

BLADE™ RF

High Peak Power Sealed-off Lasers



RF Excited CO₂ lasers
Power 150 W
Wavelength 9.3μm

KEY FEATURES

- High peak power Sealed-off technology
- Radio Frequency excited
- Extremely compact & easy to integrate
- Special RF 177G: 150W @9.3μm
- High electrical/optical conversion efficiency
- Integrated RF power supply



RF 177G

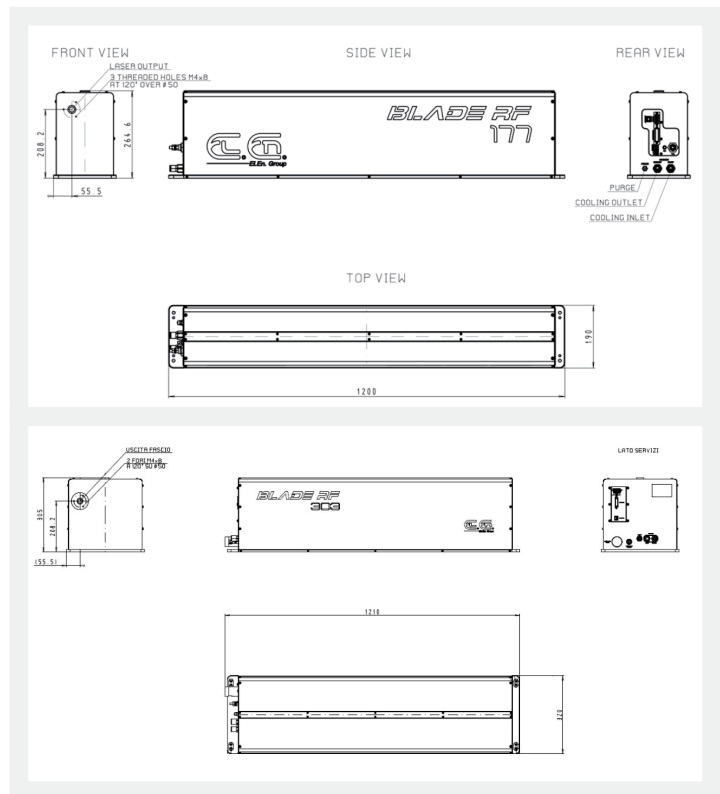
The exceptional characteristics of the new sealed-off technology allow to obtain excellent performances.

The wavelength 9.3 μm is the best for glass and plastic treatment.

The extreme compactness makes it very easy to integrate.

MAIN APPLICATIONS:

- galvo scanners applications;
- plastics and leather cutting;
- thin glass film, display, LCD processing.



Systems Specifications

Model	RF 177 G
Rated power (W)	≥ 170
Effective peak power ⁽¹⁾ (W)	700
Power stability (long term)	$\pm 5\%$
Wavelength (μm)	9.3 ± 0.2
Polarization	linear vertical
Beam diameter ($1/e^2$ at the exit) (mm)	9.5 ± 0.5
Beam divergence (long term) (mrad)	3.0 ± 0.3
Maximum pulsing frequency (kHz)	100
Pulse width range (μs)	$2 \div 1000$
Pulse Rise / Fall time (μs)	< 50
Mode quality (M^2)	< 1.15
Beam ellipticity	1.15:1
Environmental temperature range ($^{\circ}\text{C}$)	$5^{\circ} \div 35^{\circ}$
Maximum humidity	Non condensing at inlet water cooling temperature

Electrical Power Requirements

Input voltage (V_{DC})	48 ± 1
Max current (A)	60

Coolant

Heat dissipation (W)	3000
Coolant temperature ($^{\circ}\text{C}$)	$20^{\circ} \pm 0.5^{\circ}$
Max water cooling input pressure (bar)	4
Water cooling flow rate (l/min)	7 ± 0.5

Dimensions/Weight

Dimensions (LxWxH) (mm)	1200x190x265
External safety shutter	optional
RF Power supply dimensions (LxWxH) (mm)	integrated
Weight (kg)	37,5

1 - At 10% duty cycle and 1kHz

NOTE: Aiming to product improvement, El.En. SpA reserves the right to change specifications without notice. Purchaser acknowledges that the products must comply with applicable regulations before they can be resold to customers. El.En. lasers are produced under a quality assurance system certified according to ISO 9001.



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