

premiScan-ULD

High-end Optical Parametric Oscillator



Features and Benefits

Modular and reliable design

Adaptable to most commercial Nd:YAG pump lasers

Midband operation with excellent beam properties

Computer controlled tuning, crystal change, and absolute wavelength accuracy (optional)

Double crystal unit

OPO Model	premiScan - ULD /170	premiScan - ULD /240	premiScan - ULD /400	premiScan - ULD /500	premiScan - ULD /650
Pump Pulse Energy @ 355 nm	170 mJ	240 mJ	400 mJ	500 mJ	650 mJ
Repetition Rate (1)	0 - 100 Hz				
OPO - Pulse Duration	0-3 ns shorter than pump pulse				
Linewidth (2)	3 - 7 cm ⁻¹				
Pulse Energy Signal, Max., Spec	27 mJ	38 mJ	56 mJ	70 mJ	90 mJ
Pulse Energy Signal, Max., Typ.	33 mJ	46 mJ	68 mJ	85 mJ	110 mJ
Tuning Range (3)	410 - 2630 nm				
Beam Divergence (Full Angle,2)	0.6 - 2.7 mrad (> 85% round)				

(1) Same repetition rate as pump laser, performance at repetition rates above 20 Hz on request

(2) Linewidth and divergence depend on pump pulse duration and characteristics, divergence for Signal

(3) Tuning range can be optimized at edges of range (down to 403 nm on request, contact factory), wavelength separation around degeneracy point: contact factory

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This BBO-OPO can be pumped by most commercial Nd:YAG lasers. The exceptional beam quality with its low divergence qualify this OPO especially for applications requiring long beam propagation as in multipass cells or atmospheric measurements. Options include frequency converters for UV generation, wavemeter (lambdaScan) for absolute wavelength control, full computer control (LabView library available). Ask for details.

Pump Laser Requirements	
Pump Wavelength	355 nm
Pump Energy	50 - 650 mJ/pulse @ 355 nm
Pulse Width	3.5 - 10 ns @ 355 nm
Repetition Rate	1 - 100 Hz
Spatial Beam Profile	homogeneous
Divergence	< 0.5 mrad, > 0.5 mrad on request

Notes:

All specifications depend on pump laser specifications and performance. Please contact factory or your sales representative for details. All specifications subject to change without notice.

Mechanical + Utilities		
Size (L x W x H)	OPO (Body Only)	415 mm x 130 mm x 155 mm
	Electronics Box (Option)	280 mm x 285 mm x 176 mm
Weight	OPO Head w/ Motor	8.8 kg
	Electronics Box (Option)	5.2 kg max.
Power Requirements	Electronics & Motorizers	100 - 240 V, 50/60 Hz, 1.7 A

Dimensions with feet, micrometer screw, and other protruding elements please refer to dimensional drawing

