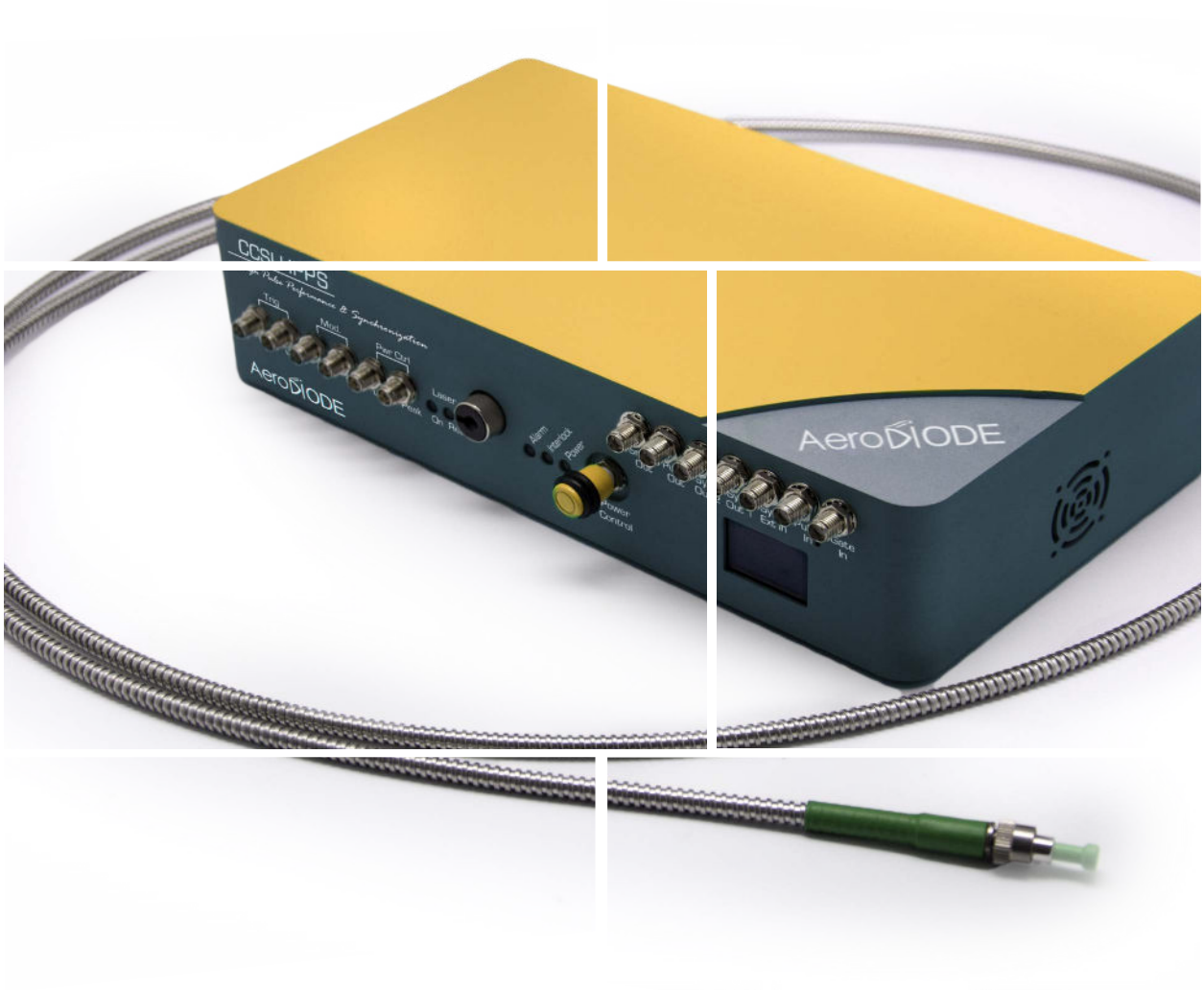
CCSI-HPHS

High-Power-High-Speed Pulsed Laser Diode



AeroDIODE

www.aerodiode.com

CCSI-HPHS

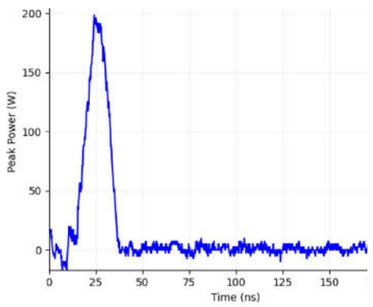
High Power Pulsed Laser Diode

High peak power (100's W) nanosecond pulses fiber-coupled laser diode from 450 up to 1500 nm.

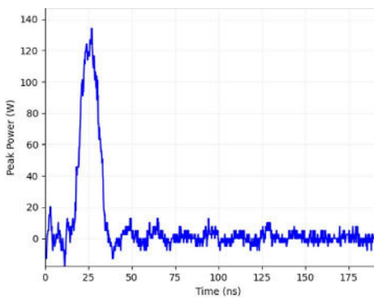
Designed to offer an optimized solution for the generation of high peak power nanosecond precision pulses at visible or infra-red wavelengths such at 450, 785, 808, 830, 905, 915, 980, 1064 or 1470 nm. All modules have a very high brightness with a typical output fiber core of 105 µm (62.5 µm also available as a special request). This makes it an ideal solution for LIDAR R&D or various laser lighting applications.

Key features:

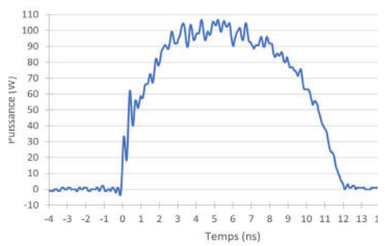
- Adjustable pulse width
- Adjustable peak power
- Adjustable repetition rate
- Low Jitter internal and external triggering with an embedded pulse generator
- Down to 1 ns rise/fall time
- Includes one «Tombak» multifunctional synchronization pulse delay generator. This device allows to generate any pulse or burst configuration with adjustable width and delay. It includes a voltage converter for low volatge triggering.
- 27 versions over 9 wavelengths : 450 nm, 785 nm, 808 nm, 905 nm, 915 nm, 940 nm, 980 nm, 1064 nm and 1470 nm.
- The maximum duty cycle depends on the targeted peak power level
- Laser diode tuning by adjusting the laser diode temperature (depends on the model versio).
- Full GUI software and multiple software libraries : LabVIEW, Python (Windows or Linux), DLLs, Hexa etc.



Exemple of a 200 W peak power 15 ns pulse at 808 nm out of a 200 µm-core fiber. The peak power, pulse width and repetition rates are adjustable.



Exemple of a 120 W peak power 10 ns pulse at 940 nm out of a 105 µm-core fiber.

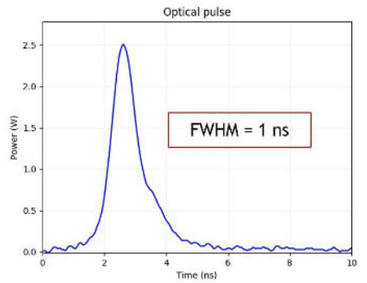


Exemple of a 100 W peak power 9 ns pulse at 940 nm out of a 105 µm-core fiber. The peak power, pulse width and repetition rates are adjustable.

Technical Specifications

The product includes our famous Tombak multifunctional synchronization pulse delay generator

This Turnkey unit has multiple adjustments capabilities controlled by an efficient GUI.



Down to 1 ns pulsewidth with multi-Watt peak power

HPHS (High Power High Speed) modules performances :

Nominal Wavelength (nm)	version		Min pulse width*	Max pulse width*	Max peak power*	Max Duty Cycle
450 nm	1	High speed low current	5 ns	2 000 ns	20 W	10 %
	2	High speed high current	5 ns	50 ns	60 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	40 W	0.1 %
785 nm	1	High speed low current	5 ns	2 000 ns	30 W	10 %
	2	High speed high current	5 ns	50 ns	100 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	75 W	0.1 %
808 nm	1	High speed low current	2 ns	2 000 ns	30 W	10 %
	2	High speed high current	2 ns	50 ns	300 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	200 W	0.1 %
830 nm	1	High speed low current	10 ns	2 000 ns	30 W	10 %
	2	High speed high current	10 ns	50 ns	100 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	75 W	0.1 %
905 nm	1	High speed low current	2 ns	2 000 ns	18 W	10 %
	2	High speed high current	2 ns	50 ns	250 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	150 W	0.1 %
915 nm	1	High speed low current	2 ns	2 000 ns	18 W	10 %
	2	High speed high current	2 ns	50 ns	250 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	150 W	0.1 %
940 nm	1	High speed low current	2 ns	2 000 ns	18 W	10 %
	2	High speed high current	2 ns	50 ns	250 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	150 W	0.1 %
980 nm	1	High speed low current	2 ns	2 000 ns	18 W	10 %
	2	High speed high current	2 ns	50 ns	250 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	150 W	0.1 %
1064 nm	1	High speed low current	2 ns	2 000 ns	10 W	10 %
	2	High speed high current	2 ns	50 ns	80 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	60 W	0.1 %
1470 nm	1	High speed low current	5 ns	2 000 ns	15 W	10 %
	2	High speed high current	5 ns	50 ns	35 W	0.1 %
	3	Long pulse high current	20 ns	1 000 ns	35 W	0.1 %

*Typical values - contact us to share your precise need and evaluate the associated performances

TOMBAK is a multifunctional pulse delay generator. It is ideal for complex synchronization needs like burst generation, frequency division, voltage conversion, Arbitrary Waveform Generation etc. One Tombak module is included within each of the CCSI-HPHS product.

A GUI software opens automatically two windows: the driver part and the Tombak synchronization part. Multiple software libraries are available : LabVIEW, Python, DLLs, Hexa etc.

Classification :

Name	940HPHS -
HPHS version :	1 : High Speed Low Current 2 : High Speed High Current 3 : Long Pulse High Current

Ordering information :

HPHS: 940HPHS - [_]

Nominal Wavelength : 450; 785 ; 808 ; 830 ; 905 ; 915 ; 915 ; 940 ; 980 ; 1064 ; 1470

Version
1 : High Speed Low Current
2 : High Speed High Current
3 : Long Pulse High Current

P.N.A172 - Version 11-23

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