



# HLPN-2050/2060 Series

## Ho:YLF Hybrid Fiber-to-Bulk Nanosecond Lasers

NEW PRODUCT

Acousto-optically Q-switched Optical Heads



### Applications

- ▶ Plastics Marking
- ▶ Spectroscopy
- ▶ Plastics Cutting & Welding
- ▶ LIDAR
- ▶ Medical Therapy, Surgery
- ▶ OPO Pump Source



### Features

- ▶ Output Power up to 80 W
- ▶ Pulse Duration 10-500 ns
- ▶ Pulse Energy up to 80 mJ
- ▶ TEM<sub>00</sub> Beam Mode
- ▶ Repetition Rate up to 40 kHz

IPG Photonics' HLPN-2050/2060 Holmium:YLF laser provides 10 - 500 nanosecond pulses at  $\sim 2.05 \mu\text{m}$  with pulse energies up to 80 mJ, output powers up to 80 W at repetition rates up to 40 kHz. The Q-switched Ho:YLF head is pumped by IPG's efficient and reliable Thulium fiber laser. The HLPN-2050/2060 2.05  $\mu\text{m}$  pulsed laser addresses a wide range of materials processing, scientific and medical applications.

# HLPN-2050/2060 Series

## Ho:YLF Hybrid Fiber-to-Bulk Nanosecond Lasers

Optical Characteristics	HLPN-20-10-15	HLPN-40-10-40	HLPN-80-10-80
Wavelength*, nm	2050/2060		
Linewidth, nm	<1		
Polarization	Linear, >500:1		
Max. Average Power, W	15	40	80
Max. Pulse Energy, mJ	20 (0-500 Hz) 10 (at 1.5 kHz) 1 (at 15 kHz)	40 (0-500 Hz) 20 (at 2 kHz) 2 (at 20 kHz)	80 (0-500 Hz) 40 (at 2 kHz) 4 (at 20 kHz)
Pulse Width, ns	10-500		
Max. Peak Power, MW	2	4	8
Repetition Rate, kHz	0-40		
Beam Quality, M <sup>2</sup>	<1.1	<1.2	<1.3
Output Beam Size, mm	~1.1	~1.3	~1.5

General Characteristics	50 W Tm Fiber Laser	120 W Tm Fiber Laser	(2) 120 W Tm Fiber Laser
Pump Laser	50 W Tm Fiber Laser	120 W Tm Fiber Laser	(2) 120 W Tm Fiber Laser
Laser Head Dimensions (W x D x H), mm	170 x 130 x 40	320 x 325 x 80	320 x 430 x 80
Pump Laser Cooling**	Water-cooled***		
Laser Head Cooling	Conductive	Water-cooled****	
Supply Voltage 50-60 Hz, VAC	Single-phase, 110-240	Single-phase, 208-240	

\* Nonlinear conversion to 2nd through 8th harmonics is available upon request

\*\* Water Chiller is not included

\*\*\* Optional Air-cooling is available upon request

\*\*\*\* Optional Air or conductive cooling is available upon request

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MAX. AVERAGE OUTPUT POWER: 160 W  
 MAX. PEAK OUTPUT POWER: 16 kW  
 PULSE DURATION: 10-500 ns  
 PULSE REPETITION RATE: 0-40 kHz  
 WAVELENGTH RANGE: 1800-2200 nm

DANGER - INVISIBLE LASER  
 RADIATION AVOID EYE OR SKIN  
 EXPOSURE TO DIRECT OR  
 SCATTERED RADIATION  
 CLASS 4 LASER PRODUCT  
 IEC 60825-1:2014

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**The Power to Transform®**