LUXINAR
INGENUITY AMPLIFIED

INDUSTRIAL

OEM/SCX/SR

Sealed CO_2 laser sources

Who we are

At Luxinar, we have a singular focus: developing laser technology to enhance our world.

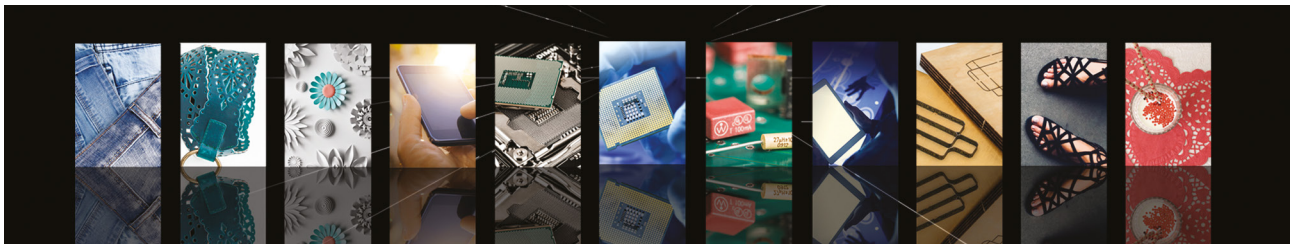
Like a laser that channels light into a single, powerful beam, we focus on improving the lives of our customers. This allows us to create solutions to meet every single challenge – from heavy industry to delicate, high precision applications. We support the laser technologies of yesterday, focus on today's and pioneer those of tomorrow.

Luxinar has been at the forefront of laser technology for over 25 years and is a leading manufacturer of sealed carbon dioxide (CO_2) laser sources up to 1000W and, more recently, ultrashort pulse laser sources. To date, we have an installed base of over 20000 lasers.

CO_2 industrial lasers

Our industrially proven sealed laser sources are based on a diffusion-cooled slab principle that gives a high-quality, round, and symmetrical beam. Running costs are minimal; gas recirculation equipment such as vacuum pumps or pressure control systems are not needed, and there is no gas refill requirement during the operational lifetime of the laser.

Our versatile portfolio caters for many different configurations, allowing us to provide laser solutions tailored to customers' specific applications. System performance can also be configured to suit applications according to a list of options available.



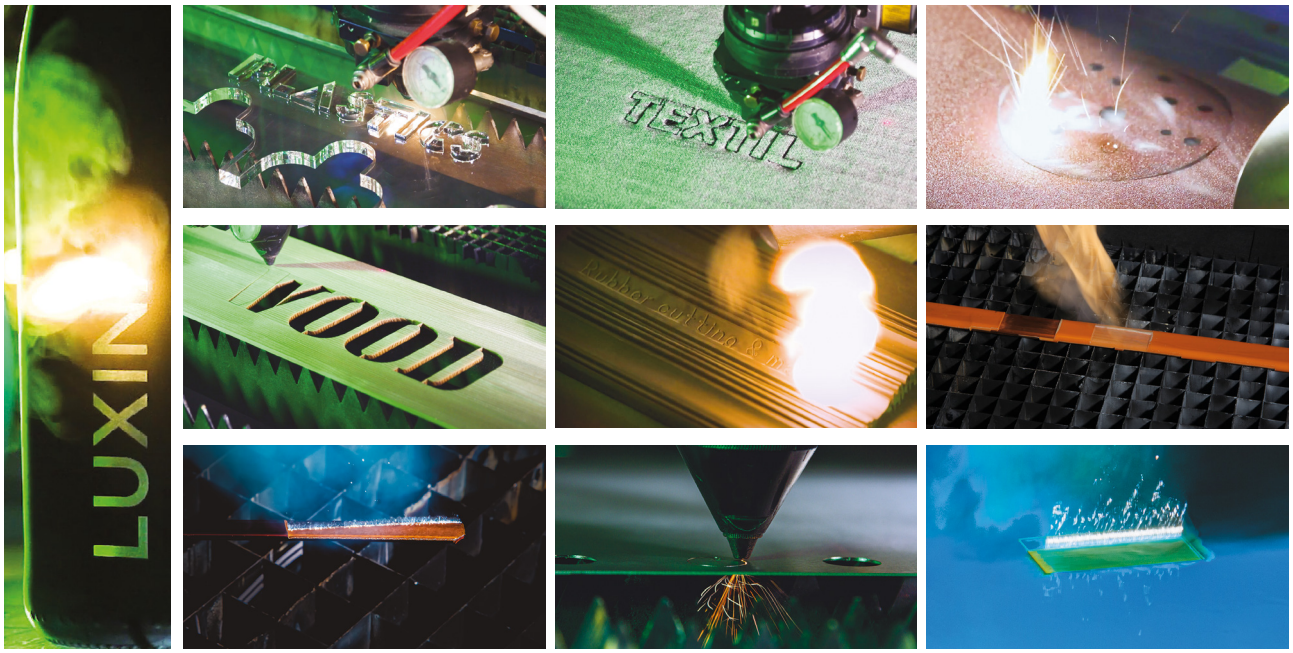
Product	Power range	Ideal for...
OEM series	Up to 1000W	▪ Industrial processing environments, mid-high power
SCX 35	Up to 350W	▪ Industrial processing environments, low power
SR series	Up to 250W	▪ Harsh environments; dust, heat, water

All products are capable of:

Ablating, cutting, drilling, engraving, kiss cutting, marking, perforating, scribing, welding

And they can be used to process a variety of materials, including:

Acrylic, ceramics, glass, optical films, paper, plastics, textiles, thin sheet metal, wood



SR series - power range of 60-250W

- IP66 rating
- Wavelengths 10.6µm, 10.25µm, 9.3µm
- Integrated, field-replaceable RF power supplies
- Compact, lightweight laser source
- Easy-to-understand diagnostics
- Minimum shipment power 20% higher than rated power

The SR series laser, with output powers of up to 250W, has an integrated RF power supply design and is hermetically sealed, making it ideal for the harshest of industrial environments (dust, heat, water spray). The simple control interface and compact mechanical design of the unit allows easy integration into laser-based processing machines used for cutting, marking, welding and drilling, among others. Throughput, economy, flexibility and reliability are the main features associated with the SR series of CO_2 laser sources.

Most common industries for SR series:

Aerospace, ceramic, electronics, e-mobility, energy storage, food, leather, packaging and labelling, paper, plastics, security, textiles, wood

The SR e 9.3µm series specifically targets the electronics industry, where high peak power and low HAZ are required. Processing polarising film, removing excess bonding agent, and laser texturing, to mention a few, require perfect edge quality and minimum disruption of the surrounding area.

Specifications of SR 08s

	10.6	9.3
Power range	5-80W	5-60W
Minimum shipment power	96W	72W
Peak laser output power	> 110W	> 80W
Duty cycle (max)	80%	80%
Wavelength	10.6µm	9.3µm
Typical stability (long term)	< ± 4.5%, < ± 7% guaranteed	< ± 5%, < ± 8% guaranteed
Beam diameter (1/e² at laser output optic)	6.0 ± 0.5mm	
Polarisation	Linear (parallel to base), purity > 100:1	
Weight	22kg (23.9kg with shutter)	
Supply voltage	50VDC	
Maximum average DC input current	32A	
Optical rise/fall time	< 100µs	
Pulse width	2-400µs	
Pulse frequency	0-130kHz	

Specifications of SR 10i

	10.6	10.25	9.3
Power range	5-125W	5-110W	5-95W
Minimum shipment power	150W	132W	114W
Peak laser output power	> 315W	> 275W	> 240W
Duty cycle (max)	60%	60%	60%
Wavelength	10.6µm	10.25µm	9.3µm
Typical stability (long term)	< ± 4.5%, < ± 7% guaranteed < ± 1%, < ± 2% guaranteed (power feedback) *		< ± 5%, < ± 8% guaranteed
Beam diameter (1/e² at laser output optic)	6.0 ± 0.5mm		
Polarisation	Linear (parallel to base), purity > 100:1		
Weight	22kg (23.9kg with shutter)		
Supply voltage	50VDC		
Maximum average DC input current	48A		
Optical rise/fall time	< 60µs		
Pulse width	2-400µs		
Pulse frequency	0-130kHz		

*Power feedback turn on response is typically 300-500 milliseconds

Specifications of SR 10e

	9.3
Power range	5-115W
Minimum shipment power	138W
Peak laser output power	> 330W
Duty cycle (max)	50%
Wavelength	9.3µm
Typical stability (long term)	< ± 3%, < ± 6% guaranteed
Beam diameter ($1/e^2$ at laser output optic)	6.0 ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1
Weight	32kg (33.9kg with shutter)
Supply voltage	50VDC
Maximum average DC input current	60A
Optical rise/fall time	< 60µs
Pulse width	2-400µs
Pulse frequency	0-130kHz

Specifications of SR 10x

	9.3
Power range	5-105W
Minimum shipment power	> 126W
Peak laser output power	235W
Duty cycle (max)	70%
Wavelength	9.3µm
Typical stability (long term)	< ± 5%, < ± 8% guaranteed
Beam diameter ($1/e^2$ at laser output optic)	6.0 ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1
Weight	22kg (23.9kg with shutter)
Supply voltage	50VDC
Maximum average DC input current	56A
Optical rise/fall time	< 60µs
Pulse width	2-400µs
Pulse frequency	0-130kHz

Specifications of SR 15i

	10.6	10.25	9.3
Power range	10-175W	10-155W	5-130W
Minimum shipment power	210W	186W	156W
Peak laser output power	> 440W	> 390W	> 330W
Duty cycle (max)	60%	60%	60%
Wavelength	10.6µm	10.25µm	9.3µm
Typical stability (long term)	< ± 3%, < ± 6% guaranteed < ± 1%, < ± 2% guaranteed (power feedback) *		
Beam diameter (1/e^2 at laser output optic)	6.8 ± 0.5mm		6.0mm ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1		
Weight	32kg (33.9kg with shutter/power feedback module)		
Supply voltage	50VDC		
Maximum average DC input current	72A		
Optical rise/fall time	< 60µs		
Pulse width	2-1000µs	2-400µs	2-400µs
Pulse frequency	0-130kHz		

*Power feedback turn on response is typically 300-500 milliseconds

Specifications of SR 15e

	9.3
Power range	10-160W
Minimum shipment power	192W
Peak laser output power	> 460W
Duty cycle (max)	50%
Wavelength	9.3µm
Typical stability (long term)	< ± 4%, < ± 6% guaranteed
Beam diameter (1/e^2 at laser output optic)	6.3 ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1
Weight	34kg (35.9kg with shutter)
Supply voltage	50VDC
Maximum average DC input current	80A
Optical rise/fall time	< 60µs
Pulse width	2-400µs
Pulse frequency	0-130kHz

Specifications of SR 15s

	10.6	9.3
Power range	10-160W	5-120W
Minimum shipment power	192W	144W
Peak laser output power	> 215W	> 160W
Duty cycle (max)	80%	80%
Wavelength	10.6µm	9.3µm
Typical stability (long term)	< ± 3%, < ± 6% guaranteed	
Beam diameter (1/e^2 at laser output optic)	6.8 ± 0.5mm	6.0 ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1	
Weight	32kg (33.9kg with shutter)	
Supply voltage	50VDC	
Maximum average DC input current	64A	
Optical rise/fall time	< 100µs	
Pulse width	2-400µs	
Pulse frequency	0-130kHz	

Specifications of SR 15x

	9.3
Power range	10-150W
Minimum shipment power	180W
Peak laser output power	> 335W
Duty cycle (max)	70%
Wavelength	9.3µm
Typical stability (long term)	< ± 3%, < ± 6% guaranteed
Beam diameter (1/e^2 at laser output optic)	6.0mm ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1
Weight	32kg (33.9kg with shutter)
Supply voltage	50VDC
Maximum average DC input current	84A
Optical rise/fall time	< 60µs
Pulse width	2-400µs
Pulse frequency	0-130kHz

Specifications of SR 25i

	10.6	10.25	9.3
Power range	15-250W	10-225W	10-185W
Minimum shipment power	300W	270W	222W
Peak laser output power	> 630W	> 565W	> 465W
Duty cycle (max)	60%	60%	60%
Wavelength	10.6µm	10.25µm	9.3µm
Typical stability (long term)	< ± 3%, < ± 6% guaranteed < ± 1%, < ± 2% guaranteed (power feedback) *		< ± 4%, < ± 6% guaranteed
Beam diameter (1/e^2 at laser output optic)	6.5 ± 0.5mm		6.3mm ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1		
Weight	34kg (35.9kg with shutter/power feedback module)		
Supply voltage	50VDC		
Maximum average DC input current	96A		
Optical rise/fall time	< 60µs		
Pulse width	2-400µs		
Pulse frequency	0-130kHz		

*Power feedback turn on response is typically 300-500 milliseconds

Specifications of SR 25x

	9.3
Power range	10-210W
Minimum shipment power	252W
Peak laser output power	> 465W
Duty cycle (max)	70%
Wavelength	9.3µm
Typical stability (long term)	< ± 4%, < ± 6% guaranteed
Beam diameter (1/e^2 at laser output optic)	6.3mm ± 0.5mm
Polarisation	Linear (parallel to base), purity > 100:1
Weight	34kg (35.9kg with shutter/power feedback)
Supply voltage	50VDC
Maximum average DC input current	112A
Optical rise/fall time	< 60µs
Pulse width	2-400µs
Pulse frequency	0-130kHz

SCX 35 - power range of up to 350W

- Wavelengths 10.6µm, 10.25µm, 9.3µm
- Separate RF power supply for flexible integration
- Minimum shipment power 20% higher than rated power

The SCX 35 laser source, with an output power of up to 350W, is designed for integration into industrial processing systems and is often used for cutting applications such as plastics and wood. It includes a separate RF power supply which enables the laser to produce short optical pulses with high peak power or quasi-CW output. Due to its lightweight and robust design, this CO2 laser is ideal for robotic applications and can be integrated exceptionally well into systems with scanners or other beam guidance components.

Most common industries for SCX 35:
Automotive, e-mobility, energy storage, packaging, plastics, security, textile, tobacco

Specifications of SCX 35

	10.6	10.25	9.3
Power range	20-350W	15-315W	15-265W
Minimum shipment power	420W	380W	318W
Peak laser output power	> 880W	> 800W	> 670W
Duty cycle (max)	60%	60%	60%
Wavelength	10.6µm	10.25µm	9.3µm
Typical stability (long term)	< ± 5%, < ± 7% guaranteed < ± 1%, < ± 2% guaranteed (power feedback) *		
Beam diameter (1/e² at laser output optic)	7 ± 0.5mm		
Polarisation	Linear (45 degrees to base), purity > 100:1		
Weight	63kg		
Supply voltage	50VDC		
Maximum average DC input current	144A		
Optical rise/fall time	< 60µs		
Pulse width	2-400µs		
Pulse frequency	0-130kHz		

*Power feedback turn on response is typically 300-500 milliseconds

OEM series – power range of 400-1000W

- Wavelengths 10.6µm, 10.25µm, 9.3µm
- Short optical pulses with high peak power, or quasi-CW output
- Minimum shipment power 20% higher than rated power

The OEM series of CO_2 lasers, with output powers of up to 1kW, is a compact solution that can be easily integrated into industrial processing production lines. Most of the OEM series include an integrated RF power supply enabling short optical pulses with high peak power or quasi-CW output. There is also the option for an absorbing thin film reflector (ATFR) to prevent back reflection issues.

OEM iX lasers use a single resonator design producing laser light with a linear polarisation. With a beam quality of K > 0.83, power and precision are defining characteristics of these lasers. Since many equipment manufacturers purchase this range to integrate into their equipment, these OEM iX laser sources are available without the laser enclosure, if desired.

The OEM series is recommended for processing textiles, paper, glass, wood, thin sheet metal, plastics, composite materials, etc.

Most common industries for OEM series:

Automotive, e-mobility, energy storage, food, packaging & labelling, plastics, textile, tobacco

Specifications of OEM 45iX

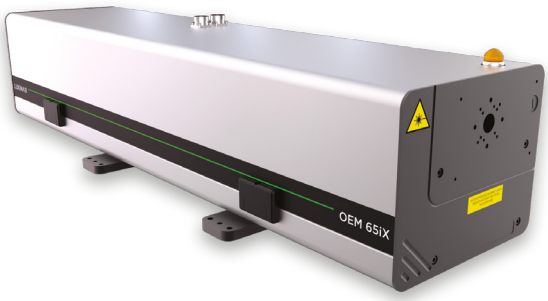
	10.6	10.25	9.3
Power range	25-450W	20-405W	20-400W
Minimum shipment power	540W	485W	480W
Peak laser output power	> 1135W	> 1020W	> 855W
Duty cycle (max)	55%	55%	60%
Wavelength	10.6µm	10.25µm	9.3µm
Typical stability (long term)	< ± 3%, < ± 5% guaranteed < ± 1%, < ± 2% guaranteed (power feedback) *		
Beam diameter (1/e^2 at laser output optic)	11.5 ± 1mm	11 ± 1mm	11 ± 1mm
Polarisation	Linear (parallel to base), purity > 100:1		
Weight	92kg (78kg without covers)		
Supply voltage	50VDC		
Maximum average DC input current	176A	176A	192A
Optical rise/fall time	< 60µs		
Pulse width	2-400µs		
Pulse frequency	0-100kHz		

*Power feedback turn on response is typically 300-500 milliseconds

Specifications of OEM 65iX

	10.6	10.25
Power range	35-650W	25-540W
Minimum shipment power	780W	650W
Peak laser output power	> 1640W	> 1365W
Duty cycle (max)	60%	60%
Wavelength	10.6µm	10.25µm
Typical stability (long term)	< ± 4.1%, < ± 7% guaranteed < ± 1%, < ± 2% guaranteed (power feedback) *	
Beam diameter (1/e^2 at laser output optic)	11.6 ± 1mm	
Polarisation	Linear (parallel to base), purity > 100:1	
Weight	134kg (113.5kg without covers)	
Supply voltage	50VDC	
Maximum average DC input current	288A	
Optical rise/fall time	< 60µs	
Pulse width	2-400µs	
Pulse frequency	0-130kHz	

*Power feedback turn on response is typically 300-500 milliseconds



Specifications of OEM 100iX

	10.6
Power range	50-1000W
Minimum shipment power	1200W
Peak laser output power	> 2520W
Duty cycle (max)	60%
Wavelength	10.6µm
Typical stability (long term)	< ± 3%, < ± 5% guaranteed < ± 1%, < ± 2% guaranteed (power feedback) *
Beam diameter (1/e^2 at laser output optic)	11.2 ± 1mm
Polarisation	Linear (perpendicular to base), purity > 100:1
Weight	200kg
Supply voltage	50VDC
Maximum average DC input current	480A
Optical rise/fall time	< 60µs
Pulse width	2-400µs
Pulse frequency	0-130kHz

*Power feedback turn on response is typically 300-500 milliseconds

Pre-sales technical support

Could a laser improve your manufacturing process?

Find out by sending us samples of your material or product to test in our labs.

Luxinar's engineers can carry out cutting, marking, engraving, drilling, scribing, ablation, and more to replicate your application in the lab. You'll receive your processed sample within 10 working days and a detailed report of our findings even sooner. You can also receive complimentary advice ranging from fume extraction to sample positioning.

Whatever your process, we can help you to determine the best laser for your application.

Aftersales technical support

The Luxinar aftersales team comprises technical specialists, passionate and knowledgeable about laser sources. Each team member has an in-depth understanding of our laser sources and experience of lasers working in many industries and environments.

Our dedicated, skilled, and experienced aftersales technicians located in your time zone are on hand to provide the following support:

- Troubleshooting
- Spare parts identification
- Product documentation
- Integration support
- System maintenance

Our technical teams are based at Luxinar sites in China, Germany, Italy, Korea, the UK and the USA to give you laser support whenever you need it. Contact us at info@luxinar.com

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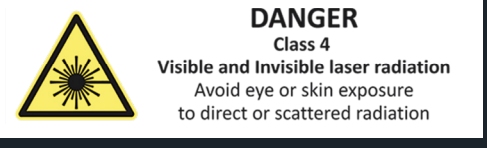

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