

Single Frequency Lasers



SLIM
LaserBox

UV to IR
CW Monolithic DPSS Lasers
Laser Diode Modules

| | LBX-405S* | SLIM-473S | SLIM-532S | SLIM-550S | SLIM-561S | LBX-640S* | SLIM-660S* | LBX-730S* | LBX-785S* | LBX-830S* | Units |
|--|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-------|
|--|-----------|-----------|-----------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-------|

Optical specifications

| | | | | | | | | | | | |
|------------------|--------|------|-----|-----|--------|------|------|--------|------|------|-----|
| Wavelengths | 405* | 473 | 532 | 553 | 561 | 640* | 660* | 730* | 785* | 830* | nm |
| Wavelength range | ± 1 | | | | | | | | | | |
| Linewidth | < 150 | < 1 | | | < 100 | | < 1 | < 100 | | | MHz |
| Coherence Length | > 1 | > 50 | | | > 1 | | > 50 | > 1 | | | m |
| Laser type | LD/VBG | DPSS | | | LD/VBG | | DPSS | LD/VBG | | | |

Single Mode (TEM₀₀)

| | | | | | | | | | | | |
|---|---------|-------|-----------|-----------|-----------|-----|-------|-------|------|------|---------|
| Output Power | 25* | 50 | 50 to 300 | 25 to 200 | 25 to 300 | 35* | 50* | 30* | 100* | 100* | mW |
| Power Stability over 8 hours and ±3°C, p-p | ± 1 | | | | | | | | | | % |
| Optical Noise rms, 10Hz - 20MHz | < 0.5 | < 0.2 | | | < 0.5 | | < 0.2 | < 0.5 | | | % |
| Polarization Ratio Vertical +/- 3 Deg. | > 100:1 | | | | | | | | | | - |
| Beam Pointing stability | < 5 | | | | | | | | | | μrad/°C |

Circular Beam version

| | | | | | | | | | | |
|--|-----------|-------|-------|-----|-------|-------|-------|--|--|----------------|
| Beam Diameter (typ.) at 1/e ² , at 50mm from aperture | 0.4 x 0.8 | 0.75 | 0.7 | 0.7 | 1.2 | 1.2 | 0.5 | | | mm |
| Beam Divergence (typ.) at 1/e ² , full angle, in far field | < 10 | 1.0 | | | 0.6 | 1.0 | 2.5 | | | mrad |
| Beam Circularity in far field | > 80 | > 90 | | | > 80 | > 90 | > 65 | | | % |
| Beam Quality (typ.) | < 1.6 | < 1.2 | < 1.1 | | < 1.6 | < 1.1 | < 1.8 | | | M ² |

PM Fiber Coupling option

| | | | | | | | | | | | |
|--|------|----|----------|----------|----------|------|----|------|--|--|----|
| Output Power FC/APC connectors, 1.5m fiber length | call | 35 | 70 - 200 | 17 - 140 | 17 - 200 | call | 35 | call | | | mW |
|--|------|----|----------|----------|----------|------|----|------|--|--|----|

Lasers for Biophotonics

| | LBX-375 | LBX-375 | LBX-405 | LBX-405 | LBX-445 | SLIM-473 | LBX-488 | LBX-515 | LBX-532 | SLIM-532 | SLIM-550 | SLIM-561 | LBX-638 | LBX-642 | LBX-660 | LBX-705* | LBX-730* | LBX-785* | Units |
|--|---------|---------|---------|---------|---------|----------|---------|---------|---------|----------|----------|----------|---------|---------|---------|----------|----------|----------|-------|
|--|---------|---------|---------|---------|---------|----------|---------|---------|---------|----------|----------|----------|---------|---------|---------|----------|----------|----------|-------|

Optical specifications

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|------------------|-------------|-----|-----|-----|-----|------|-------------|-----|------|-----|-----|-------------|--------|-----|------|------|------|------|----|
| Wavelengths | 375 | 375 | 405 | 405 | 445 | 473 | 488 | 515 | 532 | 532 | 553 | 561 | 638 | 642 | 660 | 705* | 730* | 785* | nm |
| Wavelength range | ± 5 | | | | | ± 1 | +2/- 5 | ± 5 | ± 1 | | | +5/- 2 | +3/- 5 | ± 5 | ± 10 | | ± 5 | | |
| Laser type | Laser Diode | | | | | DPSS | Laser Diode | | DPSS | | | Laser Diode | | | | | | | |

Single Mode (TEM₀₀)

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|---|---------|-----|-----------|-----|----|-------|----------|----|-------|------------|-----------|-----------|-----------|-------|-----|-----|-----|---------|----|
| Output Power | 16 | 150 | 100 / 120 | 500 | 50 | 50 | 50 / 100 | 20 | 50 | 100 to 300 | 25 to 200 | 25 to 300 | 100 / 150 | 130 | 100 | 30* | 30* | 130* | mW |
| Power Stability over 8 hours and ±3°C, p-p | ± 0.5 | | | | | ± 1 | ± 0.5 | | ± 1 | | | ± 1 | | ± 0.5 | | | | | % |
| Optical Noise rms, 10Hz - 20MHz | < 0.5 | | | | | < 0.2 | < 0.5 | | < 0.2 | | | < 0.5 | | | | | % | | |
| Polarization Ratio Vertical +/- 3 Deg. | > 100:1 | | | | | | | | | | | | | | | | | - | |
| Beam Pointing stability | < 5 | | | | | | | | | | | | | | | | | μrad/°C | |

| | | | | | | | | | | | | | | | | | | | |
|--|--------|-----------|--------|-----------|--------|-------|--------|-------|-------|-------|-------|--------|-----|-----|-----|-----|----------------|-----|------|
| Beam Diameter (typ.) at 1/e ² , at 50mm from aperture | 1.3 | 1.3 x 2.4 | 0.9 | 1.2 x 2.8 | 1.0 | 0.75 | 1.2 | 1.0 | 0.7 | 0.7 | 1.3 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | mm |
| Beam Divergence (typ.) at 1/e ² , full angle, in far field | 0.6 | 2.6 x 0.4 | 0.6 | 2.6 x 0.3 | 0.6 | 1.0 | 0.6 | 0.8 | 1.0 | 1.0 | 0.6 | | 0.7 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | mrad |
| Beam Circularity in far field | > 90 | NA | > 90 | NA | > 90 | | | | | | | | | | | | | | % |
| Beam Quality (typ.) | < 1.35 | MM | < 1.25 | MM | < 1.25 | < 1.2 | < 1.25 | < 1.2 | < 1.1 | < 1.1 | < 1.1 | < 1.25 | | | | | M ² | | |

PM Fiber Coupling option

| | | | | | | | | | | | | | | | | | | | |
|--|---|----|---------|----|----|----|---------|----|----|----------|-----------|-----------|----------|----|----|----|----|---------|----|
| Output Power FC/APC connectors, 1.5m fiber length | 8 | NA | 70 / 85 | NA | 30 | 35 | 35 / 70 | 14 | 35 | 70 - 200 | 17 to 140 | 17 to 200 | 70 / 100 | 90 | 70 | 20 | 20 | 40 / 90 | mW |
|--|---|----|---------|----|----|----|---------|----|----|----------|-----------|-----------|----------|----|----|----|----|---------|----|