

Nd:YAG Laser Crystals

Nd:YAG CRYSTALS (STANDARD RODS)



SPECIFICATIONS OF STANDARD Nd:YAG LASER RODS

Nd Doping Level	0.8% or 1.1%
Orientation	<111> crystalline direction
Surface Quality	10 – 5 scratch & dig (MIL-PRF-13830B)
Surface Flatness	$\lambda/10$ at 633 nm
Parallelism	< 10 arcsec
Perpendicularity	< 5 arcmin for plano/plano ends
Diameter Tolerance	+0 / -0.05 mm
Length Tolerance	+1 / -0.5 mm
Clear Aperture	> 90 % of full aperture
Chamfers	0.1 mm at 45 deg
Coating	Both sides coated AR @ 1064 nm, R < 0.2%, AOI = 0 deg
Barrel Grooving	All Ø6.35, 8, 10, 12 mm rods with barrel grooving

Diameter, mm	Length, mm	Doping, %	Wedge of the ends, deg	Description	Coating	Application	Catalogue number	Price, EUR
3	53	0.9	0/0	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-3-0.9-A/A	215
3	65	0.8	0/0	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-3-0.8-A/A	265
3	65	1.1	0/0	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-3-1.1-A/A	325
4	65	0.8	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-4-0.8-A/A	530
4	65	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-4-1.1-A/A	530
6.35	85*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-6.35-1.1-A/A	890
8	85*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-8-1.1-A/A	1340
10	85*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-10-1.1-A/A	2200
12	100*	0.8	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-12-0.8-A/A	4740
12	100*	1.1	3/3 parallel	Nd:YAG	AR/AR @ 1064 nm	Generation @ 1064 nm	E-Y-12-1.1-A/A	4740

* Rods with barrel grooving, except 10 mm at both ends of the rod without grooving.

RELATED PRODUCTS

Laser Safety Eyewear

See page 1.17



Visualizator 990-0840

See page 1.17



Pockels Cells for Q-Switching



NONLINEAR CRYSTALS for SHG @ 1064 nm

LBO CRYSTALS

LBO crystals feature the highest damage threshold, small walk-off and have high efficiency. These crystals are the best choice for harmonics generation of relatively high power and high repetition rate Q-switched or mode-locked lasers.

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
3x3x10	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-401	245
3x3x15	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-402	325
4x4x10	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-301	510
4x4x15	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-302	630
4x4x20	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-303	745
5x5x10	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-501	655
5x5x15	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-503	765
5x5x20	90	11.6	Type 1	AR/AR @ 1064+532 nm	SHG@1064 nm	LBO-502	940
3x3x15	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	LBO-404	325
3x3x20	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	LBO-405	405
3x3x30	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	LBO-409	710
3x3x50	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	LBO-410	1300
4x4x10	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	LBO-304	510
4x4x15	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	LBO-305	630
4x4x20	90	0	Type 1	AR/AR @ 1064+532 nm	NCPM SHG@1064 nm, T=149 °C	LBO-306	745

KTP CRYSTALS

KTP crystals feature the highest efficiency and are suited for low average power or CW lasers applications. These crystals are temperature change insensitive and operate with sharply focused or highly divergent laser beams.

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
3x3x5	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	KTP-401	76
3x3x10	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	KTP-402	109
4x4x6	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	KTP-403	118
7x7x9	90	23.5	Type 2	AR/AR @ 1064+532 nm	SHG@1064 nm	KTP-404	529

DKDP CRYSTALS

Large aperture DKDP crystals are used for high energy Q-switched lasers with large beam diameters.

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
15x15x13	36.5	45	Type 1	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	DKDP-401	485
15x15x13	53.5	0	Type 2	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	DKDP-402	485
12x12x20	53,5	0	Type 2	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	DKDP-404	475
15x15x20	53,5	0	Type 2	AR/AR @ 1064/1064+532 nm	SHG@1064 nm	DKDP-405	579

Please contact EKSMA OPTICS
for special OEM and large volume pricing.

RELATED PRODUCTS

Ovens with thermocontrollers and heaters for different crystal sizes
See pages 2.28–2.30



NONLINEAR CRYSTALS for THG @ 1064 nm

LBO CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
3x3x10	42.2	90	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	LBO-406	245
3x3x15	42.2	90	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	LBO-407	325
5x5x15	42.2	90	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	LBO-508	765

DKDP CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
12x12x20	59.3	0	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	DKDP-403	475
15x15x20	59.3	0	Type 2	AR/AR @ 1064+532/355 nm	THG@1064 nm	DKDP-406	579

NONLINEAR CRYSTALS for 4HG @ 1064 nm

BBO CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
7x7x6	47.6	90	Type 1	P/P @ 532/266 nm	SHG@532 nm	BBO-700	925

KDP CRYSTALS

Size, mm	Orientation		Type	Coating	Application	Catalogue number	Price, EUR
	Theta, deg	Phi, deg					
12x12x5	76.5	45	Type 1	AR/AR @ 532/266 nm	SHG@532 nm	KDP-401	408
15x15x7	76.5	45	Type 1	AR/AR @ 532/266 nm	SHG@532 nm	KDP-402	480

HOUSING ACCESSORIES

Ring Holders
for Nonlinear Crystals
See page 2.26



Positioning Mount
840-0199 for
Nonlinear Crystal
Housing
See page 2.27

