

# MOPA 1064-650

Diode pumped passively Q-switched solid state laser

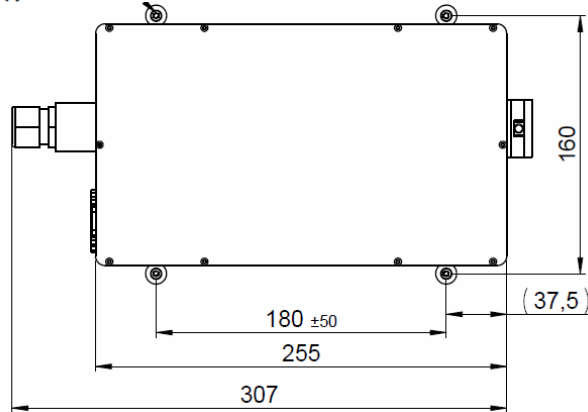
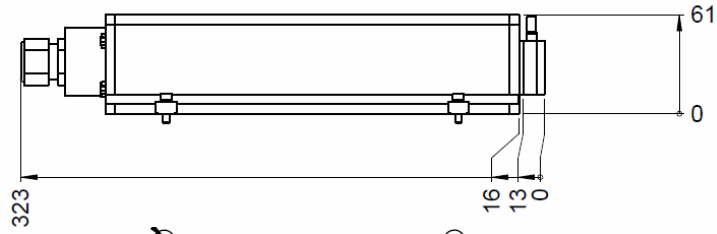
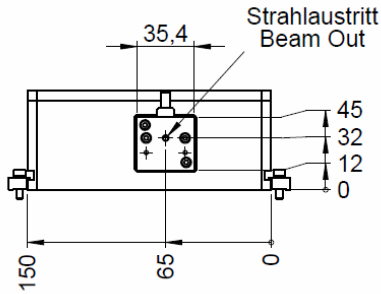
- 1064 nm
- Single Pulse
- $\leq 1.6$  ns
- 1 – 1000 Hz
- $> 650$   $\mu$ J
- External / Internal Trigger Mode



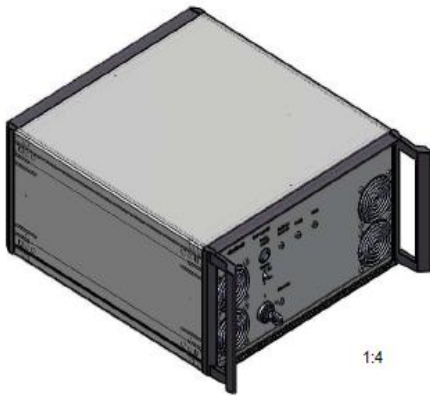
**biology · biomedicine · chemistry · analytics**

<b>Optical Data</b>	Wavelength	1064 nm
	Peak Power	$> 430$ kW @ 1000 Hz
	Pulse Energy	$> 650$ $\mu$ J @ 1000 Hz
	Beam Divergence (full angle)	$< 5.0$ mrad
	Beam Ellipticity	$< 2:1$
	Beam Diameter	$0.9 \pm 0.3$ mm (at laser exit)
	Spatial Mode	TEM <sub>00</sub>
	Pulse Repetition Rate (with external trigger)	1 - 1000 Hz
	Pulse Width (FWHM)	$\leq 1.6$ ns
	Polarization Ratio	$> 100:1$ , vertical
	Pulse Energy Drift <sup>1)</sup>	$< \pm 3$ %
	Pulse-to-Pulse Energy Stability <sup>2)</sup>	$< 2$ % rms
Laser Classification	4 / IV	
<b>Optical Output</b>	Free Beam	
<b>Electrical Data</b>	Electrical Power Consumption	$< 250$ W (maximum)
	Line Voltage	100 - 240 V AC (50-60 Hz)
<b>Interface</b>	USB	
	BNC connector for external triggering (TTL)	
	SMB connector for 24 V DC output	
<b>Miscellaneous</b>	Warm-up Time	$< 10$ min
	Operating Temperature	18 - 38 °C
	Laser Head Size	61 x 150 x 326 mm (H x W x L)
	Stand Alone Unit Size	184 x 356 x 375 mm (H x W x L)
<b>Options</b>	External telescope (beam expander) or multimode fiber coupling	
	Manual or electrical attenuator	
	Synchronization signal output (rise time $< 2$ ns)	
	Electrical beam blocker	
<sup>1)</sup> Drift over 8 hours, energy averaged over 10 sec after 5 min of continuous operation, temperature variation $\pm 3$ °C and $< 3$ °C/hour, with activated closed loop control for the pulse energy <sup>2)</sup> RMS over 1000 pulses after 5 min of continuous operation.		

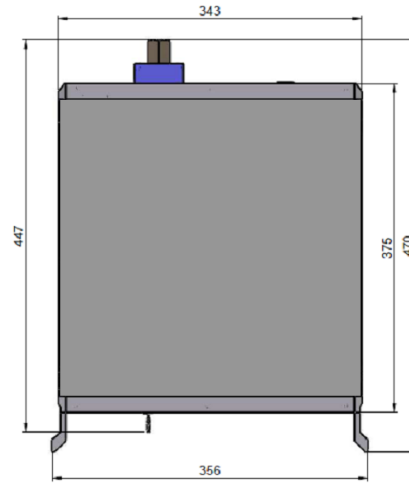
## Laser Head and Controller



Laser Head  
(height = 61; width = 150; length = 255  
core dimensions in mm )



Stand Alone Unit  
(height = 184, width = 343; length = 375  
core dimensions in mm )



## Laser Safety Labels

The MOPA 1064-650 lasers are class 4 / IV according to IEC 60825-1:2014

