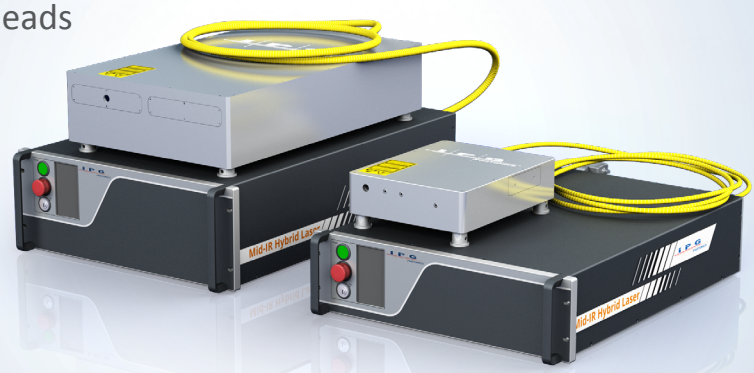
HLPN-2090 Series

Ho:YAG Hybrid Nanosecond Pulsed Lasers

NEW PRODUCT

Acousto-optically or Passively Q-switched Optical Heads

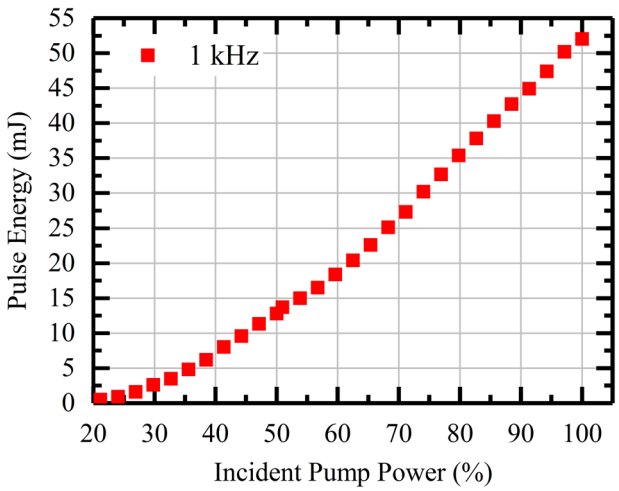


Applications

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

Features

- Output Power up to 80 W
- Pulse Energy 1 - 50 mJ
- Repetition Rate 0.1 - 100 kHz
- Pulse Duration 10 - 50 ns
- TEM_{00} Beam Mode
- Power Amplification Option
- Single-frequency Option



Typical Output-input of HLPN-50-20-50

IPG Photonics' HLPN Holmium:YAG laser provides 10 - 50 nanosecond pulses at 2.09 µm with pulse energies up to 50 mJ and output powers up to 80 W. The acousto-optically or passively q-switched Ho:YAG head is pumped by IPG's efficient and reliable Thulium fiber laser. The HLPN 2.09 µm pulsed laser addresses a wide range of materials processing, scientific and medical applications. A single-frequency option is also available.

HLPN-2090 Series

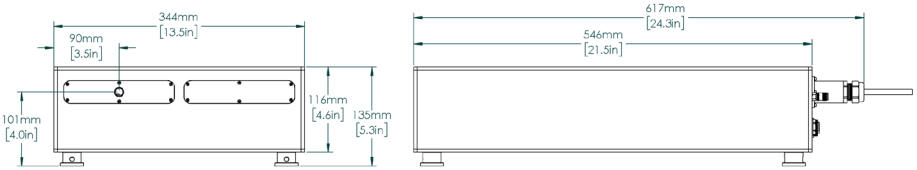
Ho:YAG Hybrid Nanosecond Pulsed Lasers

Optical Characteristics	HLPN-5-10-9	HLPN-15-15-15	HLPN-40-15-30	HLPN-50-20-50	HLPN-1.6-30-80
Mode of Operation*	Passively Q-switched	Acousto-optically Q-switched			
Wavelength, nm	2090				
Linewidth FWHM**, nm	<0.01	<1			
Max. Average Power, W	9	15	30	50	80
Peak Power, MW	0.5	1	2.5	2.5	0.08
Max. Pulse Energy***, mJ	5	15	40	50	1.25
Pulse Duration, ns		15		20	15-55
Repetition Rate****, kHz	0.2-2	0.3-1	0.1-10	0.1-1	20-100
Polarization	Linear, >100:1				
Output Beam Mode, M^2	≤1.2				
Beam Diameter (FW, $1/e^2$), mm	1.5				
Beam Divergence, mrad	<1				
Warm-up Time, min	15				

General Characteristics

Pump Laser	IPG Photonics' CW Thulium Fiber Laser				
Optical Head Dimensions (W × D × H), mm	107 × 323 × 143		206 × 260 × 72		344 × 546 × 116
Pump Laser Cooling*****	Air-cooled or Water-cooled				
Optical Head Cooling	Water-cooled				
Supply Voltage 50-60 Hz, VAC	110 - 240				
Power Consumption, W	500	800	1300	2300	2200

* All lasers can operate in CW mode with maximum average power
** Single-frequency option is available upon request
*** Output energies >50 mJ are available upon request
**** Custom repetition rates are available upon request
***** Wafer chiller is not included



MAX. AVERAGE OUTPUT POWER: 160 W
MAX. PEAK OUTPUT POWER: 7 MW
PULSE DURATION: 15-55 ns
PULSE REPETITION RATE: 0.1-100 kHz
WAVELENGTH RANGE: 2000-2200 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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