

OEM SOLUTIONS

ULCR 400 Watt CO₂ Laser Source

BENEFITS

- Long operating life
- Stable and reliable under the most demanding conditions.
- Maintenance-free
- Excellent beam quality in both near and far fields.
- Easy integration into all types of OEM system configurations.
- Cross-polarized beam for improved laser material processing results.
- Compact dual resonator with integrated RF for size and convenience.

FEATURES

- **RoHS compliant**
- **Advanced Technology** – RF-excited laser with an internal tickle, and can be operated from CW to the maximum modulation frequency.
- **Safety** – TTL temperature warning output guards against overheating; fault indicator LED.
- **Simplified Integration** – Low profile mounting plate with quick release electrical connector can be mounted in any orientation.
- **Options** – A variety of options available, including visible red dot pointer coaxial with the main beam, reinforced front mounting plate, and water-cooling.
- **Customer Service** – The most responsive, customer-oriented technical support in the industry.
- **Superior Construction** – Metal construction, precision machining, and the highest quality components is fundamental to the design of the laser.

Expanded Possibilities



Universal Laser Systems is expanding its OEM 10.6 micron range CO₂ laser offerings to include an optically-combined dual resonator 400 Watt laser. It is fully-integrated with built-in RF power supply and patented (patent#7,715,454) in-line air cooling, making it the first and only air-cooled laser in this power range.

The laser construction employs a folded, slab dual resonator design making it compact and adaptable to a multitude of applications with excellent beam quality and power stability. A new robust RF power supply design operates on 48 Volts DC and includes a communication port for monitoring laser status. Temperature-controlled fans allow quiet operation at lower duty cycles. The laser is optionally available with a pointer (water-cooling also an option).

Universal Laser Systems is your CO₂ laser provider for integrating with your OEM process. Leveraging Universal's advanced CO₂ laser technology, we can deliver strong solutions tailored to your specific business challenges and requirements.

Parameter

400 Watts

Rated Power	400 W
Wavelength	10.5-10.7 μ m
Power Stability	\pm 5% after 15 minutes of CW operation
M ²	<1.4 \pm 0.2
Beam Size (Near Field)	8 \pm 1mm
Beam Divergence (Full Angle)	3 \pm 1mrad
Polarization	Cross-polarized
Pointing Stability	200 μ R
Rise Time	140 \pm 40 μ s
Duty Cycle	0-100%
Modulation Signal Type	TTL Compatible
Cooling	Air (built in) or Water (built in)
Weight (w/Integrated Cooling)	200 lbs. (90.7 kg)

Environmental

Ambient Temperature	50–95°F (10–35°C)
Relative Humidity	< 90% (non-condensing)

Power Requirements

DC Input Voltage	48 V DC
RMS Current (CW, including fan)	140 A Max
Inrush Current	200 A

For specific OEM laser information, call 1-480-483-1214 or visit www.co2laser.com.

Universal's ongoing commitment to technological innovation has resulted in U.S. patent numbers 5,661,746; 5,754,575; 5,867,517; 5,881,087; 5,894,493; 5,901,167; 5,982,803; 6,181,719; 6,313,433; 6,342,687; 6,423,925; 6,424,670; 6,983,001; 7,060,934; 7,415,051; 7,469,000; 7,715,454; 7,723,638; 7,947,919; D517,474. Other U.S. and international patents pending.

Output power is guaranteed to exceed the specified level for a period of 15 months from the date of purchase, regardless of use. At temperatures below 50°F [10°C] operation of the laser may be intermittent and there is a potential for damage to the power supply and optics.

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