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Find the *CrystaLaser GCL-025-L-0.25%* at our website: ***Click HERE***

CrystaLaser®

Ultra-compact High reliability Low noise Low cost

- ***CrystaLaser*** designs and manufactures cost effective ultra-compact diode-pumped crystal lasers. Our lasers feature with **high reliability, high stability, high efficiency, low noise** and **excellent laser beam quality.** These lasers are specificly designed for OEM, scientific and industrial use.
- Current products include diode-pumped green lasers, blue lasers , red lasers , infrared lasers and UV Lasers.
  New Product !! (Catalog Download)
  CW yellow green lasers at 561 nm, 593 nm, 594 nm, 558nm, 555 nm and 542 nm up to 200 mW
  CW red lasers at 656.5 nm, 660 nm and 671 nm up to 300 mW
  True CW Ultra-Violet (UV) laser at 375 nm up to 20 mW, 445 nm laser 45 mW
  Single longitudinal mode (SLM) violet blue laser at 375 nm, 405 nm and 442 nm
  Compact Q-switched UV, green, blue, red and IR lasers are availible now.
  Single longitudinal mode (SLM), Q-switched laser is availible now.
  Single longitudinal mode (SLM) red laser up to 100 mW with long coherence length is availible now.
  Ultra-stable green laser, blue laser and near infrared lasers, output **stability 0.25% over 24 hours,** are availible now.
  The 3 W infrared lasers, TEMoo mode output at 1064 nm and 1047 nm with stability <1% over 24 hours.
  Single longitudinal mode infrared lasers available for injection seeding application.
  Compact blue lasers at 405 nm, 445 nm, 473 nm and 488 nm, TEMoo mode, low noise output up to 100 mW.
- Wavelengths from UV to IR (nm):
  262, 266, 349, 351, 355, 375, 405, 440, 445, 447, 473, 488, 523, 527, 532, 542, 555, 561, 593 638, 642, 655, 660, 671, 685, 785, 780-980, 808, 852, 946, 980, 1030, 1047, 1053, 1064, 1080, 1313-1342, 1444, 1550
- The laser is easy to use, plug and play, no cooling fan, no cooling water required, no noise and no vibration during laser operation
- The diode-pumped CrystaLasers are based on our proprietary laser cavity technology. This new technology allows our green and infrared crystal lasers to operate in a single longitudinal mode and TEMoo mode with low amplitude noise and extremely low power consumption in a compact housing.
- CrystaLaser is the exclusive distributor in the North America for the following products of Rainbow Photonics, Zurich, Switzerland BluePoint 430/490 lasers, SBS Cells, Electro-Optic DAST Crystals, Photorefractive KNbO3 Crystals and KNbO3 Waveguides
- If you need special configurations, please contact CrystaLaser directly.
  Job Opportunities Laser Engineers, Electronic Engineers, Optical Technicians, Sales, 3+ year laser experience required

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Diode Pumped Green *CrystaLaser*

Ultra-compact High reliability Low noise Low cost

SPECIFICATIONS

Wavelength	532 nm		
CW output power (mW)	500, 400, 300, 200, 150, 100, 75, 50, 25, 10, 5		
Output power stability	< 2% over 2 hours; (Ultra-stable option: <0.25%, over 24 hrs)		
Noise(10 Hz to 50 MHz)	< 0.5% for L-version and S-version		
Transverse beam mode	TEMoo,		
Beam diameter ($1/e^2$)	0.36 mm		
Beam divergence	2 mrad		
Beam pointing stability	0.005 mrad/°C		
Polarization ratio	> 100 : 1		
Operation temperature	10 to 35 °C		
Operation voltage	90-250 VAC, or 9-24 VDC		
Typical power consumption	10 W		
Warm-up time	< 2 min		
Dimensions of laser head	3 x 3 x 12 cm (1.2 x 1.2 x 4.7 inch)		
Dimensions of power supply	AC: 5x14x15 cm^3 (2x5x6 inch) DC: 3.5x8.5x12.7 cm^3		
Expected life time	> 10,000 hours		
Model number	GCL-XXX-S S-version	GCL-XXX-L L-version	GCL-XXX-M M-version
Longitudinal mode	single(SLM)	several	multiple
Linewidth	<0.00001 nm	<0.2 nm	<0.2 nm

Instantaneous Linewidth	10 kHz		
Coherence length	>100 meter	2-10 mm	2-10 mm
Output noise(rms)	<0.5%	<0.5%	1% at 0-10 kHz, ~20% at 500 kHz

Diode Pumped Infrared *CrystaLaser*

Miniature High stability High reliability SLM Low cost

SPECIFICATIONS

SPECIFICATIONS

Wavelength	Laser crystal	CW laser output power (mW) 1)
946 nm	Nd:YAG	200
1064 nm	Nd:YAG/YVO4	3000, 2500, 2000, 1500, 1000, 800, 500, 300, 100 and <20 mW
1047 nm	Nd:YLF	2000, 1500, 1000, 800, 500, 300, 100, 50 and <20 mW
1053 nm	Nd:YLF	2000, 1500, 1000, 800, 500, 300, 100, 50 and <20 mW
1313 nm	Nd:YLF	1000, 800, 500, 300, 100, 50 and <20 mW
1319 nm	Nd:YAG	1000, 800, 500, 300, 100, 50 and <20 mW
1342 nm	Nd:YVO4	1500, 1000, 800, 500, 300, 100, 50 and <20 mW
Plane of the polarization		1064/1047/1342nm horizontal, 1053/1313/1319nm vertical
Polarization ratio		> 100 : 1
Transverse mode		TEMoo, M2 < 1.2
Beam divergence		3.6 mrad (full angle)
Beam diameter (1/e2)		0.45 mm
Beam pointing stability		< 0.005 mrad/°C
Output power stability		< 1 % over 2 hours, < 2% over 24 hours (Ultra-stable option:<0.25%, <0.25%, over 24 hrs)
Noise (rms, 10Hz-1MHz)		< 0.5%
Wavefront distortion		< Wave 1/20
Operation temperature		5 to 35 °C
Dimensions of laser head		3 x 3 x 12 cm3, or for high power 5 x 3.2 x 16 cm3
Dimensions of power supply		AC: 5x14x15 cm3 (2x5x6 inch) DC: 3.5x8.5x12.7 cm3
Operation voltage		90-250 VAC, or 9-20 VDC
Typical power consumption		10 W
Warm-up time		< 1 min
Expected life time		> 10,000 hours
LaLaser linewidth	0.2 nm typical, 0.05 nm narrow linewidth selection available		

For Single longitudinal mode (SLM) laser, linewidth <0.00001 nm
instantaneous Linewidth 10 kHz, Coherence length >100 meter

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1) Maximum CW output power of single longitudinal mode lasers:
   700mW@1064nm, 200mW@1053nm, 250mW@1047nm, 100mW@1313nm, 200mW@1340nm
   single longitudinal mode with lower output power available
   Wavelength tunable option for SLM laser available.

   TEMoo mode lasers with output power of 2 W, 1.5 W, 1 W, 800 mW, 700 mW
   600 mW, 500 mW, 400 mW, 300 mW, 200 mW, 100 mW, 50 mW and 20 mW availble
2) Single longitudinal mode version with instantaneous linewidth
   <10 kHz available
3) Collimators for reducing or increasing beam divergence available
4) Dual-line output 532 and 1064 nm laser up to 300 mW available
5) 2 kHz, 5 kHz and 10 kHz TTL modulation option

| Main | Green laser | Blue laser | Red laser | Infrared laser | Q-switched laser | Dimensions | Catalog download | Contact CrystaLaser |

Compact Solid State Yellow Lasers

Ultra-compact High efficiency High reliability Low noise

SPECIFICATIONS

Wavelength	561 nm, 542 nm, 555 nm and 593 nm

Output power (mW)	200, 150, 100, 75, 40, 20, 10, 5 mW M-version
Transverse beam mode	TEMoo, M^2<1.1
Beam divergence	2 mrad
Beam diameter (1/e^2)	0.36 mm
Beam point stability	0.005 mrad/°C
Stability (rms)	< 2% (Ultra-stable option: <0.25%, over 24 hrs)

	S-version	M-version
Available output power	25, 10, 5 mW	200, 150, 100, 75, 40, 20, 10, 5 mW
Longitudinal mode	Single	2-4 longitudinal modes
Linewidth	0.00001 nm	0.15 nm
Amplitude noise (rms)	< 0.5% (10Hz-20MHz)	< 1% (10 Hz to 10 kHz)
Coherence length	300 meters	1-3 mm

Polarization ratio	> 50 : 1 or > 100 : 1 option
Operation temperature	10 to 35 °C
Operation voltage	90-250 VAC or 9-20 VDC
Power consumption	15 W
Warm-up time	1 minute
Dimensions of laser head	3 x 3 x 12 cm (1.2 x 1.2 x 4.7 inch), 5 x 3.6 x 18 cm for high power
Dimension of power supply	AC: 5x14x15 cm^3 (2x5x6 inch) DC: 3.5x8.5x12.7 cm^3
Expected life time	> 10,000 hours

Compact Solid State Blue Lasers

Ultra-compact High efficiency High reliability Low noise

Diode-pumped 473 nm Blue Lasers, 430/490nm Blue Lasers and 375/405/445/473/488 nm UV-Violet-Blue Lasers

SPECIFICATIONS

Wavelength	473 nm
Laser material	Nd:YAG
CW output power	100 mW, 75 mW, 40 mW, 30 mW, 20 mW, 10 mW, 5 mW; Noise <2%(1 Hz-10 kHz) 15 mW, 10 mW, 5 mW, 2 mW; Noise <1%(1Hz-10 MHz)
Transverse spacial mode	TEMoo, M^2<1.1
Beam divergence	3 mrad
Beam diameter (1/e^2)	0.25 mm
Beam point stability	0.005 mrad/°C
Stability (rms)	< 2% (Ultra-stable option: <0.25%, over 24 hrs)
Amplitude noise	< 1%,or < 5% (rms, 10 Hz to 20 MHz)
Longitudinal mode	Two or three longitudinal modes
Linewidth	0.15 nm
Polarization ratio	> 50 : 1
Operation temperature	10 to 35 °C
Operation voltage	90-250 VAC or 9-24 VDC
Power consumption	15 W
Warm-up time	2 minutes
Dimension of laser head	3 x 3 x 12 cm with a 6 mm thick base plate
Dimension of power supply	AC: 5x14x15 cm^3 (2x5x6 inch) DC: 3.5x8.5x12.7 cm^3
Expected life time	> 10,000 hours

Rainbow Photonics Bluepoint 430nm/490nm Lasers

SPECIFICATIONS

Wavelength	490+/-2 nm		430+/-2 nm		
CW output power (mW)	2,	5	5,	10	(15)
Beam divergence(mrad)					
Horizontal	0.8,	0.3	0.8,	0.8,	0.3
Vertical	1.1,	0.4	1.1,	1.1,	0.4
Beam diameter(1/e^2, mm)					
Horizontal	0.4,	1.2	0.4,	0.4,	1.1
Vertical	0.3,	1.0	0.3,	0.3,	0.9

Transverse mode	TEMoo, M^2<1.2
Long term stability	< 5 % (p-p, 2 hours)

Noise(rms)	< 1 % (from 10 Hz to 10 MHz)
Beam pointing stability	< 0.05 mrad
Longitudinal mode	multiple longitudinal mode(MLM)
Linewidth	< 20 GHz
Coherence length	> 2 cm
Polarization	vertical, linear
Polarization ratio	> 500 : 1
Operation temperature	15 to 30 °C
Warm-up time	<15 min, 1 minute from standby
Operation voltage	90-250 VAC
Power consumption	<80 W
Dimension of laser head	21 x 12 x 8 cm
Dimension of power supply	22 x 27 x 7.5 cm

Ultra-Violet-Blue 375/405/445/473/488 nm Lasers

SPECIFICATIONS

Wavelength (+/-5 nm)	375 nm(max 20mW) 405 nm(max 1W) 445 nm(max 1W) 473/488 nm(max 20mW)
CW output power	1000 mW* 500 mW* 100 mW, 50 mW, 40 mW, 20 mW, 15 mW, 10 mW, 5 mW
Polarization ratio	100:1
Transverse mode	TEMoo, M2<1.2
Beam diameter (1/e2) and	1.1 mm
Beam divergence	0.6 mrad
Output stability	<1% over 24 hours; ultra-stable option <0.25% over 24 hours;
Beam point stability	0.005 mrad/°C
Longitudinal mode	Multiple longitudinal mode Single longitudinal mode with >50 m coherence length available
Noise (rms, 10Hz-20MHz)	<0.25 %
Operation temperature	10 to 40 °C
Dimensions of laser head	3x3.6x13.5 cm; Dimensions type 4
Dimensions of power supply	AC: 5x14x15 cm, DC: integrated inside laser head
Warm-up time	30 seconds
Operation voltage	12-15 VDC or 90-250 VAC
Typical power consumption	6 Watts

* 200-1000 mW 405 nm or 445 nm lasers are square mode output, M^2<3; or fiber coupled output

| Main | Green laser | Blue laser | Red laser | Infrared laser | Q-switched laser | Dimensions | Catalog download | Contact CrystaLaser|

Diode Pumped Compact Q-switched *CrystaLaser*

UV to IR **High reliability** **TEMoo mode** **Low cost**

SPECIFICATIONS

Laser crystals and Wavelengths:

	Nd:YAG/Nd:YVO4	Nd:YLF	Max. average output power*
UV	266 nm	262, 263 nm	50 mW, 30 mW, 20 mW, 10 mW, 5 mW, 2 mW
UV	355 nm	349, 351 nm	100 mW, 50 mW, 25 mW, 10 mW
Blue	473 nm	447, 438 nm	50 mW, 25 mW
Green	532 nm	523, 527 nm	1000 mW, 500 mW, 200 mW, 100 mW, 50 mW
Red	671 nm	657, 660 nm	400 mW, 200 mW, 100 mW, 50 mW
IR	1064 nm	1047,1053 nm	1.5 W, 1 W, 500 mW, 200 mW

Other Q-switched laser wavelengths available: 657, 660, 671, 946, 1313, 1320, 1342 nm

Pulse energy**	Example: For an average maximum power of 1000 mW Nd:YLF laser, the maximum pulse energy is 0.3 mJ at 1 kHz
Pulse width	Typically 10 ns to 20 ns varies from lasers and rep. rate Optional pulse width from 5 ns to 100 ns available
Repetition rate	1 kHz to 100 kHz internal adjustable 0 Hz to 200 kHz by external trigger
External trigger signal	TTL, trig at rising edge
Transverse beam mode	TEMoo, M^2<1.3, typical M^2<1.1
Longitudinal mode	Multiple longitudinal modes
NEW LASER PRODUCTS	Single longitudinal mode Q-switched lasers
contact CrystaLaser	Single longutidinal mode laser provides >2 m coherence length
Beam divergence	3 to 4 mrad, full angle

Beam point stability	0.005 mrad/°C
Beam diameter (1/e2)	IR 0.5mm, Green 0.35mm, UV 0.25 mm
Power stability, rms	5% after warm-up, at 1k to 10 kHz
Pulse to pulse variation	+/-10%
Polarization ratio	100:1
Dimensions of laser head	5x18.5x3.6 cm (L,W,H) for most of the lasers or 7x18.5x3.6 cm (L,W,H) for high power lasers
Dimensions of power supply	20x20x8 cm (L,W,H)
Cooling	Laser head: conductive cooling; Power supply: fan
Warm-up time	<5 min
Operation temperature	10 to 35 °C
Operation voltage	90-250 VAC or 12 VDC
Power consumption	40 W, typical

View photo of the Q-switched laser

* Average output power, Nd:YAG/YVO4 lasers, 1064 & 532 nm rep rate at >40kHz; 355 & 266 nm lasers at 15kHz; Nd:YLF lasers, 1047/1053 nm, rep. rate at 15kHz, 527 & 523 nm rep. rate at 8kHz; 349, 351 & 262 nm lasers at 4kHz.
**Maximum pulse energy at 1 kHz, 0.25mJ for 1053&1047 nm, 0.12mJ for 523&527 nm, 0.05mJ for 349&351 nm lasers, respectively.

Model No. samples			Max. average output power
QUV-266-5,	QUV-262-5,		5 mW
QUV-355-25,	QUV-349-25,	QUV-351-25	25 mW
QG-532-200,	QG-523-200,	QG-527-200	200 mW
QIR-1064-500,	QIR-1047-500,	QIR-1053-500	500 mW

Warrantee: 6 months warranty with unlimited usage against defective parts and labour after shipment for all of the Q-switched lasers.

Compact Red *CrystaLaser*

TEMoo mode **High stability** **High reliability**

SPECIFICATIONS

Wavelength (+/-3nm)	635nm	638/642nm	660 nm	690 nm	785 nm	808 nm	980 nm
Maximum Output power	35 mW	100 mW	100 mW	50 mW	120 mW	120 mW	1W

Polarization ratio	100:1
Transverse mode	TEMoo, M2<1.2
Beam diameter (1/e2) and	0.9 mm
Beam divergence	1 mrad
Longitudinal mode	Multiple longitudinal mode
SLM Option	Single longitudinal mode >10 meters coherence length available
Output stability	<1 % over 24 hours
Beam point stability	0.005 mrad/°C
Noise (rms, 10Hz-20MHz)	<0.5 %
Operation temperature	10 to 40 °C
Dimensions of laser head	3x3x12 cm with a fixed 6 mm thick base plate
Dimensions of power supply	DC: 8.5x3.5x12.7 cm, AC: 5x14x15 cm
Warm-up time	30 seconds
Operation voltage	12 VDC or 90-250 VAC
Typical power consumption	5 Watts

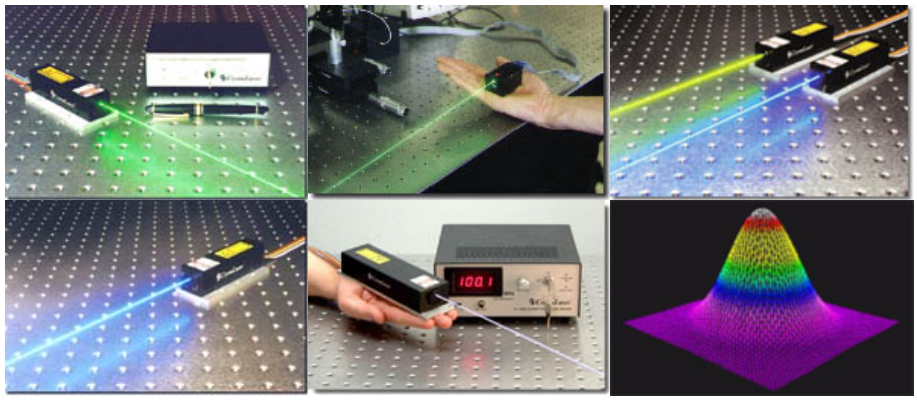
Intermediate power available from 1 mW to the maximum output power
Other beam divergence and beam size is available on request
smaller size laser head and power supply available for quantity order.

Red Laser, CW output 100 mW to 200 mW, at 656.5 nm, 660 nm and 671 nm

Preliminary SPECIFICATIONS

Wavelength	656.5 nm	660 nm	671 nm
Laser material	Nd:YLF	Nd:YAG	Nd:YVO4
CW output power	200 mW, 100 mW, 50 mW, 25 mW, 10 mW		
Transverse beam mode	TEMoo, M^2<1.1		

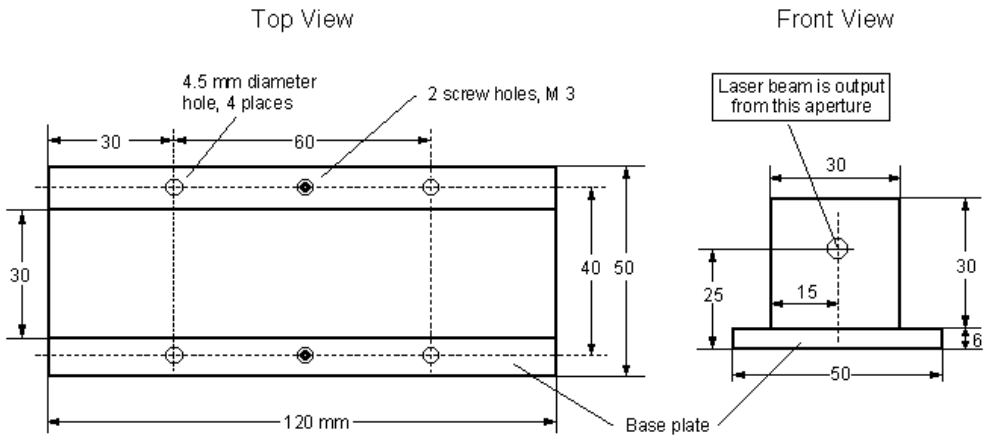
Beam divergence	3 mrad	
Beam diameter ($1/e^2$)	0.35 mm	
Beam point stability	0.005 mrad/°C	
Stability (rms)	< 2%	(Ultra-stable option: <0.5%, over 24 hrs)
	S-version	M-version
Longitudinal mode	Single	Two to five longitudinal modes
Linewidth	0.00001 nm	0.2 nm
Coherence length	> 300 meters	1-5 mm
Amplitude noise (rms)	< 0.5% (10Hz-10MHz)	< 1% (10 Hz-10 kHz)
Polarization ratio	> 50 : 1	
Operation temperature	10 to 35 °C	
Operation voltage	90-250 VAC or 9-24 VDC	
Power consumption	15 W	
Warm-up time	2 minutes	
Dimension of laser head	3 x 3 x 12 cm with a 6 mm thick base plate or 7x18.5x3.6 cm (L,W,H) for 200 mW lasers	
Dimension of power supply	AC: 5x14x15 cm^3 (2x5x6 inch)	DC: 3.5x8.5x12.7 cm^3
Expected life time	> 10,000 hours	



Click on any picture to get more detail.

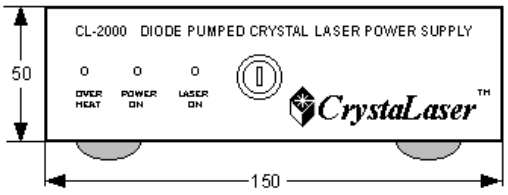
Laser Head

All dimensions in mm

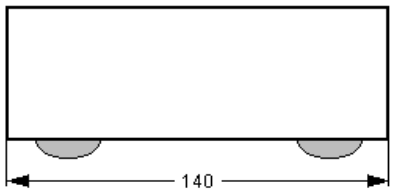


Power Supply

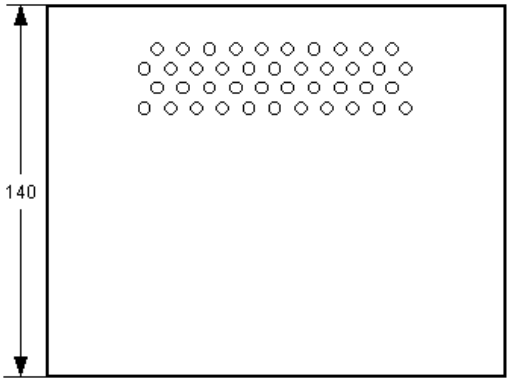
Front View



Side View



Top View



All dimension in mm

For more information, please access the online information request form
or send e-mail
Fax (775) 348-7047, Phone (775) 348-4820
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| Main | Green laser | Blue laser | Red laser | Infrared laser | Q-switched laser | Dimensions | Catalog download | Contact CrystaLaser |

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