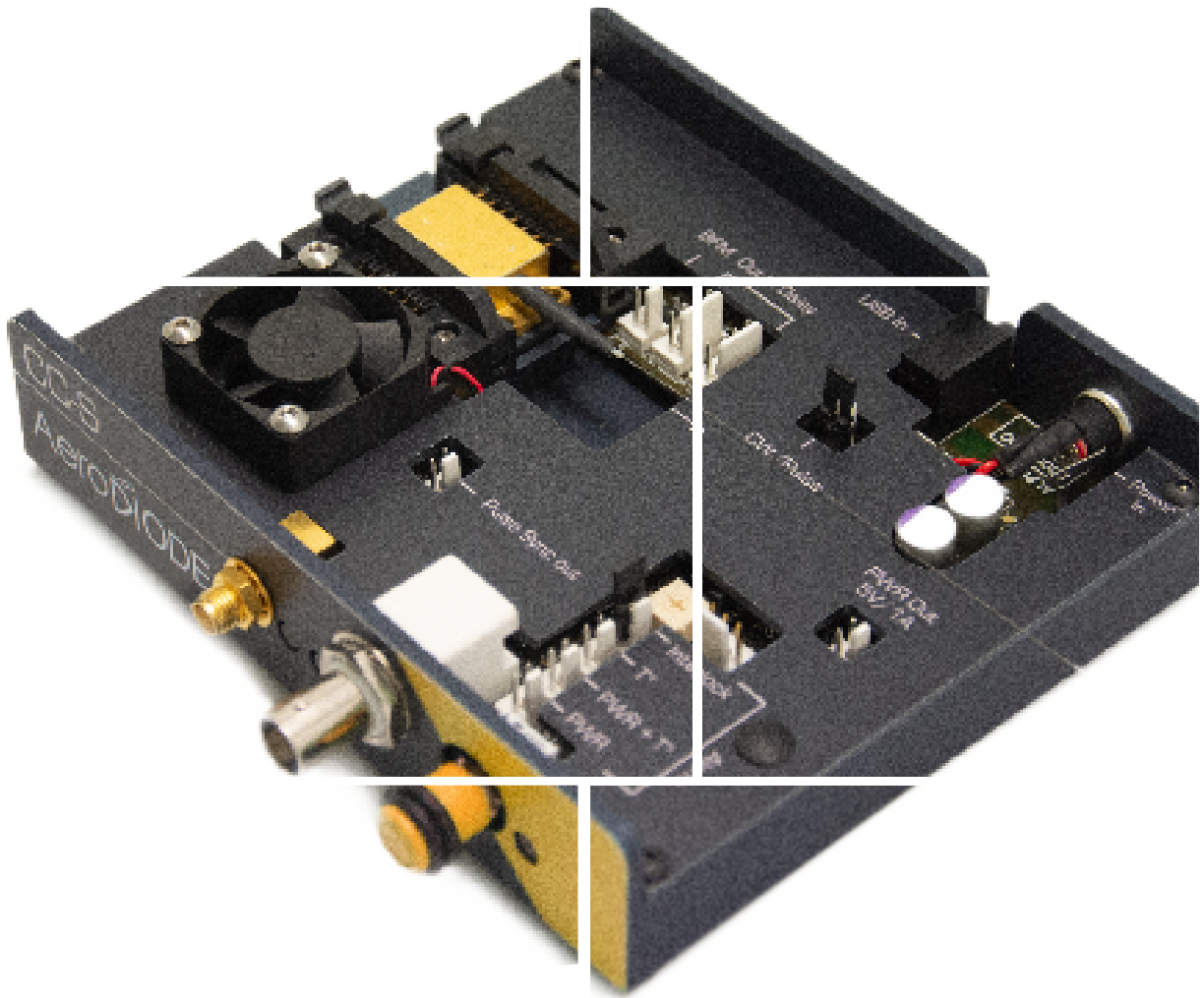


# 1064 nm Laser Diode & Turn-key solutions



Aero*Di*ODE

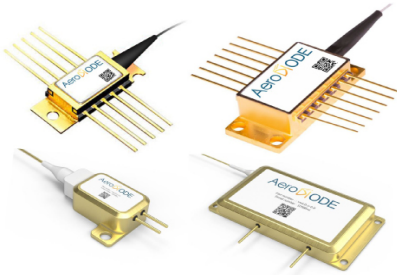
# 1064 nm laser diode

## Choose your own Bragg, DFB or multimode laser diode + driver solution

Standard Bragg or DFB laser diodes are offered as Stock items or associated with a CW and/or Pulsed Turn-Key Laser Diode Driver.

### 1st

Choose your laser diode :



| Diode type | Technology            | Wavelength (nm)                                | Fiber                  | Emission Linewidth (typ - CW)    | Power Kink free (CW) | Power Kink free (Pulse)                 | Package         |
|------------|-----------------------|------------------------------------------------|------------------------|----------------------------------|----------------------|-----------------------------------------|-----------------|
| 1a         | Standard with Bragg   | 1064,5 ±2nm (chip regulated at ~ 20°C, No FBG) | PM single-mode         | 1-3 nm                           | up to 500 mW         | up to 1500 mW                           | 14 pin type 1   |
| 2a         | DFB (for pulsing)     | 1063.5 ±1nm                                    |                        | MHz range                        | up to 200 mW         | up to 500 mW [700 mW typical max value] | 10 pin Type 1   |
| 2b         | DFB (for CW emission) | 1064.0 ±1nm                                    |                        | ~ 200 kHz                        |                      |                                         |                 |
| 2c         |                       |                                                |                        | ~100 kHz ( mode-hop free tuning) | up to 70 mW          | up to 100 mW                            | 14 pin type 1   |
| 3          | Ultra Broad FBG       | 1064 ±2nm                                      |                        | > 2nm                            | up to 650mW          | up to 2000 mW                           | 10 pin - Type 1 |
| 4          | Multimode             | 1064 ±5nm                                      | Multi-mode 105 µm core | 3.5 nm                           | 9 W                  | 9 W                                     | 30*17 mm        |
| 5          |                       | 1064 ±6nm                                      |                        | 4.5 nm                           | 25 W                 | 25 W                                    | 66.5*36 mm      |
| 6          |                       | 1064 ±10nm                                     |                        | 4 nm                             | 50 W                 | 50 W                                    | 66.5*36*15      |
| 7          |                       | 1064 ±6nm                                      |                        | 4.5 nm                           | 100 W                | 100 W                                   | 123.5*62.7*22   |

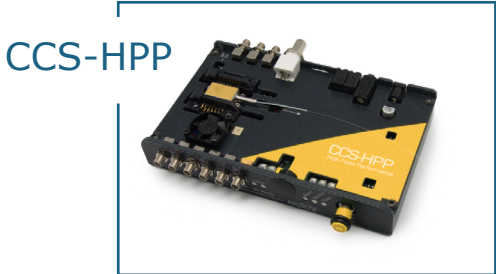
### 3rd

Choose your product form factor : OPEN FRAME or INTEGRATED

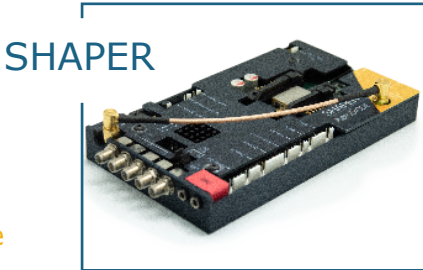
#### OPEN FRAME VERSIONS :



➤ Open driver for CW, std and HP electronics Boards



➤ Open driver for HPP (High Pulse Performance) electronic Board



➤ Open driver for Shaper electronics Board

## 2nd

Choose your Driver performance :

| LASER DRIVER VERSION :                                                                                                                          |                       |                                                  |                                                               |                               |                                  |                                     |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------------------------------------|---------------------------------------------------------------|-------------------------------|----------------------------------|-------------------------------------|--------------------------------------------------|
|                                                                                                                                                 | Laser Diode version : | CCS-CW                                           | CCS-Std (from 1ns to CW)                                      | CCS-HP (High Power)           | CCS-HPP (High Pulse Performance) | SHAPER (User Design ns Pulse Shape) | CCM/CCMI High Power (for 10-100 W models only)   |
| Output Power - <u>CW regime</u> (typ) - (see the product webpage for detailed peak power performances in pulse mode - scroll down the web page) | 1a - Bragg            | 500 mW                                           | 400 mW                                                        |                               | 500 mW                           | No (driver generates only pulses)   | No (driver not compatible for singlemode diodes) |
|                                                                                                                                                 | 2a/2b/2cDFB           | 200mW/200mW/70mW                                 |                                                               |                               |                                  |                                     |                                                  |
|                                                                                                                                                 | 3- Broad FBG          | 650 mW                                           | 500 mW                                                        |                               |                                  |                                     |                                                  |
|                                                                                                                                                 | 4/5/6/7 Multimode     | No (drivers not compatible for multimode diodes) |                                                               |                               |                                  |                                     | 9 W / 25 W / 50 W / 100 W                        |
| User design Pulse shape                                                                                                                         | Any                   | No                                               | No (On-Off Driver only)                                       |                               |                                  | Yes (embedded AWG)                  | Yes (analog)                                     |
| Laser diode T° range                                                                                                                            |                       | 15 - 50 °C                                       |                                                               |                               |                                  |                                     | 15 - 40 °C                                       |
| Pulse duration (Ext pulse trigger)                                                                                                              |                       | CW only                                          | 0.5 ns - CW                                                   |                               | 0.5 ns - 8 µs                    |                                     | 10 µs - CW                                       |
| Pulse duration (Internal pulse generator)                                                                                                       |                       |                                                  | 0.5 ns - 500 ns                                               |                               |                                  |                                     | No                                               |
| Typ rise/fall time ; Min Pulse duration                                                                                                         |                       |                                                  | 3 (ns/A) ; 1.5 ns                                             |                               | < 1 (ns/A) ; 1.5 ns              |                                     | few µsec                                         |
| Internal rep rate adjustment                                                                                                                    |                       |                                                  | 1Hz - 4MHz                                                    | 1Hz - 10MHz [250MHz optional] | 1Hz - 250MHz                     | 1Hz - 20MHz                         | No                                               |
| Temporal Jitter                                                                                                                                 |                       |                                                  | < 25 ps                                                       |                               | < 8 ps                           | < 2 ns                              |                                                  |
| Adj. CW offset in pulse regime                                                                                                                  |                       |                                                  | No                                                            | Yes                           |                                  | No                                  | Yes (external mode)                              |
| Interface/GUI/libraries                                                                                                                         |                       |                                                  | USB - Windows 7 / 10 - DLLs - Hexa / Linux - Labview - Python |                               |                                  |                                     |                                                  |

#### INTEGRATED VERSIONS :

CCSI-CW/ std/HP/HPP



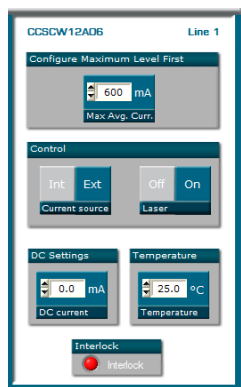
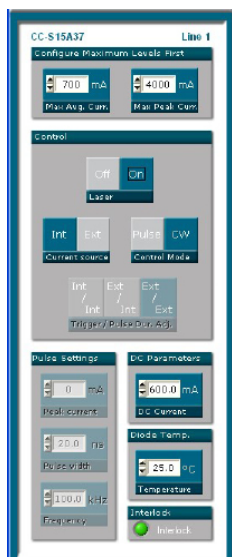
➤ Integrated version for CW, std and HP electronics board

SHAPER-I

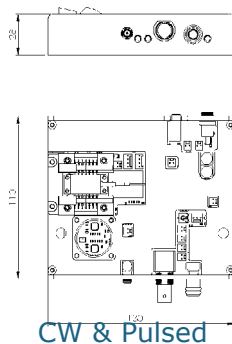


➤ Integrated version for Shaper electronics board

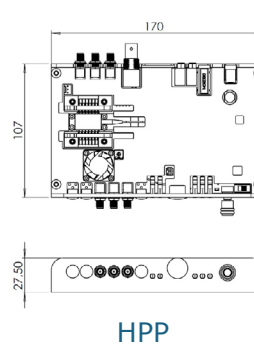
## GUI (examples)



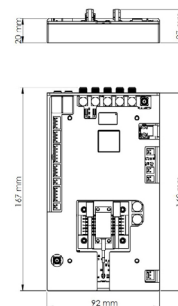
## Mechanical (examples) :



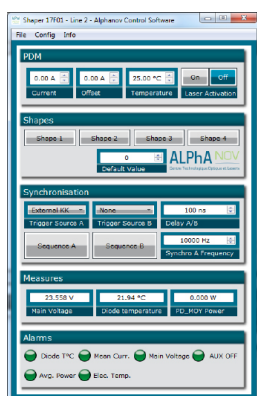
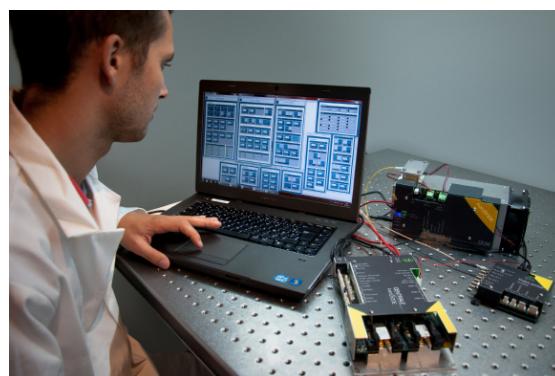
CW &amp; Pulsed



HPP



Shaper



## Ordering guide :

Please be advised that compatibility for certain options and wavelengths is model-specific. Refer to the product webpage for a comprehensive list of part numbers.

| Wavelength | Laser diode model | Driver model                                                                                                                                                                                                              | Form factor                                                                               | Fiber type                                                                           | Internal isolator                                                                                                                                  | Laser diode options*                                                                                                                                                                                                                                                                                                                                                                                                                                                | Driver options*                                                                                                                                                                                                                       |
|------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| [...]LD    | [...]             | a : No driver<br>CW : CCS-CW<br>HP2 : CCS-CW-HP2<br>STD : CCS-std<br>HP : CCS-HP<br>UHP : CCS-UHP<br>HPP : CCS-HPP<br>LN : CCS-LN<br>TDL : TDLAS<br>SHA : Shaper<br>CEN : Centrale<br>CCMINI<br>CCMSTD<br>CCMHP<br>CCMUHP | a : No driver<br>1 : Open frame<br>2 : Integrated<br>OEM : For integration <sup>(1)</sup> | SM : Singlemode fiber<br>PM : Polarization maintaining fiber<br>MM : Multimode fiber | a : No int. isolator (multimode diode)<br>NI : No int. isolator (singlemode diode)<br>I : Internal isolator<br>I2 : Internal double stage isolator | a : No laser diode option<br>T2 : Type 2 <sup>(2)</sup><br>T2A : Type 2 Bias T Anode Grounded <sup>(3)</sup><br>TS : Special type <sup>(3)</sup><br>FBG : Fiber Bragg Grating<br>FI : External fiber isolator<br>FI2 : External fiber double stage isolator<br>Only for laser diodes > 1 W :<br>SMA-HP : High power connector<br>R : Red aiming beam<br>LX : specific fiber length (X in cm) <sup>(4)</sup><br>CX : specific core diameter (X in µm) <sup>(5)</sup> | a : No driver option<br>250 : 250 MHz <sup>(4)</sup><br>FUCE : Benchtop <sup>(5)</sup><br>Only for CCM driver models :<br>LN : Ultra low Noise version<br>TOMBAK : Synchronization module<br>DB : Double board<br>FUCE-STD<br>FUCE-HP |

(1) Not available for CCM driver models.

(2) Only compatible with some of the singlemode laser diodes.

(3) Please contact us.

(4) Available only for driver models STD, HP and UHP.

(5) Available only for integrated driver models CW, STD, HP and UHP.

\*Each option is separated by a slash.

The Part Number list is subject to update. Access the current version [here](#).