,450	1,450	400 (in the furnace)
Time (hour)	2	4.5	2	1.5

^{*}In the case of crown and bridge (up to 14 units)

Gradation type





<Mixed composition layered type・5 layers>

KZR-CAD Zr Loxio

Controlled Medical Device - Zirconia Blank for Dental Milling and Machining



Shade		Diameter 1 (Φ) 98.5 mm / Diameter 2 (Φ) 93.5 mm		
		Thickness 1 (t)		
GR	White	14 mm	18 mm	22 mm
	A1			
	A2			
	A3			

	GR-White	GR-A1	GR-A2	GR-A3
Translucency of 0.5 mm thick pellets				

Monochromatic type

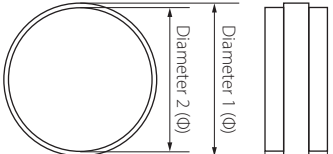

KZR-CAD NANOZR

Controlled Medical Device - Zirconia Blank for Dental Milling and Machining



NANOZR	Diameter 1 (Φ)98.3 mm / Diameter 2 (Φ) 94.0 mm										
	Thickness 1 (t)										
	10 mm	12 mm	14 mm	16 mm	18 mm	20 mm	22 mm	25 mm	30 mm [*]	35 mm [*]	

^{*}Thickness 2 of 30 mm and 35 mm is 20 mm.

	NANOZR			
Translucency of 0.5 mm thick pellets				

^{*}Thickness 2 of 30 mm and 35 mm is 20 mm.

Web site

For more information, scan here ▶

