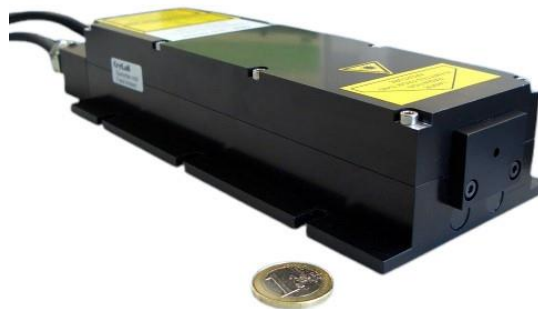


# FQSS 266-200

Diode pumped passively Q-switched solid state laser

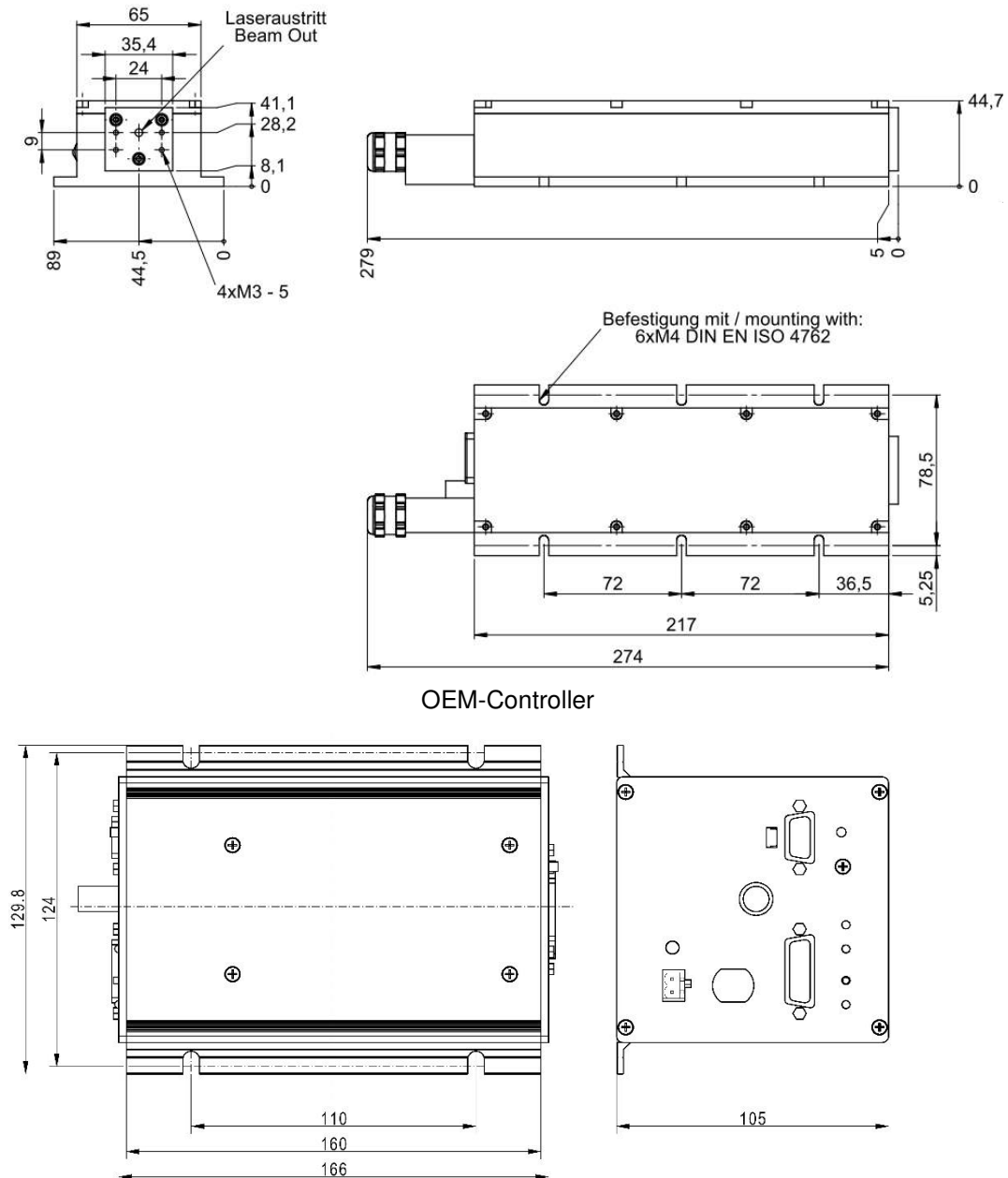
- 266 nm
- single pulse
- < 1.5 ns
- 1 – 60 Hz
- > 200  $\mu$ J



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|                                                                                                                                                                                                                            |                                                               |                                                                         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-------------------------------------------------------------------------|
| <b>Optical Data</b>                                                                                                                                                                                                        | Wavelength                                                    | 266 nm                                                                  |
|                                                                                                                                                                                                                            | Beam Divergence (full angle)                                  | < 3.0 mrad                                                              |
|                                                                                                                                                                                                                            | Beam Ellipticity                                              | < 1.5 : 1                                                               |
|                                                                                                                                                                                                                            | Waist Diameter                                                | 500 $\pm$ 150 $\mu$ m<br>(located at about 110mm inside the laser head) |
|                                                                                                                                                                                                                            | Beam Diameter                                                 | 800 $\pm$ 300 $\mu$ m (at laser exit)                                   |
|                                                                                                                                                                                                                            | Peak Power                                                    | > 130 kW @ 20 Hz                                                        |
|                                                                                                                                                                                                                            | Pulse Energy                                                  | > 200 $\mu$ J @ 20 Hz                                                   |
|                                                                                                                                                                                                                            | Pulse Repetition Rate (with external trigger)                 | 1 - 60 Hz                                                               |
|                                                                                                                                                                                                                            | Pulse Width (FWHM)                                            | < 1.5 ns                                                                |
|                                                                                                                                                                                                                            | Polarization Ratio                                            | > 100:1, vertical                                                       |
|                                                                                                                                                                                                                            | Long term pulse energy stability (6 hours) <sup>1)</sup>      | < $\pm$ 5 %                                                             |
|                                                                                                                                                                                                                            | Pulse-To-Pulse Stability <sup>2)</sup>                        | < 3 % rms                                                               |
|                                                                                                                                                                                                                            | Laser Classification                                          | 4 / IV                                                                  |
|                                                                                                                                                                                                                            | Residual Emission                                             | < 0.5 mW @ 1064 nm<br>< 0.1 mW @ 532 nm                                 |
| <b>Optical Output</b>                                                                                                                                                                                                      | Free Beam                                                     |                                                                         |
| <b>Electrical Data</b>                                                                                                                                                                                                     | Electrical Power Consumption                                  | < 90 W                                                                  |
|                                                                                                                                                                                                                            | Line Voltage                                                  | 100 - 240 V AC (50-60 Hz) or 24 V DC                                    |
| <b>Interface</b>                                                                                                                                                                                                           | RS 232, USB                                                   |                                                                         |
| <b>Miscellaneous</b>                                                                                                                                                                                                       | Warm-up Time                                                  | < 10 min                                                                |
|                                                                                                                                                                                                                            | Operating Temperature                                         | 18 - 38 $^{\circ}$ C                                                    |
|                                                                                                                                                                                                                            | Laser Head Size                                               | 217 x 65 x 45 mm (core dimensions)                                      |
| <b>Options</b>                                                                                                                                                                                                             | Synchronization signal output (rise time < 2 ns)              |                                                                         |
|                                                                                                                                                                                                                            | Manual shutter or electrical beam blocker                     |                                                                         |
|                                                                                                                                                                                                                            | Manual or electrical driven wavelength switch 266 nm / 532 nm |                                                                         |
|                                                                                                                                                                                                                            | External telescope (e.g. M=5)                                 |                                                                         |
|                                                                                                                                                                                                                            | Manual or electrical attenuator                               |                                                                         |
| <sup>1)</sup> Drift over 6 hours, energy averaged over 10 sec after 5 min of continuous operation, temperature variation < 3 $^{\circ}$ C/hour.<br><sup>2)</sup> RMS over 1000 pulses after 5 min of continuous operation. |                                                               |                                                                         |

## Laser Head and Controller



## Laser Safety Labels

The FQSS266-200 lasers are class 4 / IV according to IEC 60825-1:2014

|                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                    |                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <p>wavelength: 266 nm<br/> max. output: 400 µJ<br/> pulse duration: &lt;1.5 ns<br/> max. repetition rate: 60 Hz</p> <p>Complies with IEC 60825-1:2014<br/> Complies with 21CFR 1040.10 and 1040.11<br/> except for deviations pursuant to<br/> Laser Notice No. 50, dated July 28, 2001</p> | <p><b>DANGER - INVISIBLE<br/> LASER RADIATION</b><br/> <b>AVOID EYE OR SKIN</b><br/> <b>EXPOSURE TO DIRECT OR<br/> SCATTERED RADIATION</b></p> <p><b>CLASS 4 LASER PRODUCT</b></p> | <p><b>LASER<br/> RADIATION<br/> IS EMITTED FROM THIS<br/> APERTURE</b></p> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|

