

# eMOPA 213-20

Diode pumped passively Q-switched solid state laser

- 213 nm
- Single Pulse
- < 1.0 ns
- single shot (pulse on demand) – 1 kHz
- > 20  $\mu$ J
- External / Internal Trigger



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<b>Optical Data</b>	Wavelength	213 nm
	Peak Power	> 20 kW @ 1000 Hz
	Pulse Energy	> 20 $\mu$ J @ 1000 Hz
	Beam Divergence (full angle)	< 1.5 mrad
	Beam Ellipticity	< 3:1
	Beam Diameter	0.6 $\pm$ 0.3 mm (at laser exit)
	Spatial Mode	TEM <sub>00</sub>
	Pulse Repetition Rate (with external trigger)	single shot (pulse on demand) – 1 kHz
	Pulse Width (FWHM)	< 1.0 ns
	Polarization Ratio	> 100:1, horizontal
	Pulse Energy Drift over 6h <sup>1)</sup>	< $\pm$ 5 %
	Pulse-to-Pulse Energy Stability <sup>2)</sup>	< 3%
Laser Classification	4 / IV	
<b>Optical Output</b>	Free Beam	
<b>Electrical Data</b>	Electrical Power Consumption	< 100 W
	Line Voltage	90 - 265 V AC (50-60 Hz)
<b>Interface</b>	USB / RS232	
	BNC connector for external triggering (TTL)	
	SMB connector for 24 V DC output	
<b>Miscellaneous</b>	Warm-up Time	< 10 min
	Operating Temperature	22 - 32 °C
	Laser Head Size	56 x 140 x 265 mm (H x W x L)
	Stand-Alone Unit Size	129,5 x 177 x 180 mm (H x W x L)
<b>Options</b>	Electrical beam blocker	
	Synchronization signal output (rise time < 1.5 ns)	

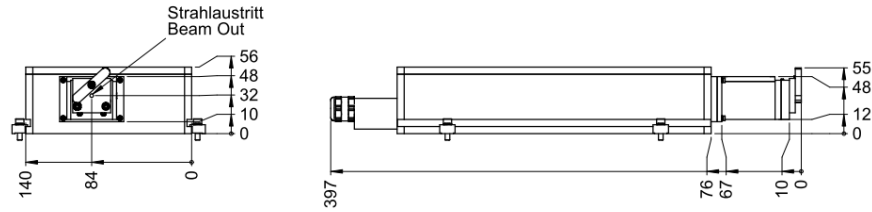
<sup>1)</sup> Averaged over 10s after 10min of continuous operation @ 1kHz activated closed loop control

<sup>2)</sup> Over 1000 pulses @ 1kHz after 10min of continuous operation

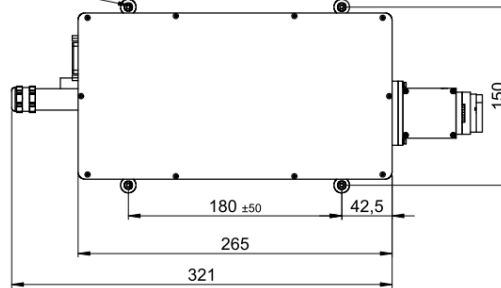
## Dimensions

Laser Head:

265 x 140 x 56 mm

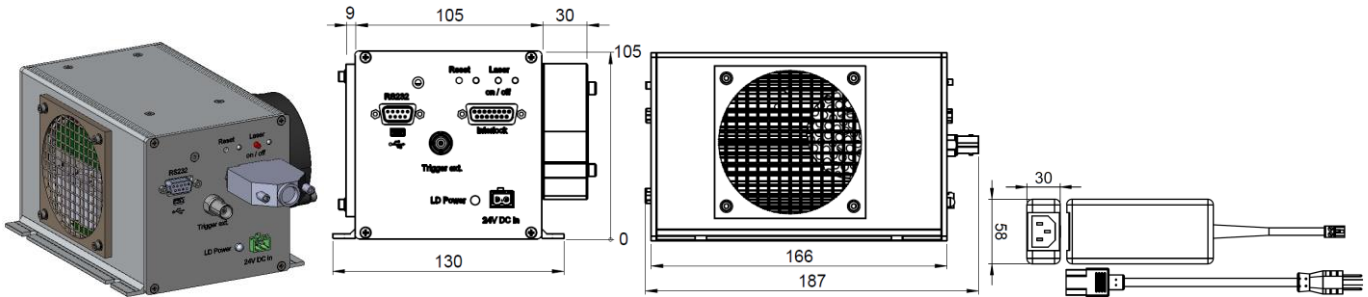


Befestigung mit / mounting with:  
4xM4 DIN ISO EN 4762



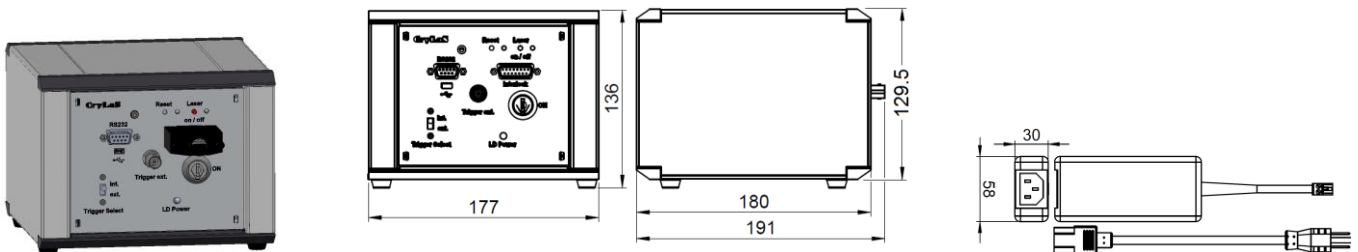
Controller OEM:

166 x 144 x 105 mm



Controller Stand-Alone:

180 x 177 x 129.5 mm



## Laser Safety Labels

The eMOPA 213-20 lasers are class 4 according to IEC 60825-1

**OEM Laser Device**  
Caution! It is designed for use solely as a component and therefore does not comply with 21CFR 1040.10 and 1040.11. Complies with IEC 60825-1:2014

wavelength: 213 nm  
max. Output: 60 µJ  
pulse duration: <1.0 ns  
max. repetition rate: 2000 Hz

**DANGER - INVISIBLE LASER RADIATION**  
AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION

**CLASS 4 LASER PRODUCT**



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