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Neodymium Doped Gadolinium Vanadate (Nd:GdVO₄) Crystals

Nd: GdVO₄ crystals are excellent laser crystals. They are ideal laser host materials for diode pumped solid state (DPSS) micro/mini lasers because of their good physical, optical and mechanical properties. They have higher slope efficiency than Nd: YAG crystals and provide better thermal conductivity and higher power output than Nd: YVO₄ crystals, so they are a good choice for high power output DPSS lasers. Using advanced growth technology, Casix provides high grade Nd: GdVO₄ crystals with Nd doping from 0.1 atm% to 4.0 atm%. In addition, crystal components of various sizes and coatings are available.

Main Features

- Large stimulated emission cross section at laser wavelength
- High absorption coefficient and wide bandwidth at pump wavelength
- Low dependency on pump wavelength
- Good thermal conductivity

- Low lasing threshold and high slope efficiency
- High laser induced damaged threshold
- Strongly polarized laser output

Capability

** Our internal inspection criterion on this specification.

Additional Nd: GdVO4 crystals and coating specifications are available upon request.

ATTRIBUTE	COMMERCIAL	HIGH PRECISION
Nd: Doping Level	0.5atm%, 3.0atm%	
Wavefront Distortion	$\lambda/4$	$\lambda/8$
Scattering Sites**	Invisible, probed with a He-Ne laser	
Orientation	$\pm 0.5^\circ$	$\pm 0.2^\circ$
End-faces Configuration	Flat	
Dimension Tolerance	$\pm 0.1\text{mm}$	$\pm 0.01\text{mm}$
Surface Quality	20-10 scratch and dig	10-5 scratch and dig
Flatness	$\lambda/8$	$\lambda/10$
Parallelism	20"	10"
Perpendicularity	15'	5'

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Crystal Products

Laser Crystals

Nd: YVO4 Crystal

Nd: GdVO4 Crystal

DPM Crystal

Nd: YAG Crystal

CR4: YAG Crystal

Non-Linear Optical Crystals

Birefringent Crystals

IR Crystals

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