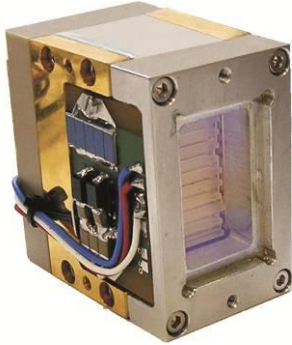
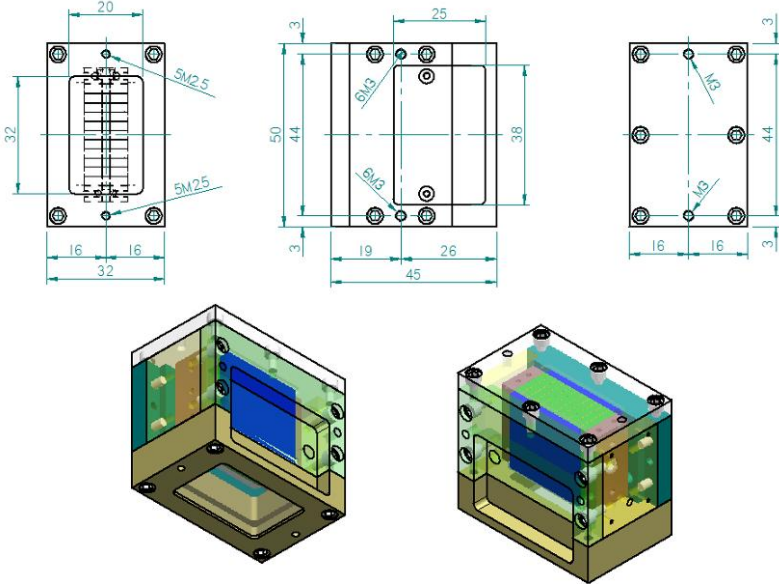




|                  |  |
|------------------|--|
| Product Division | <b>LDBA</b> Laser Diode Bar Assemblies   |
| Product          | LBS-85P10-17 PULS  |
| Description      | Diode Laser Head for Pulsed operation – Conductive mount   |
| Applications     | Gated imaging  |
| Main Features    | <p>Short pulse length in direct diode laser.</p> <p>High reliability in pulsed conditions, since the clamped bars do not suffer the same fatigue effect than the soldered ones.</p> <p>Long lifetime, due to the absence of the mechanical stress caused by the soldering process at high temperature.</p> <p>Small thermal resistances, owing to the reduction of the contact resistance between electrodes and laser bar.</p> <p>Large storage temperature range tested from <math>-60^{\circ}\text{C}</math> to <math>+85^{\circ}\text{C}</math>.</p> |
| Picture(s)       |    |
| Outline          |    |

## LBS-85P10-17 PULSE | TENTATIVE SPECIFICATION

|   | Minimum   | Operation  | Max. rating |
|---|---|------------|-------------|
| Centre wavelength [nm]                                  | 840   | 850        | 860         |
| Linewidth (FWHM) <sup>(1)</sup> [nm]                    |   | 2,5        |             |
| Wavelength Temp. Coefficient [nm/°C]                    |   | 0,27       |             |
| Output peak power (P <sub>op</sub> ) <sup>(2)</sup> [W] |   | 2000       |             |
| Polarization  |   | TE (100:1) |             |
| Fast axis divergence (@ 1/e <sup>2</sup> ) [°]          |   | 65         |             |
| Slow axis divergence (@ 1/e <sup>2</sup> ) [°]          |   |            | 10          |
| Laser spot size (H x W) [mm]                            |   | 23 x 11    |             |
| Pulse length <sup>(3)</sup> [ns]                        | 20  |            | 100         |
| Frequency <sup>(3)</sup> [Hz]                           | 10  |            | 500         |
| Duty cycle, DC <sup>(3)</sup> [%]                       |   |            | 0,002       |
| Driver input voltage [V]                                |   | 200        |             |
| Operating temperature <sup>(4)</sup> [°C]               |   |            | 50          |
| Storage temperature <sup>(4)</sup> [°C]                 |   |            | 70          |
| Cooling <sup>(5)</sup>                                  | Internal for laser bar stack: TEC   |            |             |
| Electrical connections                                  | Two copper blocks with female terminal for M2,5   |            |             |
| Dimension of housing (LxHxW) [mm]                       | 47 x 50 x 32  |            |             |
| IP classification                                       | IP64  |            |             |
| Laser class product (EN-60825)                          | 4   |            |             |
| Expected lifetime                                       | 10 <sup>9</sup> pulses  |            |             |
| Laser controller (optional)                             | LDR-300A-20V-QCW (-TS: with touch screen optional)<br>Interface connectors: <ul style="list-style-type: none"> <li>• Multi-connector for signals and safety interlocks</li> <li>• RS232 or USB for computer (software included)</li> <li>• Compatible with battery and/or 220VAC</li> </ul> |            |             |

Device sensitive to ESD & dust contamination => Handling under clean area conditions advised.  
 Parametrical and dimensional specifications can be modified upon request.

<sup>1</sup> Spectral width per bar. The total spectral width of the stack will depend on the centre wavelength tolerance of the bars forming the stack, on duty cycle and pulse width

<sup>2</sup> Peak power before output window

<sup>3</sup> Frequency and pulse duration set by TTL driver input

<sup>4</sup> Minimum temperature depending on outdoor humidity to avoid condensation.

<sup>5</sup> External housing of laser head: to be supplied by user