
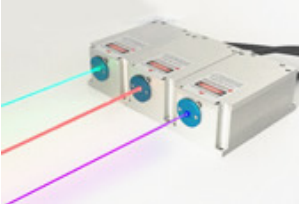


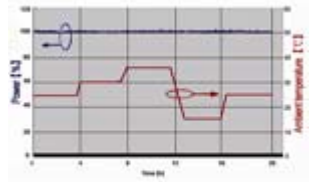
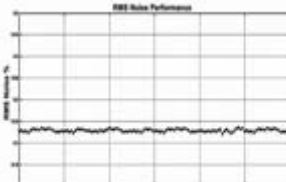

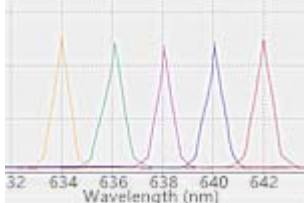


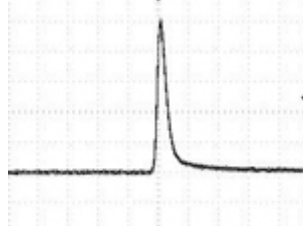



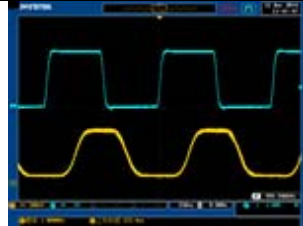



## STC Series Lasers

### Sorted by Wavelength



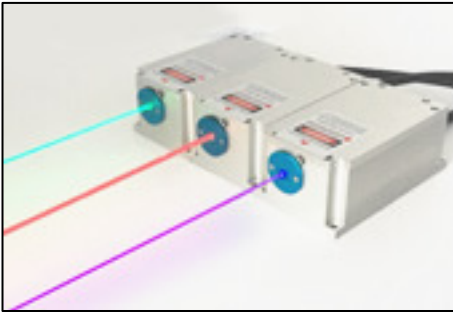
### Sorted by Laser Performance

 <p><b>DPSS Laser</b> High stability, low noise, ultra narrow linewidth, high power &amp; energy, picosecond laser...</p>	 <p><b>Diode Laser</b> Narrow linewidth, DFB laser, long coherence length, picosecond laser..</p>	 <p><b>Fiber Laser</b> SM/ MM fiber!, pulse width &lt;200ps or tunable 1~250 ns. Modulation up to 1 MHz</p>	 <p><b>Multi-wavelength Laser</b> Multi-wavelength (2~20) output, free space or fiber coupling output optional.</p>
 <p>Power stability (&lt;1%, 20 hours) environment temperature 10-35°C</p> <p><b>High Stability Laser</b> Wavelength: 257-4800nm Power stability &lt;0.1%, 0.3%, 0.5%, 1%.</p>	 <p>Noise of Amplitude(pk-pk, 1~20MHz)&lt;0.25%</p> <p><b>Low Noise Laser</b> Noise of amplitude &lt;0.2% Power stability &lt;0.1%, 0.3%, 0.5%, 1%.</p>	 <p><b>Single Frequency Laser</b> Single longitudinal mode lasers, Coherent length &gt;100 m, Linewidth &lt;0.000001nm</p>	 <p><b>Wavelength Tunable Laser</b> Multi-wavelength bands optional, Min. linewidth &lt;0.06nm</p>
 <p><b>High Power Laser</b> Wavelength: 532/ 556/ 589 /660/ 1064/ 1319 nm, Power: 1W~500W</p>	 <p><b>High Energy Laser</b> Wavelength: 266/ 355/ 532/1064/1319/1573nm, Energy: 1mJ~20J</p>	 <p><b>Q-switched Pulsed Laser</b> Pulse duration: 0.8ns~200 ns; Rep. rate: 1Hz~200kHz</p>	 <p><b>Mode-locked &amp; ps Laser</b> Pulse duration &lt;10ps; Rep. rate: 0.1-80MHz</p>
 <p><b>OEM Laser Module</b> Ultra compact size and high compatibility, suitable for OEM instrumentation and systems.</p>	 <p><b>Fiber Coupled Laser</b> MM/ SM/ PM or liquid-core fiber optional, with high coupling efficiency and good homogenization effect.</p>	 <p><b>High Frequency Modulation</b> Up to 150 MHz modulation rate, for single longitudinal mode and high stability laser.</p>	 <p><b>Line Laser</b> Fan angles of 5°, 7°, 10°, 30°, 45° 60°, 75°, 90° and 100°, line beam uniform and with good flatness.</p>

### **Customized lasers**

We specialize in designing and manufacturing custom-made and OEM lasers to suit our clients' particular needs. If you don't find a specific product or accessory from above listed products, please contact us for custom-design and fabrication. We can re-design the optical, mechanical, and/or electrical components of the lasers to provide the perfect solution for you. We have the R&D, engineering, and production expertise to manufacture the lasers that are able to maintain integrity in various extreme settings and conditions.

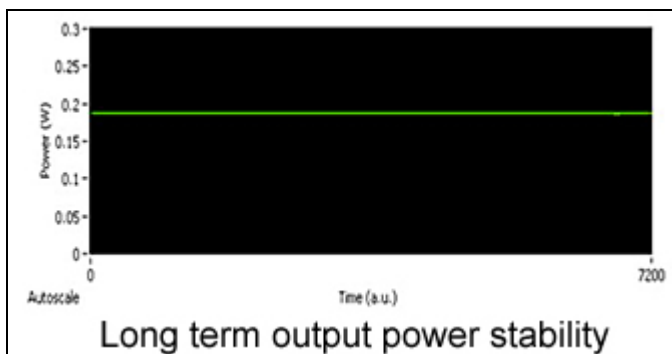
## Narrow Linewidth Diode Lasers

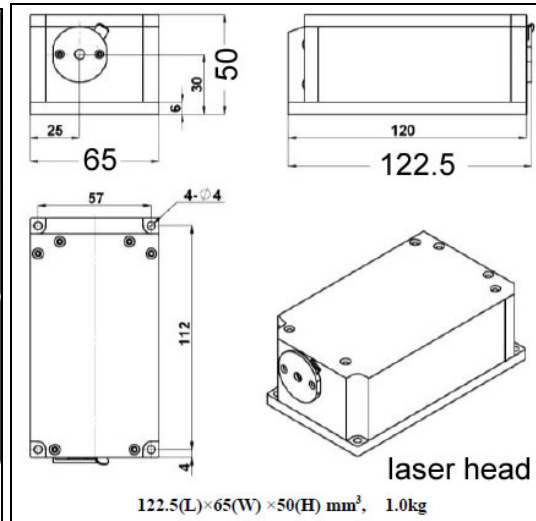
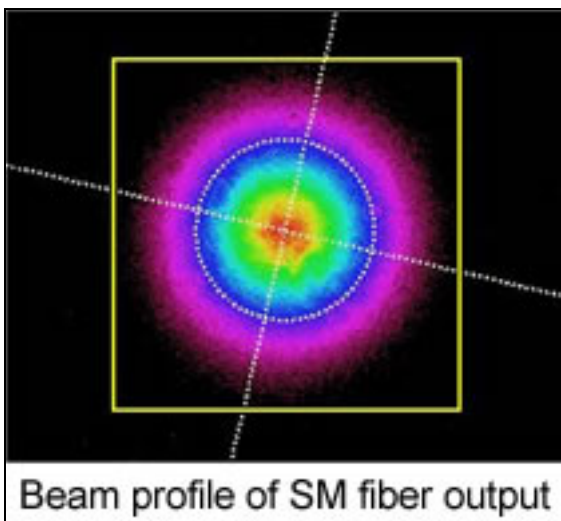
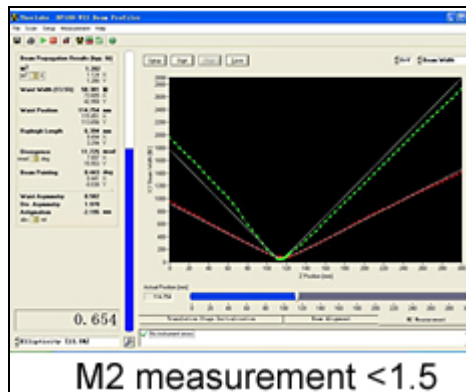
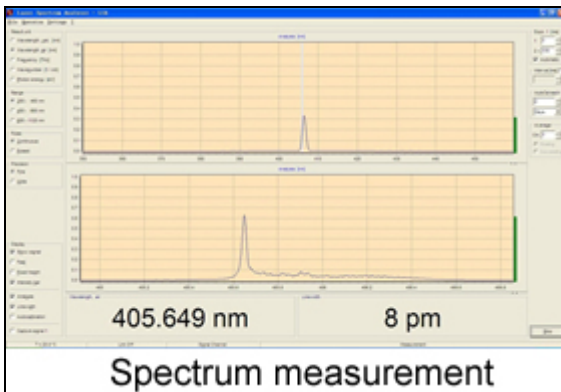
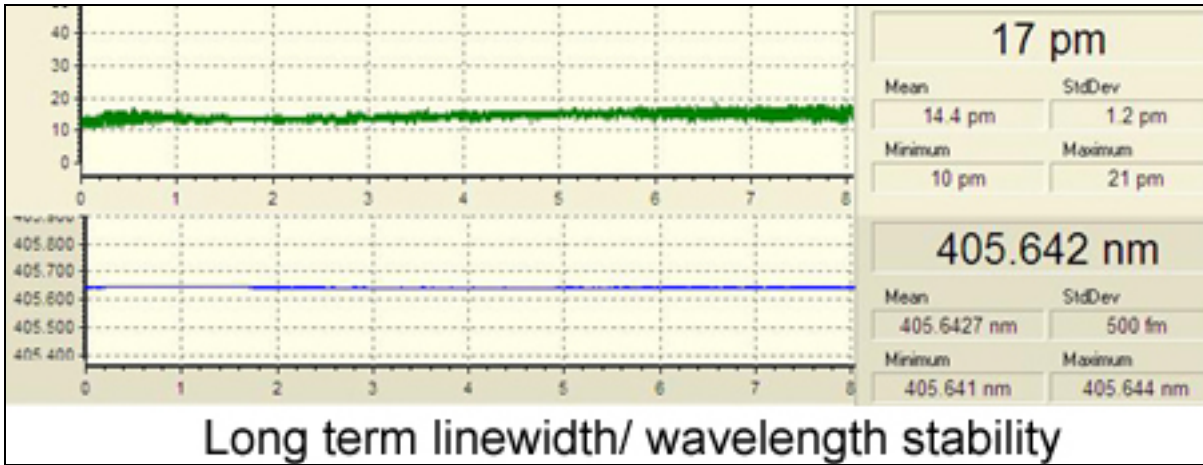


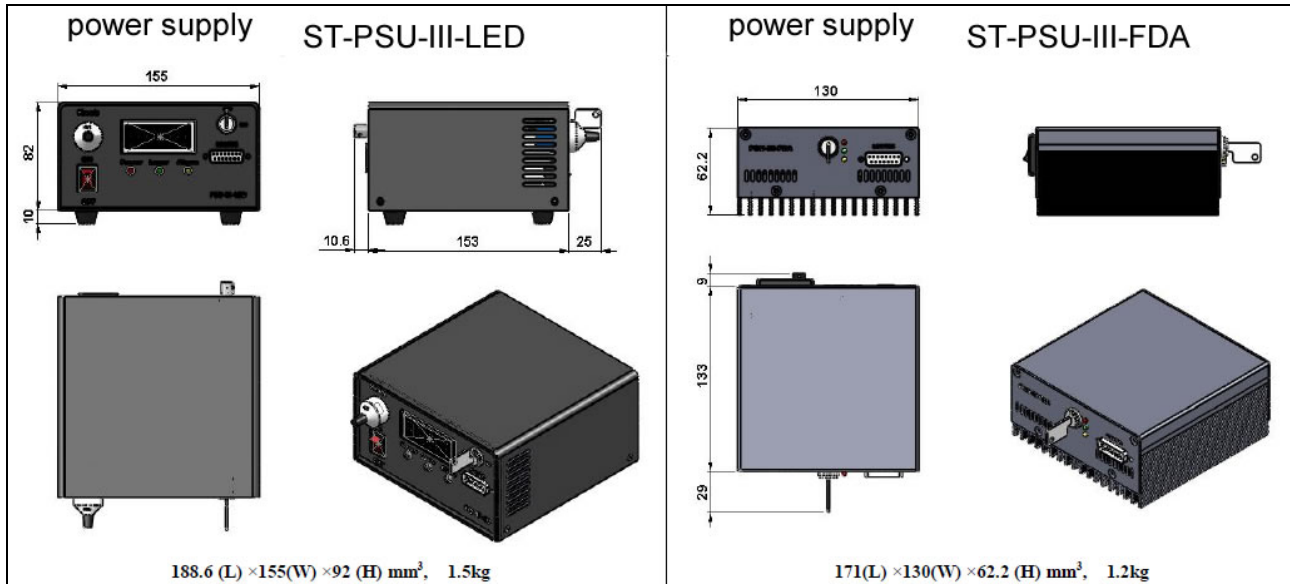
STC-MDL-E series lasers, with the characteristic of ultra narrow spectral linewidth  $<0.03\text{nm}$ , are ideal for application in DNA sequencing, flow cytometry, digital imaging, analytical chemistry, particle measurement, confocal microscopy, Raman spectroscopy and many other fields. Housed in ultra compact package, these lasers are the perfect choice for OEM instrumentation, systems design and integration, and also for end user applications in research and development.

Wavelength (nm)	Output power (mW)	Wavelength (nm)	Output power (mW)
375	1~20	637	1~80
400	1~50	640	1~30
405	1~150	642	1~30
410	1~150	650	1~30
415	1~150	655	1~30
442	1~30	660	1~120
445	1~30	705	1~10
447	1~30	730	1~10
450	1~30	785	1~20
454	1~30	808	1~20
457	1~30	830	1~30
460	1~100	915	1~30
488	1~70	940	1~30
514.5	1~40	975	1~30
520	1~10	980	1~30
633	1~80	1060	1~40
635	1~30		

**Ordering Information:** STC-MDL-E-xxxx-yyy-zzz, where xxxx means wavelength in nm, yyy means output power in mW, zzz means power stability in 1%, 2% or 3%.







### 375nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	375±0.5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,20
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<0.5
Polarization ratio	>10:1 (>50:1, optional) Horizontal ±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 400nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	400±1
Operating mode	CW
Output power (mW)	>1, 10, 20,...,50
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~1.3
Beam divergence, full angle (mrad)	<1.5
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-LED/ ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	188.6x155x92mm / 1.5kg or

	170x130x62.2mm / 1.2kg
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#### 405nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	405±1
Operating mode	CW
Output power (mW)	>1, 10, 50, ..., 150
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~1.3
Beam divergence, full angle (mrad)	<1.5
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-LED/ ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	188.6x155x92mm / 1.5kg or 170x130x62.2mm / 1.2kg

#### 454nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	454±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ..., 30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.5
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 488nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	488±0.5
Operating mode	CW
Output power (mW)	>1, 5, 10, ..., 30, 40, ..., 70
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~2.0
Beam divergence, full angle (mrad)	~1.5
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30

Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 514nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	514.5±0.5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,40
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~2.5
Beam divergence, full angle (mrad)	<1.5
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 520nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	520±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,10
Power stability (rms, over 4 hours)	<1%, <3%, <5%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 633nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	633±0.5
Operating mode	CW
Output power (mW)	>1, 10, 20, ...,80
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~2.0
Beam divergence, full angle (mrad)	<1.5

Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 635nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	635±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 637nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	637±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,80
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 640nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	640±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30



Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 642nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	642±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 650nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	650±10
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

**655nm Narrow Linewidth Diode Lasers**

Central wavelength (nm)	655±10
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

**660nm Narrow Linewidth Diode Lasers**

Central wavelength (nm)	660±0.5
Operating mode	CW
Output power (mW)	>1, 10, 20, ...,120
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~1.0
Beam divergence, full angle (mrad)	~1.0
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

**705nm Narrow Linewidth Diode Lasers**

Central wavelength (nm)	705±10
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,10
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000

Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 730nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	730±3
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,10
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~2.0
Beam divergence, full angle (mrad)	<1.5
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 785nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	785±0.5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,20
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~2.0
Beam divergence, full angle (mrad)	<1.0
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 808nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	808±0.5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,20
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.5
Polarization ratio	>50:1 (>100:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA

Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 830nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	830±0.5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.5
Beam divergence, full angle (mrad)	<1.5
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 915nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	915±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.0
Beam divergence, full angle (mrad)	<1.0
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

### 940nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	940±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.5
Beam divergence, full angle (mrad)	<1.0
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000

Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 975nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	975±5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.5
Beam divergence, full angle (mrad)	<1.0
Polarization ratio	>10:1 (>50:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 980nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	980±0.5
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,30
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~2.5
Beam divergence, full angle (mrad)	~2.5
Polarization ratio	>10:1 (>50:1, optional) Horizontal±5 degree (Vertical Optional)
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30
Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

#### 1060nm Narrow Linewidth Diode Lasers

Central wavelength (nm)	1060±10
Operating mode	CW
Output power (mW)	>1, 2, 3, ...,40
Power stability (rms, over 4 hours)	<1%, <2%, <3%
Transverse mode	Near TEM00
Spectral linewidth (nm)	<0.06 (<0.03, optional)
M2 factor	<1.5
Beam diameter at the aperture (1/e <sup>2</sup> ,mm)	~3.5
Beam divergence, full angle (mrad)	<1.0
Warm-up time (minutes)	<5
Beam height from base plate (mm)	30
Operating temperature (°C)	20~30

Power supply (85-264VAC)	ST-PSU-III-FDA
Expected lifetime (hours)	10000
Warranty	1 year
Laser head dimension & weight	122.5x65x50mm / 1kg
Power supply dimension & weight	170x130x62.2mm / 1.2kg

## STC Series Laser Diodes

We provide laser diodes with free space and fiber coupling option from 405-1550 nm wavelength range. The free space laser diode can be divided in to single mode and multimode. The fiber coupled laser diode can be divided into SM, PM, MM pigtailed and high power laser diode module. The small emitting aperture, combined with low beam divergence, make these devices the highest-brightness family of CW laser diodes available in the industry.

### 1. Free Space Laser Diode



- Single Mode/ Multimode Laser Diode
- Wavelength range 405-1550 nm
- Output power range 5mW-10W
- Fabry Perot (FP) laser cavity
- Low capacitance

Wavelength (nm)	Tolerance (nm)	Power (mW)	Laser Type
405 nm	5	20	Single Mode
405 nm	5	150	Single Mode
450 nm	5	1400	Multimode
488 nm	5	60	Single Mode
637 nm	5	120-170	Single Mode
640 nm	5	150	Single Mode
658 nm	8	200	Single Mode
730 nm	10	50	Single Mode
785 nm	5	150	Single Mode
808 nm	3/5/10	200-10000	Multimode
830 nm	5	1000	Multimode
850 nm	5	50	Single Mode
940 nm	5	1500	Multimode
980 nm	5/10	50-3000	Multimode
1064 nm	5	300	Single mode
1310 nm	5	20	Single mode
1550 nm	5	20	Single mode

#### Detailed Specifications of Free-space Laser Diodes

Part Number	STC-SLD-405-20	STC-SLD-405-150	STC-SLD-785-150
Power (mW)	20	150	150
Package	TO-18	TO-38	TO-5
Peak Wavelength (nm)	405±5	405±5	785±5
Threshold Current (Typ.)	32mA	40mA	35mA
Operating Current (Typ.)	43mA	140mA	170mA
LD Reverse Voltage	2V	2V	2.0V
Operating Voltage	5.2V	5.2V	1.9V
Slope Efficiency	1.8W/A	1.5W/A	1.1W/A
Horizontal Beam Divergence	9deg	8.5deg	8deg
Vertical Beam Divergence	20deg	19deg	25deg
Polarization	TE	TE	TE

Operating Temperature	+10-+40°C	0-+90°C	-20-+50°C
Storage Temperature	-20-+60°C	-40-+90°C	-40-+80°C

Part Number	STC-MLD-808-200	STC-MLD-808-300	STC-MLD-808-500	STC-MLD-808-500	STC-MLD-808-1000
Power (mW)	200	300	500	500	1000
Package	TO-18	TO-18	TO-3/C-Mount	TO-5	TO-3/C-Mount
Peak Wavelength (nm)	808±3	808±3	808±5	808±3	808±5
Threshold Current (Typ.)	40mA	60mA	130mA	120mA	240mA
Operating Current (Typ.)	250mA	350mA	600mA	650mA	1240mA
LD Reverse Voltage	3.0V	3.0V	2.0V	2.0V	2.0V
Operating Voltage	2.2V	2.2V	2.0V	2.0V	2.0V
Slope Efficiency	1.2W/A	1.2W/A	1.0W/A	1.0W/A	1.0W/A
Horizontal Beam Divergence	10deg	10deg	10deg	12deg	10deg
Vertical Beam Divergence	40deg	40deg	38deg	40deg	38deg
Polarization	TE	TE	TE	TE	TE
Operating Temperature	+10-+30°C	+10-+30°C	0-+35°C	-10-+30°C	0-+35°C
Storage Temperature	-40-+80°C	-40-+80°C	-10-+60°C	-10-+85°C	-10-+60°C

Part Number	STC-MLD-808-2000	STC-MLD-808-3000	STC-MLD-808-3000	STC-MLD-808-5000	STC-MLD-808-10000
Power (mW)	2000	3000	3000	5000	10000
Package	C-Mount	C-Mount	TO-3	TO-3/C-Mount	CN-Mount
Peak Wavelength (nm)	808±3	808±3	808±10	808±3	808±3
Threshold Current (Typ.)	700mA	800mA	1000mA	1000mA	1900mA
Operating Current (Typ.)	2600mA	3500mA	3500mA	6000mA	10500mA
LD Reverse Voltage	2.0V	2.0V	2.0V	2.0V	2.0V
Operating Voltage	2.0V	2.0V	2.2V	2.0V	2.0V
Slope Efficiency	1.1W/A	1.1W/A	1.0W/A	1.05W/A	1.15W/A
Horizontal Beam Divergence	8deg	8deg	12deg	8deg	10deg
Vertical Beam Divergence	35deg	35deg	40deg	35deg	38deg
Polarization	TE	TE	TE	TE	TE
Operating Temperature	0-+55°C	0-+55°C	+10-+50°C	+15-+30°C	+15-+35°C
Storage Temperature	+15-+30°C	+15-+35°C	-40-+85°C	0-+55°C	-20-+80°C

Part Number	STC-MLD-980-50	STC-MLD-980-500	STC-MLD-980-3000
Power (mW)	50	500	3000
Package	TO-18	TO-5	C-Mount
Peak Wavelength (nm)	980±10	980±10	980±5
Threshold Current (Typ.)	25mA	150mA	700mA
Operating Current (Typ.)	120mA	850mA	3300mA
LD Reverse Voltage	2.0V	2.0V	2.0V
Operating Voltage	2.0V	2.0V	2.0V
Slope Efficiency	0.45W/A	0.9W/A	1W/A
Horizontal Beam Divergence	25deg	10deg	8deg
Vertical Beam Divergence	35deg	48deg	35deg
Polarization	TE	TE	TE
Operating Temperature	+10-+40°C	+10-+40°C	+15-+30°C
Storage Temperature	-40-+85°C	-40-+85°C	0-+55°C



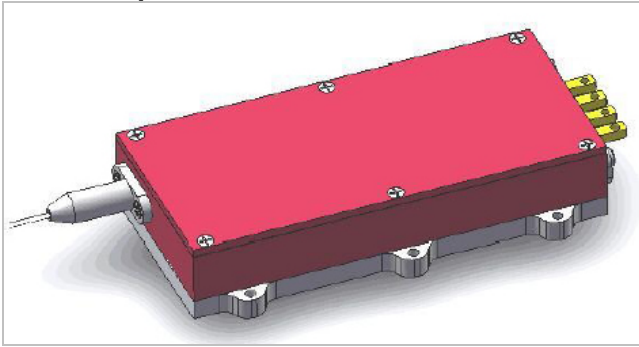
## 2. Fiber Coupled Laser Diode Module



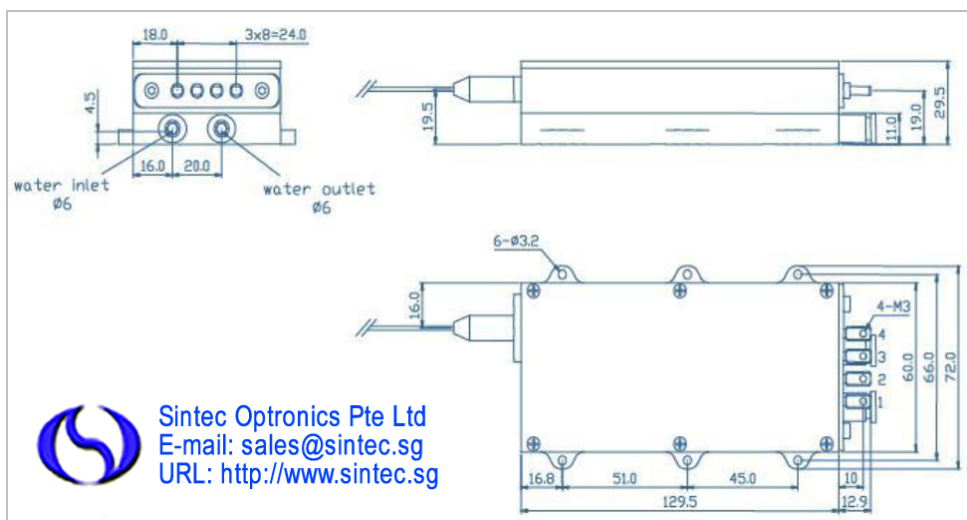
- Wavelength range 405-1064 nm
- High output power up to 4000W@ 915/980 nm
- Are designed for fiber laser, solid state laser pumping, direct diode material processing, surgical lasers and medical therapeutics

Part Number	Wavelength (nm)	Power (W)	Fiber Type (MM fiber)
STC-LDM-405-10	405 nm	10	800 μm
STC-LDM-405-35	405 nm	35	800 μm
STC-LDM-444-10	444 nm	10	100, 200, 400μm
STC-LDM-444-25	444 nm	25	100, 200, 400μm
STC-LDM-450-6	450 nm	6	105 μm
STC-LDM-450-9	450 nm	9	200 μm
STC-LDM-450-12	450 nm	12	200 μm
STC-LDM-450-50	450 nm	50	400 μm
STC-LDM-450-120	450 nm	120	800 μm
STC-LDM-520-30	520 nm	30	400 μm
STC-LDM-520-70	520 nm	70	800 μm
STC-LDM-638-15	638 nm	15	400 μm
STC-LDM-638-35	638 nm	35	800 μm
STC-LDM-793-8	793 nm	8	105 μm
STC-LDM-793-16	793 nm	16	105 μm
STC-LDM-793-30	793 nm	30	105 μm
STC-LDM-808-7	808 nm	7	105 μm
STC-LDM-808-15	808 nm	15	400 μm
STC-LDM-808-20	808 nm	20	400 μm
STC-LDM-808-30	808 nm	30	400 μm
STC-LDM-808-40	808 nm	40	200 μm
STC-LDM-808-50	808 nm	50	400 μm
STC-LDM-808-60	808 nm	60	200 μm
STC-LDM-808-100	808 nm	100	400 μm
STC-LDM-808-150	808 nm	150	400 μm
STC-LDM-878.6-25	878.6 nm	25	200 μm
STC-LDM-878.6-30	878.6 nm	30	400 μm
STC-LDM-878.6-60	878.6 nm	60	400 μm
STC-LDM-878.6-72	878.6 nm	72	400 μm
STC-LDM-878.6-75	878.6 nm	75	400 μm
STC-LDM-878.6-120	878.6 nm	120	400 μm
STC-LDM-915-10	915 nm	10	105 μm
STC-LDM-915-20	915 nm	20	105 μm
STC-LDM-915-30	915 nm	30	105 μm
STC-LDM-915-50	915 nm	50	200 μm
STC-LDM-915-80	915 nm	80	105 μm
STC-LDM-915-150	915 nm	150	105 μm
STC-LDM-915-260	915 nm	260	200 μm
STC-LDM-925-200	925 nm	200	135 μm
STC-LDM-976-10	976 nm	10	105 μm
STC-LDM-976-20	976 nm	20	105 μm

STC-LDM-976-27	976 nm	27	105 μm
STC-LDM-976-60	976 nm	60	105 μm
STC-LDM-976-100	976 nm	100	105 μm
STC-LDM-976-130	976 nm	130	105 μm
STC-LDM-976-140	976 nm	140	105 μm
STC-LDM-980-15	980 nm	15	200 μm
STC-LDM-980-35	980 nm	35	300 μm
STC-LDM-1064-10	1064 nm	10	200 μm
STC-LDM-1470-15	1470 nm	15	200 μm

**Detailed Specifications of STC-LDM-808-150-C2**


	Parameter	Symbol	Typical	Unit
Optical	CW Out Power	Pop	150	W
	Center Wavelength		808±10	nm
	Spectral Width (90% of Power)	Δ	<10.0	nm
	Wavelength Shift with Temperature	Δ / ΔT	0.35	nm / °C
Electrical	Threshold Current	I <sub>th</sub>	1.9	A
	Operating current	I <sub>op</sub>	12	A
	Operating Voltage	V <sub>op</sub>	30	V
	Slope Efficiency	η	14.9	W/A
	Power Conversion Efficiency	η <sub>ep</sub>	42	%
Fiber	Core Diameter	d <sub>core</sub>	400	μm
	Cladding Diameter	d <sub>clad</sub>	440	μm
	Buffer Diameter	d <sub>buffer</sub>	700	μm
	Numerical Aperture	NA	0.22	-
	Fiber Length	L	1.0	m
	Connector	-	SMA905,FC	-
Accessories	Aiming Laser(650nm)	-	None	-
	Monitor Photodiode	-	None	-
	Dimension		142x72x29.5	mm



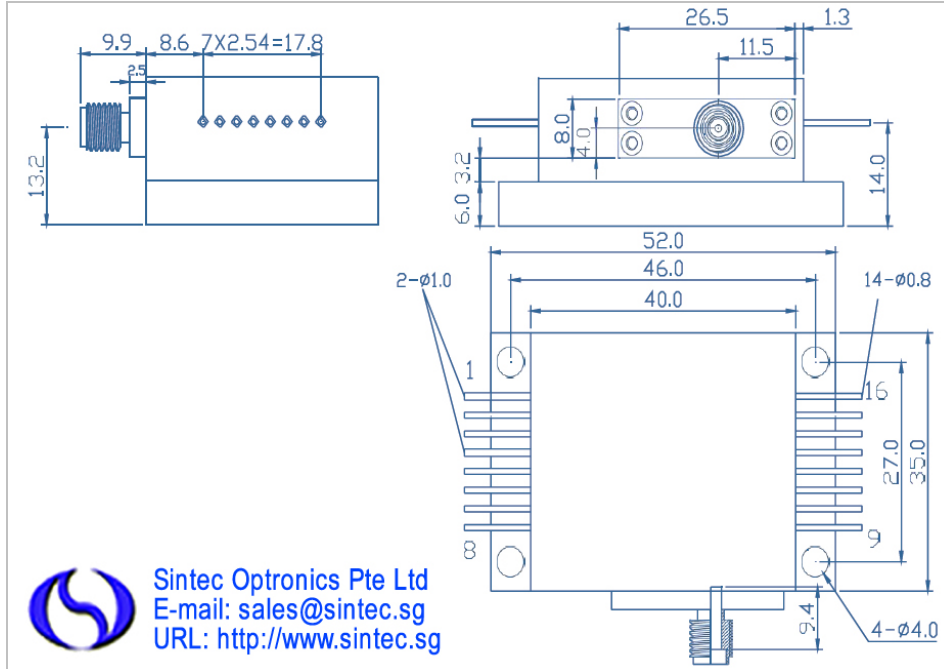
**Detailed Specifications of STC-LDM-980-15**

Optical	Unit	Typical Value
CW Output Power	W	15
Center Wavelength	nm	980±10
Spectral Width (90% of Power)	nm	4
Wavelength Shift with Temperature	nm / °C	0.3
<b>Electrical</b>		
Threshold Current	A	0.7
Operating Current	A	9.0
Operating Voltage	V	3.6
Slope Efficiency	W / A	1.8
Power Conversion Efficiency	%	46
<b>Aiming Laser*</b>		
CW Output Power	mW	1
Center Wavelength	nm	650±10
Operating Current	mA	<30
Operating Voltage	V	~2.2
<b>Fiber**</b>		
Fiber Core Diameter	μm	200
Fiber Cladding Diameter	μm	220
Fiber Buffer Diameter	μm	500
Numerical Aperture	-	0.22
Fiber Length	m	1.0
Fiber Connector	-	SMA905
Dimension	mm	52x35x17.2

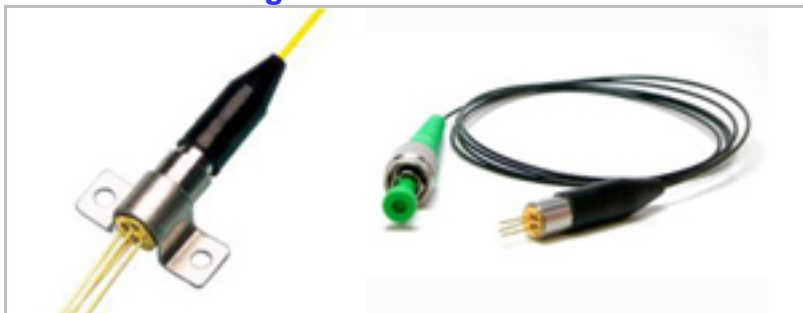
\*Optional built-in constant power circuit, 5V power supply needed.

Optional constant voltage green aiming beam.

\*\*Customized fiber and connector available.



### 3. SM/ PM/ MM Pigtailed Laser Diodes



- Wavelength range 405-1550 nm
- Output power range 1-5000mW
- Fiber coupled Fabry Perot (FP) laser diodes
- Optional FC/PC or FC/ APC connector
- Distributed feedback (DFB)

Wavelength (nm)	Power (mW)	Laser Type	Package
405 nm	1-50	SM / PM fiber	Coaxial
405 nm	5-200	MM fiber	Coaxial
635 nm	1-100	SM / PM fiber	Coaxial
635 nm	5-350	MM fiber	Coaxial
650 nm	5-100	SM / PM fiber	Coaxial
785 nm	20-50	SM / PM fiber	Coaxial
785 nm	50-80	MM fiber	Coaxial
808 nm	30	SM / PM fiber	Coaxial
808 nm	100-150	MM fiber	Coaxial
880 nm	1-2	SM / PM fiber	Coaxial
880 nm	5	MM fiber	Coaxial
905 nm	1-30	SM / PM fiber	Coaxial
940 nm	30	SM / PM fiber	Coaxial
980 nm	5-15	SM fiber	Coaxial
980 nm	20-100	MM fiber	Coaxial
1064 nm	5-50	SM / PM fiber	Coaxial
1064 nm	20	MM fiber	Coaxial
1310 nm	2-10	SM / PM fiber	Coaxial / Pigtailed
1310 nm	10	MM fiber	Coaxial / Pigtailed
1550 nm	2-10	SM / PM fiber	Coaxial / Pigtailed
1550 nm	10	MM fiber	Coaxial / Pigtailed

#### Detailed Specifications of SM/ PM/ MM Pigtailed Laser Diodes

##### 1. SM/PM Pigtailed Laser Diode at 650nm

- with SM Fiber
- with PM Fiber
- Offer Customized Products
- Offer OEM Coupling Service

Part Number	STC-SLDP-650-5-SM	STC-SLDP-650-10-SM	STC-SLDP-650-20-SM	STC-SLDP-650-20-SM-9	STC-SLDP-650-30-SM
Center Wavelength@25°C (nm)	650nm	650nm	650nm	650nm	650nm
Power (mW)	5	10	20	20	30
Package	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial
Tolerance (nm)	5	5	5	5	5
Fiber Type (80cm length)	4μm SM fiber	4μm SM fiber	4μm SM fiber	9μm SM fiber	4μm SM fiber
Fiber Connector	FC/SC/SMA905	FC/SC/SMA905	FC/SC/SMA905	FC/SC/SMA905	FC/SC/SMA905
Threshold Current (Typ.)	40mA	45mA	40mA	45mA	50mA
Operating Current (Typ.)	90mA	100mA	170mA	150mA	220mA

Operating Voltage	2.7V	2.7V	2.4V	2.4V	2.5V
Reverse Voltage	2.0V	2.0V	2.0V	2.0V	2.0V
Operating Temperature	-10-+70°C	-10-+60°C	-10-+60°C	-10-+60°C	-10-+60°C
Storage Temperature	-40-+85°C	-40-+85°C	-40-+85°C	-40-+85°C	-40-+85°C
Lead Soldering Temperature	260°C	260°C	260°C	260°C	260°C

Part Number	STC-SLDP-650-50-SM	STC-SLDP-650-50-SM-9	STC-SLDP-650-50-PM	STC-SLDP-650-100-SM	STC-SLDP-650-100-SM-9	STC-SLDP-650-100-PM
Center Wavelength@25°C (nm)	650nm	650nm	650nm	650nm	650nm	650nm
Power (mW)	50	50	50	100	100	100
Package	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial	Coaxial
Tolerance (nm)	5	5	5	5	5	5
Fiber Type (80cm length)	4µm SM fiber	9µm SM fiber	PM UV fiber	4µm SM fiber	9µm SM fiber	PM UV fiber
Fiber Connector	FC/SC/SMA905	FC/SC/SMA905	FC/SC/SMA905	FC/SC/SMA905	FC/SC/SMA905	FC/SC/SMA905
Threshold Current (Typ.)	50mA	50mA	55mA	55mA	55mA	55mA
Operating Current (Typ.)	220mA	200mA	200mA	260mA	260mA	260mA
Operating Voltage	2.6V	2.5V	2.5V	2.7V	2.7V	2.7V
Reverse Voltage	2.0V	2.0V	2.0V	2.0V	2.0V	2.0V
Operating Temperature	-10-+50°C	-10-+60°C	-10-+50°C	-10-+50°C	-10-+50°C	-10-+50°C
Storage Temperature	-40-+85°C	-40-+85°C	-40-+85°C	-40-+85°C	-40-+85°C	-40-+85°C
Lead Soldering Temperature	260°C	260°C	260°C	260°C	260°C	260°C



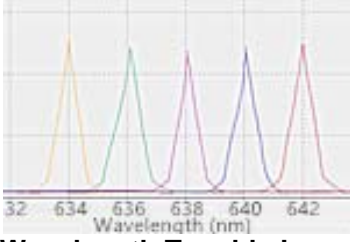






## 2. MM Pigtailed Laser Diode at 980nm

980nm Coaxial Package Diode Laser

- with MM Fiber
- Offer Customized Products
- Offer OEM Coupling Service

Part Number	STC-MLDP-980-20-MM	STC-MLDP-980-100-MM
Center Wavelength@25°C (nm)	980nm	980nm
Spectral Width (FWHM)	2.0nm	2.0nm
Power (mW)	20	100
Package	Coaxial	Coaxial
Tolerance (nm)	10	10
Fiber Type (80cm length)	MM fiber	MM fiber
Fiber Connector	FC/SC/SMA905	FC/SC/SMA905
Threshold Current (Typ.)	10mA	55mA
Operating Current (Typ.)	75mA	350mA
Operating Voltage	1.5V	1.6V
Reverse Voltage	2.0V	2.0V
Operating Temperature	-10-+40°C	-10-+40°C
Storage Temperature	-15-+85°C	-15-+85°C
Lead Soldering Temperature	260°C(10 sec.)	260°C(10 sec.)

## Diode Laser Modules

 <p><b>High Stability Laser</b> Good beam quality, ultra compact, Long-term stability &lt;1%</p>	 <p><b>TEM<sub>00</sub> Mode Diode Laser</b> Perfect beam with TEM<sub>00</sub> mode</p>	 <p><b>Wavelength Tunable Laser</b> Multi-wavelength bands optional Min. linewidth &lt;0.06nm</p>
 <p><b>Narrow Linewidth Laser</b> Linewidth &lt;0.06 nm (&lt;0.03 nm optional)</p>	 <p><b>Ultra Narrow Linewidth Laser</b> Ultra narrow linewidth &lt;math&gt;8 \times 10^{-8}&lt;/math&gt; nm</p>	 <p><b>Long Coherence Length Laser</b> Coherence length &gt;1 m 400nm-642nm wavelength available</p>
 <p><b>Nanosecond Pulsed Laser</b> Tunable pulse width 5 - 150 ns 405 - 1550 nm available</p>	 <p><b>Picosecond Pulsed Laser</b> Rep. rate 0.1 ~ 80 MHz Pulse width 100 - 1000 ps</p>	 <p><b>DFB/ DBR/ VCSEL Laser</b> Narrow linewidth up to 2 MHz</p>

### 1. TEM<sub>00</sub> Mode Diode Laser

We offer TEM<sub>00</sub> mode diode laser, which is made features of TEM<sub>00</sub> mode, high performance, ultra compact, long lifetime, low cost and easy operating. It is widely used in measurement, communication, scientific experiment, spectrum analysis, optical instrument and so on, are the perfect choice for design in and integration into OEM instrumentation and systems and also for end user applications in research and development.



Model	Operating mode	Output power (mW)	M <sup>2</sup> factor
STC-TEM-F-405	CW	1~30	<1.1
STC-TEM-F-450	CW	1~20	<1.1
STC-TEM-F-488	CW	1~15	<1.1
STC-TEM-F-520	CW	1~20	<1.1
STC-TEM-F-635	CW	1~80	<1.1
STC-TEM-F-640	CW	1~40	<1.1
STC-TEM-F-660	CW	1~50	<1.1
STC-TEM-F-685	CW	1~20	<1.1
STC-TEM-F-785	CW	1~40	<1.1
STC-TEM-F-808	CW	1~20	<1.1
STC-TEM-F-830SLD	CW	1~20	<1.1

STC-TEM-F-830	CW	1~60	<1.1
STC-TEM-F-1310	CW	1~5	<1.1
STC-TEM-F-1053SLD	CW	1~8	<1.1
STC-TEM-F-1550	CW	1~5	<1.1

## 2. Long Coherence Length STC-MDL-C Series Diode Lasers

STC-MDL-C series lasers, with the characteristic of long coherence length >1m, are ideal for application in holography, photoetching interference, DNA sequencing, flow cytometry, digital imaging, analytical chemistry, particle measurement, confocal microscopy, Raman spectroscopy and many other fields. Housed in ultra compact package, these lasers are the perfect choice for OEM instrumentation, systems design and integration, and also for end user applications in research and development.



Model	Wavelength (nm)	Output power (mW)	Coherent length (m)
STC-MDL-C-400	400	1~50	>1
STC-MDL-C-405	405	1~50	>1
STC-MDL-C-410	410	1~50	>1
STC-MDL-C-415	415	1~50	>1
STC-MDL-C-442	442	1~30	>1
STC-MDL-C-445	445	1~30	>1
STC-MDL-C-447	447	1~30	>1
STC-MDL-C-450	450	1~30	>1
STC-MDL-C-457	457	1~30	>1
STC-MDL-C-488	488	1~70	>1
STC-MDL-C-514.5	514.5	1~40	>1
STC-MDL-C-520	520	1~10	>1
STC-MDL-C-635	635	1~30	>1
STC-MDL-C-637	637	1~80	>1
STC-MDL-C-640	640	1~30	>1
STC-MDL-C-642	642	1~30	>1

## 3. Nanosecond Pulsed Diode Laser

We offer nanosecond pulsed diode laser, with tunable pulse width 10ns-10ms (external trigger), good beam profile and high power stability. It has ultra compact design that can be easily integrated into customers instrument. This series laser can be widely used in microelectronics, solar energy, material processing, equipment integration, etc..



### Features:

High frequency modulation; Good beam profile; Integrated electronics; Compact size

### Applications:

Microelectronics; Material processing; Solar energy; Equipment integration

### STC-MDL-NS Series

Model	Wavelength	Output Power @3.3VDC (CW)	User Trigger Frequency (MHz)	Pulse Width (tunable, external trigger mode)
STC-MDL-NS-405	405 nm	1-500 mW	Up to 80	10ns -10 ms
STC-MDL-NS-450	450 nm	1-80 mW	Up to 50	10ns -10 ms
STC-MDL-NS-520	520 nm	1-100 mW	Up to 50	10ns -10 ms
STC-MDL-NS-635	635 nm	1-200mW	Up to 40	10ns -10 ms
STC-MDL-NS-642	642 nm	1-80 mW	Up to 30	10ns -10 ms
STC-MDL-NS-655	655 nm	1~180 mW	Up to 30	10ns -10 ms
STC-MDL-NS-785	785 nm	1-100 mW	Up to 30	10ns -10 ms
STC-MDL-NS-808	808 nm	1-100 mW	Up to 40	10ns -10 ms

STC-MDL-NS-830	830 nm	1-120 mW	Up to 20	10ns -10 ms
STC-MDL-NS-852	852 nm	1-150 mW	Up to 30	10ns -10 ms
STC-MDL-NS-915	915 nm	1-200 mW	Up to 30	10ns -10 ms
STC-MDL-NS-980	980 nm	1-200 mW	Up to 40	10ns -10 ms
STC-MDL-NS-1060	1060 nm	1-200 mW	Up to 40	10ns -10 ms

#### STC-MDL-III-P Series

Model	Wavelength	Peak Power	Repetition Rate	Pulse Width
STC-MDL-III-P-905	905 nm	~135W (@10kHz)	1~10kHz	~20ns (@10kHz)
STC-MDL-III-P-1550	1550 nm	~15.3W (@6kHz)	1~6kHz	~150ns (@6kHz)

## 4. DFB/ DBR/ VCSEL Laser

We offer DFB/ DBR/ VCSEL laser, which is special designed for gas detection such as CH<sub>4</sub>, H<sub>2</sub>S, NH<sub>3</sub>, H<sub>2</sub>O, CO, CO<sub>2</sub>, C<sub>2</sub>H<sub>4</sub>, HF, C<sub>2</sub>H<sub>2</sub>, etc. Features with narrow linewidth up to 2MHz, ultra compact dimension, high power and wavelength stability, they are widely used in fiber gas detection, seed light source, fiber optical sensing field, etc.

#### Features:

Stable wavelength and output power; Narrow linewidth; No jump mode output in operating current range

#### Applications:

Optical fiber gas detection system; Optical sensing; Fiber communications



#### Laser Wavelength for Gas Detection

as Composition	Chemical Formula	Absorption Spectrum
Methane	CH <sub>4</sub>	1650.9 nm, 1653.7 nm
Hydrogen sulfide	H <sub>2</sub> S	1578 nm, 1590 nm
Ammonia	NH <sub>3</sub>	1512 nm
Carbon monoxide	CO	1567 nm
Carbon dioxide	CO <sub>2</sub>	1580 nm
Acetylene	C <sub>2</sub> H <sub>2</sub>	1532.68 nm
Ethylene	C <sub>2</sub> H <sub>4</sub>	1620 nm, 1625 nm, 1627 nm
Hydrogen fluoride	HF	1268.7 nm, 1273 nm, 1305 nm, 1312 nm
Water	H <sub>2</sub> O	1368 nm, 1392 nm

#### Lasers for Fiber Communication:

Model	Wavelength	Output Power
STC-TEM-F-1268DFB	1268 nm	1-10 mW
STC-TEM-F-1273DFB	1273 nm	1-10 mW
STC-TEM-F-1305DFB	1305 nm	1-10 mW
STC-TEM-F-1310DFB	1310 nm	1-10 mW
STC-TEM-F-1312DFB	1312 nm	1-10 mW
STC-TEM-F-1368DFB	1368 nm	1-10 mW
STC-TEM-F-1392DFB	1392 nm	1-10 mW
STC-TEM-F-1450DFB	1450 nm	1-20 mW
STC-TEM-F-1470DFB	1470 nm	1-20 mW
STC-TEM-F-1490DFB	1490 nm	1-20 mW
STC-TEM-F-1512DFB	1512 nm	1-10 mW
STC-TEM-F-1532DFB	1532 nm	1-20 mW
STC-TEM-F-1540DFB	1540 nm	1-20 mW
STC-TEM-F-1550DFB	1550 nm	1-30 mW
STC-TEM-F-1560DFB	1560 nm	1-20 mW
STC-TEM-F-1567DFB	1567 nm	1-10 mW
STC-TEM-F-1573DFB	1573 nm	1-20 mW
STC-TEM-F-1578DFB	1578 nm	1~10 mW
STC-TEM-F-1580DFB	1580 nm	1~10 mW
STC-TEM-F-1590DFB	1590 nm	1-20 mW



STC-TEM-F-1610DFB	1610 nm	1-20 mW
STC-TEM-F-1620DFB	1620 nm	1~10 mW
STC-TEM-F-1625DFB	1625 nm	1~10 mW
STC-TEM-F-1627DFB	1627 nm	1~10 mW
STC-TEM-F-1651DFB	1651 nm	1~10 mW
STC-TEM-F-1653DFB	1653 nm	1~10 mW

## Fiber Lasers

We offer fiber lasers with compact OEM modular design which is ideal for systems integration. They are widely used in communication, lidar, medical cosmetology, optical instrument, interference, holography, spectrum analysis, pump source, measurement, physics experiment, etc. The 1550 nm and 1064nm fiber laser are in single longitudinal and polarized mode. The pulsed mode up to 1MHz modulation and pulse duration variation are also available.



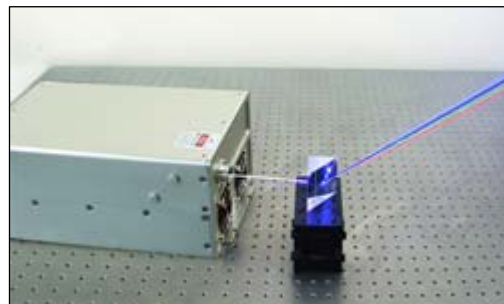
Model	Wavelength (nm)	Output power (mW)	Pulse width	Modulation rate	Longitudinal mode	Polarization
STC-FL-266-PS	266	1-10	<10 ps	20-60 MHz	Multi-	>15dB
STC-FL-343-PS	343	1-50	<10 ps	20-50 MHz	Multi-	>15dB
STC-FL-355-PS	355	1-50	<10 ps	20-60 MHz	Multi-	>15dB
STC-FL-515-PS	515	1-200	<10 ps	20-50 MHz	Multi-	>15dB
STC-FL-532-PS	532	1-150	<10 ps	20-60 MHz	Multi-	>15dB
STC-FL-1030-PS	1030	1-2000	<10 ps	20-50 MHz	Multi-	Random/ >15dB
STC-FL-1030-PS-Seed	1030	0.5-1	<10 ps	20-50 MHz	Multi-	Random/ >15dB
STC-FL-1064-PS	1064	1-2000	<10 ps	20-60 MHz	Multi-	Random/ >15dB
STC-FL-1064-PS-Seed	1064	0.5-1	<10 ps	20-60 MHz	Multi-	Random/ >15dB
STC-FL-266-Pico	266	1-50	100-900 ps	0.1-20 MHz	Multi-	>15dB
STC-FL-343-Pico	343	1-50	100-900 ps	0.1-20 MHz	Multi-	>15dB
STC-FL-355-Pico	355	1-50	100-900 ps	0.1-20 MHz	Multi-	>15dB
STC-FL-515-Pico	515	1-1000	100-900 ps	0.1-20 MHz	Multi-	>15dB
STC-FL-532-Pico	532	1-1000	100-900 ps	0.1-20 MHz	Multi-	>15dB
STC-FL-535-Pico	535	1-1000	100-900 ps	0.1-20 MHz	Multi-	>15dB
STC-FL-1030-Pico	1030	10-5000	100-900 ps	0.1-20 MHz	Multi-	Random/ >15dB
STC-FL-1064-Pico	1064	10-5000	100-900 ps	0.1-20 MHz	Multi-	Random/ >15dB
STC-FL-1070-Pico	1070	10-5000	100-900 ps	0.1-20 MHz	Multi-	Random/ >15dB
STC-FL-1030-S	1030	1 uW-200 mW Peak power	5-100 ns (Adjustable)	1 Hz-10 MHz	Multi-	Random/ >15dB
STC-FL-1064-S	1064	1 uW-500 mW Peak power	5-100 ns (Adjustable)	1 Hz-10 MHz	Multi-	Random/ >15dB
STC-FL-1550-S	1550	1uW-10 mW Peak power	5-100 ns (Adjustable)	1 Hz-10 MHz	Multi-	Random/ >15dB
STC-FL-266-Nano	266	1-50	0.5-50 ns	0.1-1 MHz	Multi-	>15dB
STC-FL-343-Nano	343	10-300	0.5-50 ns	0.1-1 MHz	Multi-	>15dB
STC-FL-355-Nano	355	1-300	0.5-50 ns	0.1-1 MHz	Multi-	>15dB
STC-FL-515-Nano	515	1-1000	0.5-50 ns	0.1-1 MHz	Multi-	>15dB
STC-FL-532-Nano	532	1-1000	0.5-50 ns	0.1-1 MHz	Multi-	>15dB
STC-FL-535-Nano	535	1-1000	0.5-50 ns	0.1-1 MHz	Multi-	>15dB
STC-FL-1030-Nano	1030	0.5-10 W	0.5-250 ns (Variable)	0.1-1 MHz	Multi-	Random/ >15dB
STC-FL-1064-Nano	1064	1000-5000	0.5-250 ns (Variable)	0.1-1 MHz	Multi-	Random/ >15dB
STC-FL-1070-Nano	1070	0.5-10 W	0.5-250 ns (Variable)	0.1-1 MHz	Multi-	Random/ >15dB
STC-FL-1550-Nano	1550	50-1000	0.5-50 ns (Variable)	50-1000 kHz	Multi-	Random/ >15dB
STC-FL-532-AO	532	10-100 nJ	0.5-50 ns	1-1000 Hz	Multi-	Random/ >15dB
STC-FL-1064-AO	1064	1-20 uJ	0.5-50 ns	1-1000 Hz	Multi-	Random/ >15dB
STC-FL-1550-AO	1550	1-20 uJ	0.5-50 ns	1-200 Hz	Multi-	Random/ >15dB
STC-FL-1064-CW	1064	1-20 W	N/A	CW/ modulated	Multi-	Random/ >15dB
STC-FL-1080-CW	1080	1-20 W	N/A	CW/ modulated	Multi-	Random/ >15dB
STC-FL-1550-CW	1550	1-20 W	N/A	CW/ modulated	Multi-	Random/ >15dB
STC-FL-1064-SF	1064	1-500	N/A	CW	Single	>15dB
STC-FL-1550-SF	1550	1-1000	N/A	CW	Single	>15dB

## Multi-line Laser/ Multi-wavelength Laser

We offer multi-line laser/ multi-wavelength laser combiner systems in free space and fiber output, it can combine multiple wavelengths into one box, with optional USB or RS232 control. The wavelengths are available for UV-Visible-IR range. This multi-line lasers can be widely used for medical, biomedical, and industrial application, etc.

### 1. Free Space Output

- Separate laser head and driver for easy integration
- 320-1064nm wide range of wavelengths available
- 2-4 wavelengths can be combined into one system (more wavelengths on request)
- Customized wavelength and output power combinations
- Free space or MM fiber output optional



Specifications: (X stands for the number of wavelength, X= II, III, IV)

Model	STC-MSII-M STC-MSIII-M STC-MSIV-M	STC-MSII-S STC-MSIII-S STC-MSIV-S	STC-MSII-N STC-MSIII-N STC-MSIV-N	STC-MSII-W STC-MSIII-W STC-MSIV-W	STC-MSII-Z STC-MSIII-Z STC-MSIV-Z
Power supply	STC-PSU-M-LED		STC-RGB-31 / STC-RGB-41		
Number of combined wavelengths	2~4 (Or more on request)				
Output mode	Free coaxially output (fiber output optional)				
Available Wavelength (nm)	320~1064				
Output power (mW)	Available for customized on request				
Power stability (rms, over 4 hours)	<1%, <2%, <3%, <5%				
Operating mode	CW, TTL or analog on request				
Operating temperature (°C)	10~35°C				
Power input	100~240VAC				
Cooling method	Air cooled				
Expected lifetime (hours)	10000				
Options:	<ul style="list-style-type: none"> <li>● TTL or analog modulation up to 30kHz</li> <li>● AOM (modulation up to 1MHz)</li> <li>● MM fiber coupling (100um, ..., 600um), SMA905/ FC connector optional</li> <li>● USB or RS232 control</li> </ul>				

#### Standard model:

- |                 |                 |                      |                      |
|-----------------|-----------------|----------------------|----------------------|
| ◆405nm/ 561nm   | ◆473nm/ 593.5nm | ◆405nm/ 473nm/ 532nm | ◆640nm/ 532nm/ 405nm |
| ◆405nm/ 589nm   | ◆635nm/ 532nm   | ◆635nm/ 532nm/ 473nm | ◆655nm/ 532nm/ 473nm |
| ◆405nm/ 593.5nm | ◆655nm/ 532nm   | ◆637nm/ 532nm/ 447nm | ◆671nm/ 532nm/ 473nm |
| ◆473nm/ 589nm   |                 |                      |                      |

### 1.1 Dual-wavelength Laser Systems

It can emit up to two wavelengths from one aperture and with separate power monitors for each wavelength. They are widely used for life sciences, fluorescence, spectral analysis, optogenetics.

Model	STC-MSII-W-405/561	STC-MSII-W-405/589	STC-MSII-W-405/593.5
Wavelength (nm)	405/561	405/589	405/593.5
Operating mode	CW	CW	CW
Total output power (mW)	>1, 10,20, ..., 200	>1, 10,20, ..., 100	>1, 10,20, ..., 100
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%	<2%, <3%, <5%

Transverse mode	near TEM <sub>00</sub> /TEM <sub>00</sub>	near TEM <sub>00</sub> /TEM <sub>00</sub>	near TEM <sub>00</sub> /TEM <sub>00</sub>
Beam diameter at aperture (mm)	~2.5	~2.5	~2.5
Beam divergence, full angle (mrad)	<1.5	<1.5	<1.5
Warm-up time (minutes)	<10	<10	<10
Operating temperature (°C)	10~35	10~35	10~35
Power supply (100-240VAC)	STC-RGB-31	STC-RGB-31	STC-RGB-31
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Expected lifetime (hours)	10000	10000	10000
Warranty	1 year	1 year	1 year
Dimension (laser head, mm)	353×211×136	353×211×136	353×211×136
Weight (laser head, kg)	13.0	13.0	13.0
Dimension (power supply, mm)	305.5×215×120	305.5×215×120	305.5×215×120
Weight (power supply, kg)	5	5	5

Model	STC-MSII-W-473/589	STC-MSII-W-473/593.5
Wavelength (nm)	473/589	473/593.5
Operating mode	CW	CW
Total output power (mW)	>1, 10,20, ..., 200	>1, 10,20, ..., 100
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%
Transverse mode	near TEM <sub>00</sub> /TEM <sub>00</sub>	near TEM <sub>00</sub> /TEM <sub>00</sub>
Beam diameter at aperture (mm)	~3	~2.0
Beam divergence, full angle (mrad)	<1.5	<1.5
Warm-up time (minutes)	<10	<10
Operating temperature (°C)	10~35	10~35
Power supply (100-240VAC)	STC-RGB-31	STC-RGB-31
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Expected lifetime (hours)	10000	10000
Warranty	1 year	1 year
Dimension (laser head, mm)	353×211×136	353×211×136
Weight (laser head, kg)	13.0	13.0
Dimension (power supply, mm)	305.5×215×120	305.5×215×120
Weight (power supply, kg)	5	5

Model	STC-MSII-N-635/532	STC-MSII-N-655/532
Wavelength (nm)	635/532	655/532
Operating mode	CW	CW
Total output power (mW)	>1, 10,20, ..., 200	>1, 10,20, ..., 500
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%
Transverse mode	near TEM <sub>00</sub> /TEM <sub>00</sub>	Multimode /TEM <sub>00</sub>
Beam diameter at aperture (mm)	~3	~5x8
Beam divergence, full angle (mrad)	<1.5	<3
Warm-up time (minutes)	<10	<10
Operating temperature (°C)	10~35	10~35
Power supply (100-240VAC)	STC-RGB-31	STC-RGB-31
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Expected lifetime (hours)	10000	10000
Warranty	1 year	1 year
Dimension (laser head, mm)	296×170×73	296×170×73
Weight (laser head, kg)	4.2	4.2
Dimension (power supply, mm)	305.5×215×120	305.5×215×120
Weight (power supply, kg)	5	5

## 1.2 Triple-wavelength Laser Systems

It can provide various kinds of colors, such as red, orange, yellow, green, indigo, blue, purple. It is widely used for laser scientific research, medical treatment, OEM field and multimedia entertainment.

Model	STC-MSIII-W-405/473/532	STC-W-635/532/473*	STC-MSIII-M-637/532/447*
Wavelength (nm)	405/473/532	635/532/473	637/532/447
Operating mode	CW	CW	CW
Total output power (mW)	>1, 50, 100, ..., 300	>1, 100, 200, ..., 500	>1, 10, 20, ..., 300
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%	<2%, <3%, <5%
Transverse mode	near TEM <sub>00</sub> /TEM <sub>00</sub> /TEM <sub>00</sub>	near TEM <sub>00</sub> /TEM <sub>00</sub> /TEM <sub>00</sub>	Near TEM <sub>00</sub> /TEM <sub>00</sub> /Near TEM <sub>00</sub>
Beam diameter at aperture (mm)	~2.5	~3.0	~3.0
Beam divergence, full angle (mrad)	<1.5	<1.5	<1.5
Warm-up time (minutes)	<10	<10	<10
Operating temperature (°C)	10~35	10~35	10~35
Power supply (100-240VAC)	STC-RGB-31	STC-RGB-31	STC-PSU-M-LED
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Expected lifetime (hours)	10000	10000	10000
Warranty	1 year	1 year	1 year
Dimension (laser head, mm)	353×211×136	353×211×136	115×75×45
Weight (laser head, kg)	13.0	13.0	1.2
Dimension (power supply, mm)	305.5×215×120	305.5×215×120	201.5×134×102
Weight (power supply, kg)	5	5	1.2

\* The combination of red, green & blue laser can generate multi-colors, such as red, orange, yellow, green, indigo, blue, purple and so much. The higher power red, green and blue laser modules are available upon request.

Model	STC-MSIII-S-640/532/405	STC-MSIII-W-655/532/473*	STC-MSIII-W-671/532/473*
Wavelength (nm)	640/532/405	655/532/473	671/532/473
Operating mode	CW	CW	CW
Total output power (mW)	>1, 50, 100, ..., 300	>1, 100, 200, ..., 1000	>1, 50, 100, ..., 300
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%	<2%, <3%, <5%
Transverse mode	near TEM <sub>00</sub> /TEM <sub>00</sub> /near TEM <sub>00</sub>	Multimode/TEM <sub>00</sub> /TEM <sub>00</sub>	TEM <sub>00</sub> /TEM <sub>00</sub> /TEM <sub>00</sub>
Beam diameter at aperture (mm)	~3.0	~5x8	~3.0
Beam divergence, full angle (mrad)	<1.5	<3.0	<1.5
Warm-up time (minutes)	<10	<10	<10
Operating temperature (°C)	10~35	10~35	10~35
Power supply (100-240VAC)	STC-PSU-M-LED	STC-RGB-31	STC-RGB-31
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Expected lifetime (hours)	10000	10000	10000
Warranty	1 year	1 year	1 year
Dimension (laser head, mm)	185×85×56	353×211×136	353×211×136
Weight (laser head, kg)	1.5	13.0	13.0
Dimension (power supply, mm)	201.5×134×102	305.5×215×120	305.5×215×120
Weight (power supply, kg)	1.2	5	5

\* The combination of red, green & blue laser can generate multi-colors, such as red, orange, yellow, green, indigo, blue, purple and so much. The higher power red, green and blue laser modules are available upon request.

## 2. Fiber Coupling Version

- Single mode fiber coupling with stable output
- Separate laser head and driver for easy integration
- 320-1064nm wide range of wavelengths available
- 2-4 wavelengths can be combined into one system (more wavelengths on request)
- Customized wavelength and output power combinations
- Customized size available



**Standard model:**

- ◆ 637nm/ 532nm                      ◆ 637nm/ 532nm/ 473nm                      ◆ 640nm/ 561nm/ 488nm/ 405nm
- ◆ 671nm/ 532nm/ 457nm              ◆ 640nm/ 593.5nm/ 532nm/ 488nm              ◆ 642nm/589nm/532nm/473nm

These multi-wavelength lasers can provide various kinds of colors, such as red, orange, green, etc. They are widely used for fluorescence microscopy, flow cytometry, confocal microscopy and optogenetics.

Model	STC-MSII-F-637/532	STC-MSIII-F-637/532/473	STC-MSIII-F-671/532/457
Wavelength (nm)	637/532	637/532/473	671/532/457
Operating mode	CW	CW	CW
Total output power (mW)	>1, 10, 20, ..., 100	>1, 10, 20, ..., 225	>1, 10, 20, ..., 75
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%	<2%, <3%, <5%
Fiber core diameter (um)	Single mode	Single mode	Single mode
Fiber connector	FC	FC	FC
Fiber length (m)*	1	1	1
Warm-up time (min)	<10	<10	<10
Operating temperature (°C)	10~35	10~35	10~35
Power supply (100-240VAC)	STC-RGB-31	STC-RGB-31	STC-RGB-31
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Expected lifetime (hours)	10000	10000	10000
Warranty	1 year	1 year	1 year
Dimension (laser head, mm)	329.5×258×88	308.7×288×88	373.7×288×88
Weight (laser head, kg)	10.0	12.0	12.0
Dimension (power supply, mm)	305.5×215×120	305.5×215×120	305.5×215×120
Weight (power supply, kg)	5	5	5

Model	STC-MSIV-F-640/561/488/405	STC-MSIV-F-640/593.5/532/488	STC-MSIV-F-642/589/532/473
Wavelength (nm)	640/561/488/405	640/593.5/532/488	642/589/532/473
Operating mode	CW	CW	CW
Total output power (mW)	>1, 10, 20, ..., 160	>1, 10, 20, ..., 80	>1, 10, 20, ..., 60
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%	<2%, <3%, <5%
Fiber core diameter (um)	Single mode	Single mode	Single mode
Fiber connector	FC	FC	FC
Fiber length (m)*	1	1	1
Warm-up time (min)	<10	<10	<10
Operating temperature (°C)	10~35	10~35	10~35
Power supply (100-240VAC)	STC-RGB-41	STC-RGB-41	STC-RGB-41
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Expected lifetime (hours)	10000	10000	10000
Warranty	1 year	1 year	1 year
Dimension (laser head, mm)	373.7×288×88	373.7×288×88	373.7×288×88
Weight (laser head, kg)	14.0	14.0	14.0
Dimension (power supply, mm)	305.5×215×120	305.5×215×120	305.5×215×120
Weight (power supply, kg)	5	5	5

\* Other fiber lengths available upon request.

### 3. Integrated Electronics:

It has integrated laser diode, laser cavity, fiber coupling optics, laser power supply and LD current in ONE box. They are widely used for medical, biomedical and industrial.

- Built-in driver for easy operation
- 375-1550nm wide range of wavelengths available
- 2-20 wavelengths can be combined into one system



- Customized wavelength and output power combinations
- Customized size available

Channel type Model	Single Channel			Multi-Channel
	STC-FC-MS	STC-FC-ML	Customized model	STC-FC-MS-CH
Available wavelength (nm)	375~1064			375~1550
Number of combined wavelengths	2~3	4~6	7~20	2~4
Fiber type	SM, MM			SM
Fiber core diameter (μm)	Customized on request			4~9
Fiber connector	SMA905/ FC			FC/PC
Output power	Customized on request			
Power stability (rms, over 4 hours)	<3%, <5%			
Operating mode	CW, TTL or analog on request			
Operating temperature(°C)	10~35			
Power input	100~240VAC			
Cooling method	Air cooled			
Expected lifetime (hours)	10000			
Warranty	1 year			

**Standard model:**

◆405nm/ 447nm/ 532nm/ 637nm      ◆405nm/ 488nm/ 532nm/ 637nm

Model	STC-FC-ML-405/447/532/637	STC-FC-ML-405/488/532/637
Wavelength (nm)	405/447/532/637	405/488/532/637
Operating mode	CW	CW
Fiber core diameter (um)	400	400
Fiber connector	SMA905	SMA905
Total output power (mW)	>1, 10, 20, ..., 160	>1, 10, 20, ..., 160
Power stability (rms, over 4 hours)	<2%, <3%, <5%	<2%, <3%, <5%
Input power	100-240VAC, 50 to 60 Hz	100-240VAC, 50 to 60 Hz
Warm-up time (min)	<10	<10
Operating temperature (°C)	10~35	10~35
TTL/analog modulation	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz	TTL or analog with 1Hz-1kHz, 1-10kHz or 10-30kHz
Cooling	Air	Air
Warranty	1 year	1 year
Dimension (mm)	366×341×161	366×341×161
Weight (kg)	3.0	3.0

## Wavelength Tunable Lasers

We offer wavelength tunable laser, the output wavelengths can be changed continuously within a certain range. Tunable lasers come with good beam quality, high stability and long life time, they are widely used in spectroscopy, photochemistry, medicine, biology, integrated optics, laser processing, etc.

**Features:**

Good beam quality; Compact design; High stability; Long life time; Easy operation

**Applications:**

Spectroscopy; Medicine; Photochemistry; Biology; Integrated optics



**◆ Tunable Diode Laser**

Tunable Wavelength Band	Model	Output Power	Spectral Linewidth
403~407 nm	STC-TUN-403~407	1~30 mW	<0.1 nm
408~412 nm	STC-TUN-408~412	1~30 mW	<0.1 nm
448~452 nm	STC-TUN-448~452	1~10 mW	<0.1 nm
518~522 nm	STC-TUN-518~522	1~10 mW	<0.1 nm
634~643 nm	STC-TUN-634~643	1~10 mW	<0.1 nm
652~658 nm	STC-TUN-652~658	1~10 mW	<0.1 nm

**◆ Tunable Ti:Sapphire Laser**

Tunable Wavelength Band	Model	Output Power	Spectral Linewidth
770~840 nm	STC-TUN-TiN-770~840	1~400 mW	<40 pm
770~840 nm	STC-TUN-Ti-770~840	1~1000 mW	<2 nm
770~840 nm	STC-TUN-TiA-770~840	1~1300 mW	<2 nm

**◆ Tunable Infrared Laser**

Tunable Wavelength Band	Model	Output Power	Spectral Linewidth
1400~1800 nm	STC-TUN-W-1400~1800	1~2000 mW	<2 nm
2600~4450 nm	STC-TUN-W-2600~4450	1~1000 mW	<2 nm



## Mode-locked & Picosecond Laser Series

Superior beam quality, best reliability, mode-locked & picosecond pulsed laser, pulsed duration could be less than 20ps. Housed in compact packages, are the perfect choice for design in and integration into OEM instrumentation and systems and also for end user applications in research and development.



### Applications:

Raman spectroscopy; Marking, Carving; Material processing; Astronomy; Scientific research; Optical instrument

### Mode-locked Type:

	Wavelength (nm)	Output power (mW)	Pulse duration (ps)	Rep. rate (MHz)	Operating mode	Transverse mode
STC-PS-R-266	266	1-50	<20	48±1	Mode-locked	TEM <sub>00</sub>
STC-PS-R-355	355	1-2000	<20	48±1	Mode-locked	TEM <sub>00</sub>
STC-PS-R-532	532	1-3000	<20	48±1	Mode-locked	TEM <sub>00</sub>
STC-PS-HR-532	532	1-2 W	~15@500kHz&2 W	100-1000kHz	Mode-locked	TEM <sub>00</sub>
STC-PS-RL-1064	1064	1-1000	~15 @10 kHz&1 W	1-10kHz	Mode-locked	TEM <sub>00</sub>
STC-PS-HR-1064	1064	1-10 W	~15@500kHz&10W	100-1000kHz	Mode-locked	TEM <sub>00</sub>
STC-PS-R-1064	1064	1-10 W	<20	48±1	Mode-locked	TEM <sub>00</sub>
STC-PS-Seed-1064	1064	1-300	<20	80±1	Mode-locked	TEM <sub>00</sub>
Macro/ Micro-1064-P	1064	10 W	Macro 160 μs	Micro~100MHz	Mode-locked	TEM <sub>00</sub>
Macro/ Micro-1319-P	1319	7 W	Macro 160 μs	Micro~100MHz	Mode-locked	TEM <sub>00</sub>

### Fiber Laser Type:

	Wavelength (nm)	Output power (mW)	Pulse duration (ps)	Rep. rate (MHz)	Operating mode	Transverse mode
STC-FL-266-PS	266	1-10	<10	20-80 (Fixed)	Mode-locked	TEM <sub>00</sub>
STC-FL-355-PS	355	1-50	<10	20-80 (Fixed)	Mode-locked	TEM <sub>00</sub>
STC-FL-532-PS	532	1-150	<10	20-80 (Fixed)	Mode-locked	TEM <sub>00</sub>
STC-FL-1064-PS	1064	1-2000	<10	20-80 (Fixed)	Mode-locked	TEM <sub>00</sub>
STC-FL-266-Pico	266	1-50	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-343-Pico	343	1-50	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-355-Pico	355	1-50	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-515-Pico	515	1-1000	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-532-Pico	532	1-1000	100-900	0.1-80 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-535-Pico	535	1-1000	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-1030-Pico	1030	10-5000	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-1064-Pico	1064	10-5000	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>
STC-FL-1070-Pico	1070	10-5000	100-900	0.1-20 (variable)	Pulsed	TEM <sub>00</sub>

### Diode Pumped Laser Type:

	Wavelength (nm)	Output power (mW)	Pulse duration (ps)	Rep. rate (MHz)	Operating mode	Transverse mode
STC-DPS-213-Pico	213	1-30	<50 ps	5	Pulsed	TEM <sub>00</sub>
STC-DPS-266-Pico	266	100-500	<50 ps	5	Pulsed	TEM <sub>00</sub>
STC-DPS-355-Pico	355	100-700	<50 ps	5	Pulsed	TEM <sub>00</sub>
STC-DPS-532-Pico	532	2-10 W	<50 ps	0.1-10 MHz	Pulsed	TEM <sub>00</sub>
STC-DPS-1064-Pico	1064	5-30 W	<50 ps	0.1-10 MHz	Pulsed	TEM <sub>00</sub>

### Picosecond Pulsed Diode Laser

Picosecond pulsed diode laser features with integrated electronics, narrow pulse duration, high repetition frequency and easy operation. It is widely used



in fluorescence excitation, time resolve spectrum, high sensitive absorption spectroscopy, etc.

Model	Output power	Rep. rate (MHz)	Pulse duration (ps)
STC-MDL-PS-405	10 $\mu$ W~0.5 mW	0.1~80	100-1000
STC-MDL-PS-450	10 $\mu$ W~0.5 mW	0.1~80	100-1000
STC-MDL-PS-640	50 $\mu$ W~3.5 mW	0.1~80	100-1000
STC-MDL-PS-655	20 $\mu$ W~1.5 mW	0.1~20	100-1000
STC-MDL-PS-785	70 $\mu$ W~4.2 mW	0.1~80	100-1000
STC-MDL-PS-808	90 $\mu$ W~6.0 mW	0.1~80	100-1000
STC-MDL-PS-852	10 $\mu$ W~1.0 mW	0.1~80	100-1000
STC-MDL-PS-940	20 $\mu$ W~1.5 mW	0.1~80	100-1000
STC-MDL-PS-980	20 $\mu$ W~1.5 mW	0.1~80	100-1000

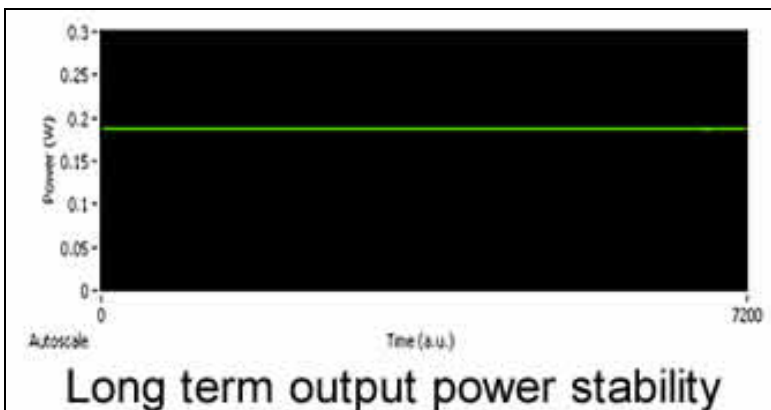
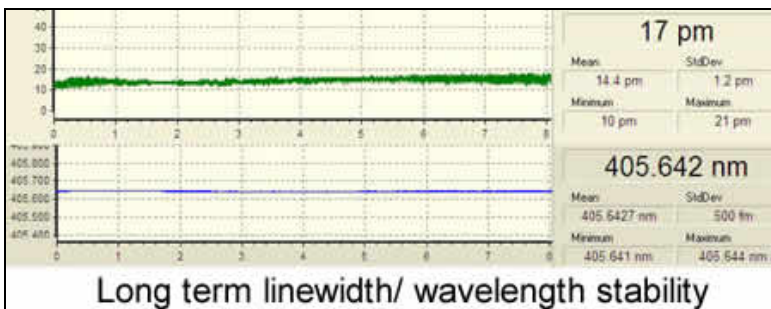
## STC-FC-D Series Lasers for Raman Spectroscopy

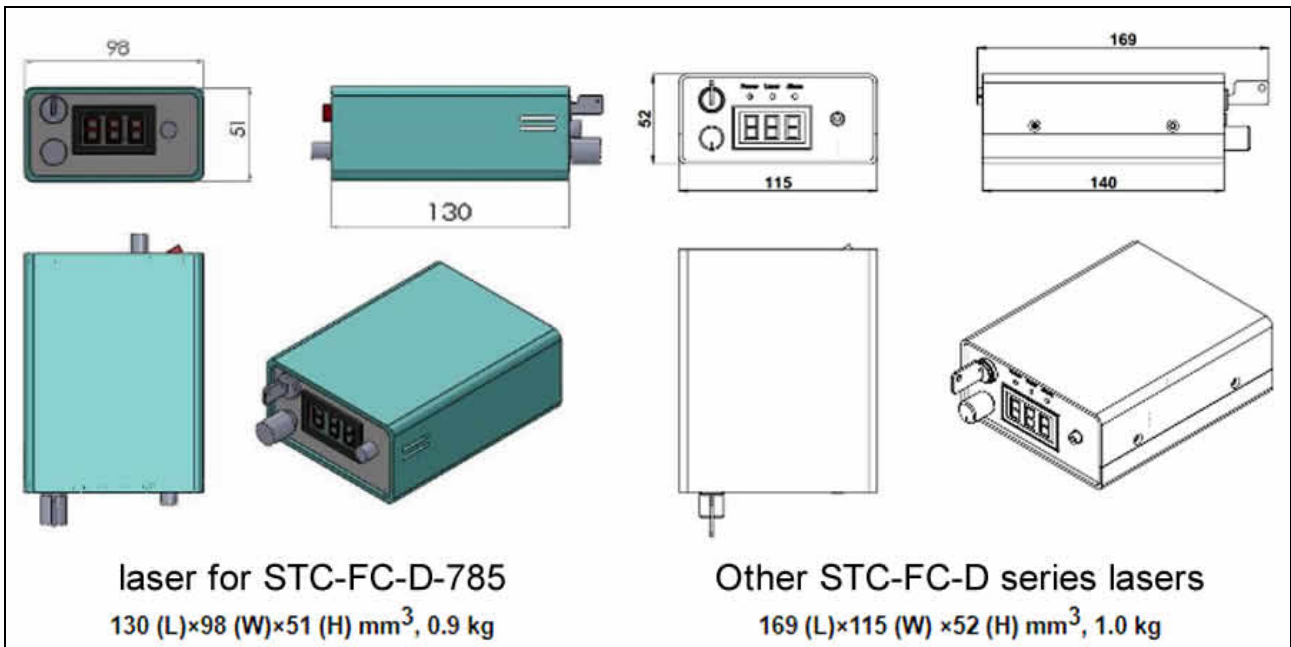
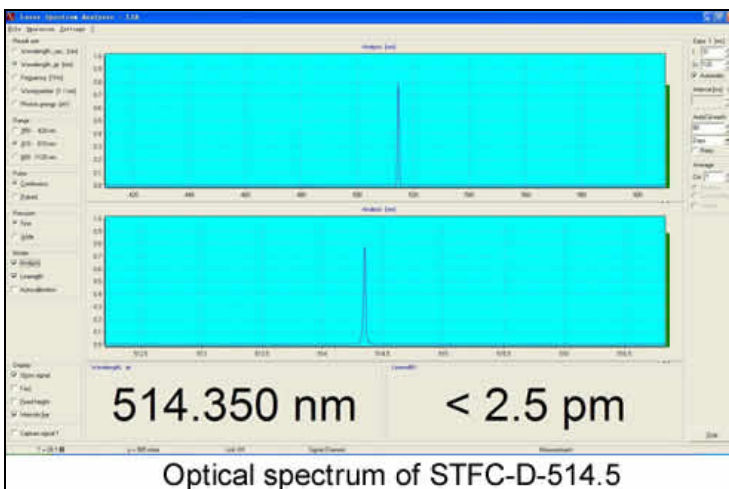
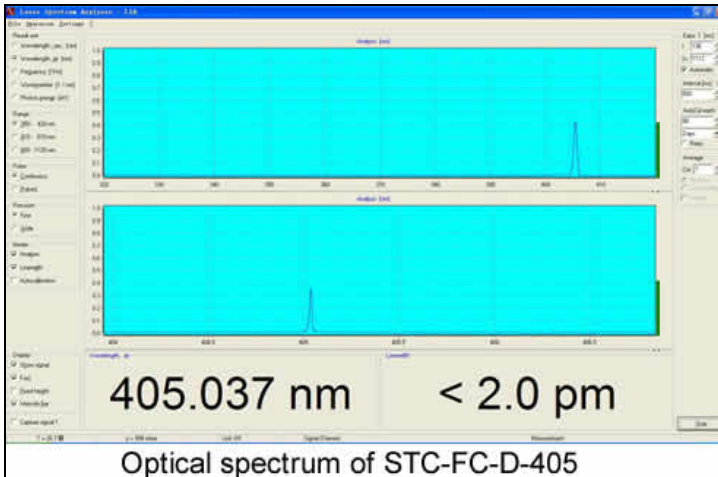
STC-FC-D series fiber coupled laser is specially designed for Raman spectroscopy, wavelength available from 375nm to 980 nm. The spectral linewidth is optional from 0.1 nm and 0.06 nm according to customers' actual requirements. Housed in ultra compact package, it is the perfect choice for Raman spectrometer, chemical and biological research, environmental science, jewelry appraisal, forensic appraisal, food/drug safety inspection, geological exploration, systems design and integration.



Wavelength (nm)	Output power (mW)	Wavelength (nm)	Output power (mW)
375	1~10	690	1~450
405	1~100	730	1~450
445	1~200	785	1~450
488	1~50	808	1~450
514.5	1~30	830	1~100
633	1~50	852	1~450
639	1~200	975	1~450
660	1~200	980	1~450

Note: The model of laser is STC-FC-D-X-Y, X stands for wavelength in nm and Y stands for laser power in mW. When placing the order, please indicate spectral line width (0.1 Or 0.06nm) and power stability (1%, 2% or 3%).





### Detailed Specifications

Model	STC-FC-D-375	STC-FC-D-405
Central wavelength (nm)	375±0.5	405±0.5
Spectral line width (nm)	0.1 (0.06, optional)	0.1 (0.06, optional)
Operating mode	CW	CW
Fiber core diameter	100µm, 0.22 NA	100µm, 0.22 NA
Fiber connector	SMA905	SMA905

Output power after fiber (mW)	>1, 2, ..., 10	>1, 10, ..., 100
Power stability (rms, over 4 hours)	<1%, <2%, <3%	<1%, <2%, <3%
Central wavelength stability (rms, over 2 hours) (pm)	<10	<10
Noise of amplitude (rms, 1~20MHz)	<1%	<1%
Warm-up time (minutes)	<5	<5
Operating temperature (°C)	20~30	20~30
Power supply	Adaptor or 5VDC@5A	Adaptor or 5VDC@5A
Expected lifetime (hours)	10000	10000
Warranty	1 year	1 year
Dimension and weight	169×115×52mm, 1.0kg	169×115×52mm, 1.0kg

<b>Model</b>	<b>STC-FC-D-514.5</b>	<b>STC-FC-D-633</b>
Central wavelength (nm)	514.5±0.5	633±0.5
Spectral line width (nm)	0.1 (0.06, optional)	0.1 (0.06, optional)
Operating mode	CW	CW
Fiber core diameter	100µm, 0.22 NA	100µm, 0.22 NA
Fiber connector	SMA905	SMA905
Output power after fiber (mW)	>1, 2, ..., 30	>1, 10, ..., 50
Power stability (rms, over 4 hours)	<1%, <2%, <3%	<1%, <2%, <3%
Central wavelength stability (rms, over 2 hours) (pm)	<10	<10
Noise of amplitude (rms, 1~20MHz)	<1%	<1%
Warm-up time (minutes)	<5	<5
Operating temperature (°C)	20~30	20~30
Power supply	Adaptor or 5VDC@5A	Adaptor or 5VDC@5A
Expected lifetime (hours)	10000	10000
Warranty	1 year	1 year
Dimension and weight	169×115×52mm, 1.0kg	169×115×52mm, 1.0kg

<b>Model</b>	<b>STC-FC-D-808</b>	<b>STC-FC-D-852</b>
Central wavelength (nm)	808±0.5	852±0.5
Spectral line width (nm)	0.1 (0.06, optional)	0.1 (0.06, optional)
Operating mode	CW	CW
Fiber core diameter	100µm, 0.22 NA	100µm, 0.22 NA
Fiber connector	SMA905	SMA905
Output power after fiber (mW)	>1, 100, ..., 450	>1, 100, ..., 450
Power stability (rms, over 4 hours)	<1%, <2%, <3%	<1%, <2%, <3%
Central wavelength stability (rms, over 2 hours) (pm)	<10	<10
Noise of amplitude (rms, 1~20MHz)	<1%	<1%
Warm-up time (minutes)	<5	<5
Operating temperature (°C)	20~30	20~30
Power supply	Adaptor or 5VDC@5A	Adaptor or 5VDC@5A
Expected lifetime (hours)	10000	10000
Warranty	1 year	1 year
Dimension and weight	169×115×52mm, 1.0kg	169×115×52mm, 1.0kg