

# OPO Systems

New OPO systems combine high energy output, extremely wide tuning range with exceptionally easy maintenance and increased reliability. These OPO systems are developed taking into consideration the end user's demands. They are highly reliable and easy to operate unlike the similar devices already existing in the market. The main advantage of the OPO LP series is extremely low operating pump power densities. Thanks to the original optical scheme the specified parameters are obtained even at low pump intensities and as a result neither crystals nor other optics can be damaged. This feature combined with precise optics mounts and dust protective housing insures perfect reliability and long-term output stability.



## Specifications

- 1) Depends on output wavelength; specified for 10 nsec pump pulse
- 2) At 500 nm
- 3) At 850 nm

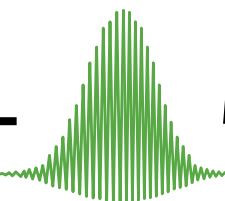
## Features

- High efficiency
- UV SHG options
- Compatibility with MM pump lasers
- 210...2500 nm operation range
- Custom solutions up to 20  $\mu\text{m}$
- PC control option
- Wavelength display option
- Easy to use and low maintenance

MODEL	LP601	LP603	LP604
Non-linear crystal	BBO		
Tuning range, nm signal + idler second harmonic	410...2500 —	410...2500 210...420	680...2500 —
Max total conversion efficiency <sup>1)</sup>	40% <sup>2)</sup>	35% <sup>2)</sup>	40% <sup>3)</sup>
Linewidth <sup>1)</sup> , $\text{cm}^{-1}$	10...100	4...6	6...8
Dimensions, mm	255 x 155 x 70		
Pump laser requirements			
Laser type	Nd:YAG		
Wavelength, nm	355	355	532
Max pump energy, mJ	100	100	150
Operating pump intensity, $\text{MW}/\text{cm}^2$	60	60	80
Pulse width, nsec	4...12		
Beam quality	<i>multimode</i> homogeneous spatial beam profile		
Beam divergence	less than 1 mrad		

The OPO LP series optical design provides high-efficiency output even if it is pumped by standard multimode Nd:YAG lasers. The customer does not have to buy or use complex and expensive TEM<sub>00</sub> or single-frequency pump lasers. The maintenance expenses are therefore reduced and the OPO series is attractive for every user. Besides the OPO supercompactness saves space at your optical table and allows to integrate it easily into any available laser system.

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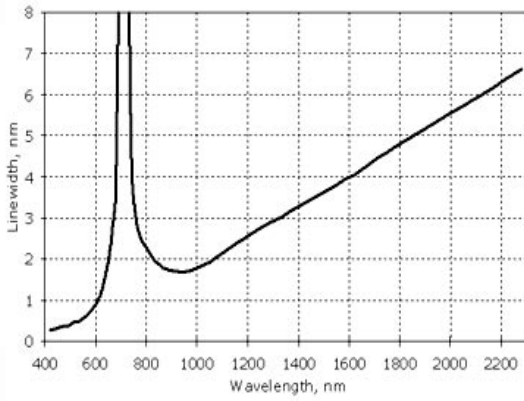


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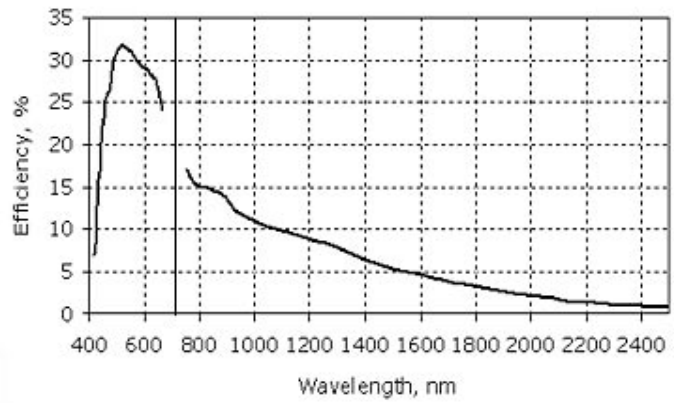
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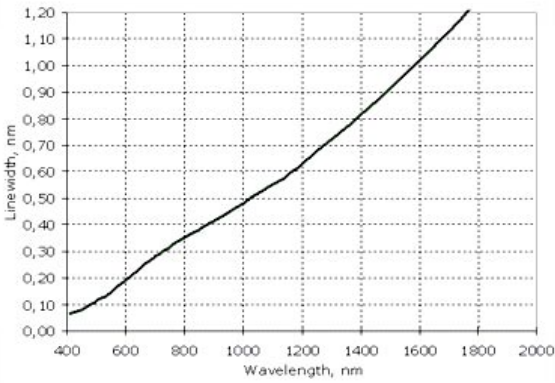
Typical linewidth of the LP 601 OPO



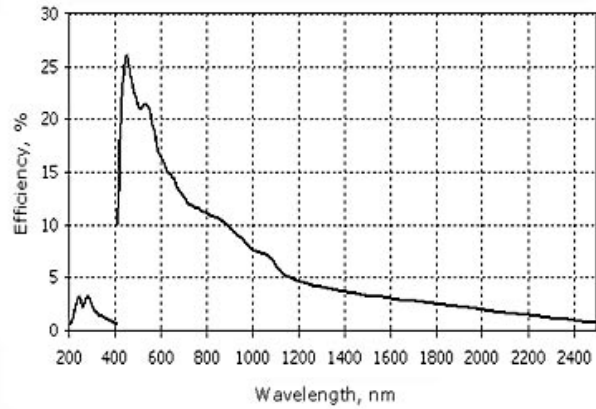
Typical efficiency of the LP 601 OPO



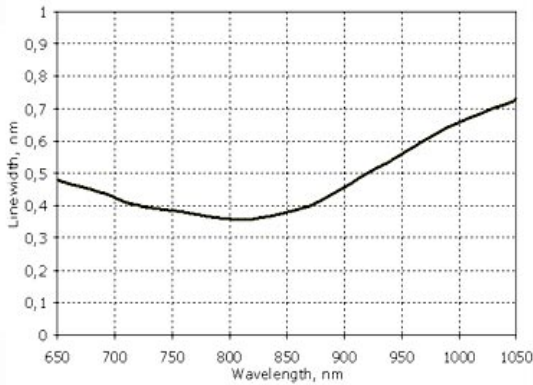
Typical linewidth of the LP 603 OPO



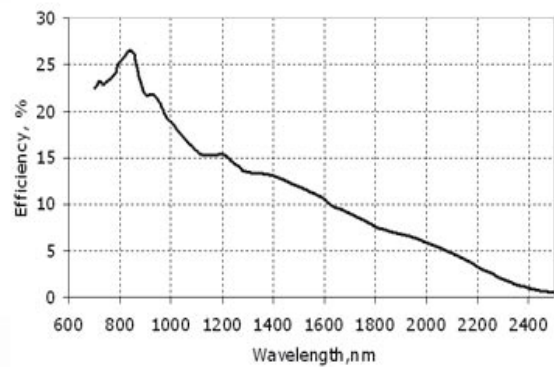
Typical efficiency of the LP 603 OPO with the LG350 SHG unit



Typical linewidth of the LP 604 OPO



Typical efficiency of the LP 604 OPO



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