

eCO₂ SLC Series

DC-Excited CO₂ Lasers



A series of DC-excited CO₂ lasers with unparalleled beam quality, efficiency, and longevity.

- Powers from 65-220W at 10.6 μ m TEM₀₀
- Proven diffusion cooled designs
- Long life high vacuum sealed technology
- Unique beam profiles available from dual-tube beam combining technology
- Easy to integrate
- Standard or custom systems, with bare tubes and power supplies offered to OEMs, as well as cased models
- Full complement of accessories, including power meters shutters, and alignment laser



Laser Specifications

Model	SLC065B&T	SLC110B&T	SLC100	SLC200	SLC200R
Wavelength (µm)	10.6	10.6	10.6	10.6	10.6
Output power (specified/max) (W)	70/80	110/120	110/120	220/240	190/200
Beam quality (M ₂)	≤1.1	≤1.1	≤1.1	≤1.1	≤1.1
Beam waist (2ω ₀) (mm)	4.8	4.8	4.8	4.8	3.7
Beam divergence (mrad full angle)	3.1	3.1	3.1	3.1	3.6
Beam waist location (m) measured from output coupler	1.0	1.15	1.15	1.15	1.2
Pointing stability (mrad)	≤0.2	≤0.2	≤0.1	≤0.1	≤0.1
Typical power stability (± % after warm up)	4.0	4.0	4.0	5.0	5.0
Cooling (l/min) (de-ionized water)	2.8	3.6	3.6	7.2	7.0
Polarization	random/linear*	random/linear*	random/linear*	crossed	horizontal
Strike voltage (kV)	30	<45	<45	<45	<45
Specified operating current/absolute max. (mA)	32/35	32/35	32/35	32/35	32/35
Dynamic range	8:1	8:1	100:1***	105:1***	10:1
Max pulse frequency (Hz) (cooling fluid dependent)**	1000	1000	1000	1000	1000

Electrical Requirements

Single phase	110V/60Hz (A)	6	6	7	13	13
	230V/50Hz (A)	3	3	4	7	7

Cooling Requirements

Min/max pressure (bar)	2/5	2/5	2/5	2/5	2/5
Water cooling capacity (W)	400	650	650	1300	1300
Temperature (°C)	15-25	15-25	15-25	15-25	15-25

Gases

Sealed unit - no gas consumption

* Optional ** With derated power *** With attenuating shutter

Model Options

Part No.	Base Unit	Power Sensor	Attenuating Shutter	Visible Alignment Laser
SLCxxxS	•			
SLCxxxA	•			•
SLCxxxP	•	•	•	
SLCxxxI	•	•	•	•

xxx = 100 or 200

Specifications are subject to change. Please consult Product Center for complete details. • GSI Group also offers custom DC CO₂ lasers.

This laser component must not be put into service until the complete laser product into which it is to be incorporated has been declared in conformity with the requirements of the appropriate laser product safety regulations or standards.

www.gsig.com/lasers



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