COHERENT

OBIS

Lasers for Plug-and-Play Simplicity

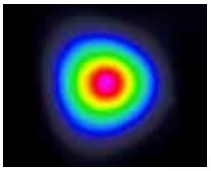
The Coherent OBIS suite of products offers higher signal-to-noise ratio laser technology for a wide range of applications in the Life Sciences, Environmental Monitoring, and Inspection markets.

Our Optically Pumped Semiconductor Laser (OPSL) technology combined with our laser diode solutions delivers the industry-best laser reliability and performance. The OBIS family of smart lasers covers the wavelength spectrum—from the Ultraviolet at 375 nm to the near-Infrared at 785 nm.

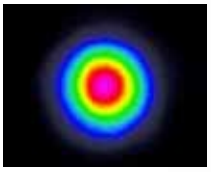
The plug-and-play flexibility allows customers to integrate the product of their choice much faster, thereby reducing their time-to-market and costs.

OBIS lasers deliver superior power, low RMS noise, and higher beam quality that are key customers needs from any laser source.

Coherent has implemented an intelligent design that allows multiple ways to interface with the laser, giving our customers the ability to choose the smartest operation process for their specific application requirements.



OBIS LX: The OBIS LX diode lasers deliver a low astigmatism circular beam as a result of our high quality optics technology. The OBIS LX beam measurements are made at the 90/10 Clip Levels to ensure the highest mode quality.



OBIS LS: OPSL technology provides the highest quality beam offering excellent circularity and beam parameters (divergence, diameter) that are constant over a wide power range.

OBIS lasers are now compatible with MetaMorph and µManager Software for microscopy automation and image analysis.

Superior Reliability & Performance

OBIS Features:

- **Commonality across the spectrum in dimensions, beam and interface**
- **Integrated control electronics**
- **Analog, Digital and mixed modulation modes**

OBIS Applications:

- **Confocal Microscopy**
- **DNA Sequencing**
- **Flow Cytometry**
- **Medical Imaging and Instrumentation**

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System Specifications	OBIS 375LX	OBIS 405LX	OBIS 413LX*	OBIS 422LX	OBIS 445LX
Wavelength[1] (nm)	375	405	413	422	445
Output Power[2] (mW)	16 50	50, 100, 140 200, 250	100	100	75
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.3	≤1.2 ≤1.3	≤1.2	≤1.2	≤1.2
Beam Asymmetry	≤1:1.2	≤1:1.2	≤1:1.2	≤1:1.2	≤1:1.2
Beam Diameter at $1/e^2$ (mm)	0.7 ±0.1	0.8 ±0.1	0.8 ±0.1	0.9 ±0.1	0.6 ±0.1
Beam Divergence (mrad, full-angle)	<1	<1	<1	<1.1	<1.1
Pointing Stability (µrad) (over 2 hours after warm-up and ±3°C)	<30	<30	<30	<30	<30
Pointing Stability Over Temp. (µrad/°C)	<5	<5	<5	<5	<5
RMS Noise (%)(20 Hz to 20 MHz)	≤0.05	≤0.05	≤0.05	≤0.05	≤0.05
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	<0.5	<0.5	<0.5	<0.5	<0.5
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2	<2	<2
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5	<5	<5
Polarization Ratio	Minimum 100:1, Vertical ±5°				
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control				
Digital Modulation					
Maximum Bandwidth (MHz)	75	150	150	150	150
Rise Time (10% to 90%)(nsec)	<5	<2	<2	<2	<2
Fall Time (90% to 10%)(nsec)	<5	<2	<2	<2	<2
Modulation Depth (extinction ratio)	>1,000,000:1 at 0 Hz, >250:1 at 75 MHz		>1,000,000:1 at 0 Hz, >250:1 at 150 MHz		
Analog Modulation					
Maximum Bandwidth (kHz)	500	500	500	500	500
Rise Time (10% to 90%)(nsec)	<700	<700	<700	<700	<700
Fall Time (90% to 10%)(nsec)	<700	<700	<700	<700	<700
Modulation Depth (extinction ratio)	>1,000,000:1	>1,000,000:1	>1,000,000:1	>1,000,000:1	>1,000,000:1
Static Alignment Tolerances					
Beam Position from Reference[5] (mm)	<1	<1	<1	<1	<1
Beam Angle[5] (mrad)	<5	<5	<5	<5	<5
Beam Waist Position at Exit Window (mm)	n/a	n/a	n/a	n/a	n/a
Laser Safety Classification	3b	3b	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Laser Head Baseplate Temp. (Max., °C)	50	50	50	50	50
Heat Dissipation of Laser Head[6] (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Ambient Temperature[7]					
Operating Condition[8] (°C)	10 to 50	10 to 50	10 to 50	10 to 50	10 to 50
Non-operating Condition (°C)	-20 to 60	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Shock Tolerance (g)(6 ms)	30	30	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power. For LS versions all residual laser emission at 808 nm pumplight or fundamental <0.1 mW.

[3] For LX versions the M^2 measured with ModeMaster with 90/10 clip levels.

[4] For LS versions typical power-on delay 1 minute. For LX versions typical power-on delay 0.1 minutes.

[5] See mechanical drawing for exit beam location.

[6] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[7] Non-Condensing. See User Manual for more detail.

[8] For LS versions laser head baseplate temperature needs to be maintained at ≤40°C.

* Preliminary version.

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System Specifications	OBIS 458LX	OBIS 473LX	OBIS 488LX	OBIS 488LS
Wavelength[1] (nm)	458	473	488	488
Output Power[2] (mW)	75	75	50 150	20, 60, 80, 100, 150
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.2	≤1.2	≤1.2	≤1.1
Beam Asymmetry	≤1:1.2	≤1:1.2	≤1:1.2	≤1:1.1
Beam Diameter at $1/e^2$ (mm)	0.8 ±0.1	0.8 ±0.1	0.8 ±0.1 0.7 ±0.1	0.7 ±0.05
Beam Divergence (mrad, full-angle)	<1.1	<1.1	<1.2	<1.2
Pointing Stability (µrad) (over 2 hours after warm-up and ±3°C)	<30	<30	<30	<30
Pointing Stability Over Temp. (µrad/°C)	<5	<5	<5	<5
RMS Noise (%)(20 Hz to 20 MHz)	≤0.05	≤0.05	≤0.05	≤0.25
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	<0.5	<0.5	<0.5	<1
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2	<2
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5	<5
Polarization Ratio	Minimum 100:1, Vertical ±5°			
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control			
Digital Modulation				
Maximum Bandwidth (MHz)	150	150	150	0.05
Rise Time (10% to 90%)(nsec)	<2	<2	<2	<18,000
Fall Time (90% to 10%)(nsec)	<2	<2	<2.5	<2000
Modulation Depth (extinction ratio)	>1,000,000:1 at 0 Hz, >250:1 at 150 MHz			Infinite at 0 Hz to 50 kHz
Analog Modulation				
Maximum Bandwidth (kHz)	500	500	500	100
Rise Time (10% to 90%)(nsec)	<700	<700	<700	<3000
Fall Time (90% to 10%)(nsec)	<700	<700	<700	<3000
Modulation Depth (extinction ratio)	>1,000,000:1	>1,000,000:1	>1,000,000:1	>50:1
Static Alignment Tolerances				
Beam Position from Reference[5] (mm)	<1	<1	<1	<0.5
Beam Angle[5] (mrad)	<5	<5	<5	<2.5
Beam Waist Position at Exit Window (mm)	n/a	n/a	n/a	±200
Laser Safety Classification	3b	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 8, Max. 12
Laser Head Baseplate Temp. (Max., °C)	50	50	50	40
Heat Dissipation of Laser Head[6] (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 8, Max. 12
Ambient Temperature[7]				
Operating Condition[8] (°C)	10 to 50	10 to 50	10 to 50	15 to 40
Non-operating Condition (°C)	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Shock Tolerance (g)(6 ms)	30	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power. For LS versions all residual laser emission at 808 nm pumplight or fundamental <0.1 mW.

[3] For LX versions the M^2 measured with ModeMaster with 90/10 clip levels.

[4] For LS versions typical power-on delay 1 minute. For LX versions typical power-on delay 0.1 minutes.

[5] See mechanical drawing for exit beam location.

[6] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[7] Non-Condensing. See User Manual for more detail.

[8] For LS versions laser head baseplate temperature needs to be maintained at ≤40°C.

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System Specifications	OBIS 505LX	OBIS 514LS	OBIS 514LX	OBIS 520LX
Wavelength[1] (nm)	505	514	514	520
Output Power[2] (mW)	50	20	40	40
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.2	≤1.1	≤1.2	≤1.2
Beam Asymmetry	≤1:1.2	≤1:1.1	≤1:1.2	≤1:1.2
Beam Diameter at $1/e^2$ (mm)	0.7 ±0.1	0.7 ±0.05	0.6 ±0.1	0.6 ±0.1
Beam Divergence (mrad, full-angle)	<1.2	<1.2	<1.1	<1.1
Pointing Stability (µrad) (over 2 hours after warm-up and ±3°C)	<30	<30	<30	<30
Pointing Stability Over Temp. (µrad/°C)	<5	<5	<5	<5
RMS Noise (%)(20 Hz to 20 MHz)	≤0.05	≤0.25	≤0.05	≤0.05
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	<0.5	<1	<1	<1
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2	<2
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5	<5
Polarization Ratio	Minimum 100:1, Vertical ±5°			
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control			
Digital Modulation				
Maximum Bandwidth (MHz)	150	0.05	100	100
Rise Time (10% to 90%)(nsec)	<2	<18,000	<3.5	<3.5
Fall Time (90% to 10%)(nsec)	<2.5	<2000	<2	<2
Modulation Depth (extinction ratio)	>1,000,000:1 at 0 Hz, >250:1 at 150 MHz	Infinite at 0 Hz to 50 kHz	>1,000,000:1 at 0 Hz, >250:1 at 100 MHz	>1,000,000:1 at 0 Hz, >250:1 at 100 MHz
Analog Modulation				
Maximum Bandwidth (kHz)	500	100	500	500
Rise Time (10% to 90%)(nsec)	<700	<3000	<700	<700
Fall Time (90% to 10%)(nsec)	<700	<3000	<700	<700
Modulation Depth (extinction ratio)	>1,000,000:1	>50:1	>1,000,000:1	>1,000,000:1
Static Alignment Tolerances				
Beam Position from Reference[5] (mm)	<1	<0.5	<1	<1
Beam Angle[5] (mrad)	<5	<2.5	<5	<5
Beam Waist Position at Exit Window (mm)	n/a	±200	n/a	n/a
Laser Safety Classification	3b	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 8, Max. 12	Typical 5, Max. 13	Typical 5, Max. 13
Laser Head Baseplate Temp. (Max., °C)	50	40	50	50
Heat Dissipation of Laser Head[6] (W)	Typical 5, Max. 13	Typical 8, Max. 12	Typical 5, Max. 13	Typical 5, Max. 13
Ambient Temperature[7]				
Operating Condition[8] (°C)	10 to 50	15 to 40	10 to 50	10 to 50
Non-operating Condition (°C)	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Shock Tolerance (g)(6 ms)	30	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power. For LS versions all residual laser emission at 808 nm pumplight or fundamental <0.1 mW.

[3] For LX versions the M^2 measured with ModeMaster with 90/10 clip levels.

[4] For LS versions typical power-on delay 1 minute. For LX versions typical power-on delay 0.1 minutes.

[5] See mechanical drawing for exit beam location.

[6] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[7] Non-Condensing. See User Manual for more detail.

[8] For LS versions laser head baseplate temperature needs to be maintained at ≤40°C.

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System Specifications	OBIS 532LS	OBIS 552LS	OBIS 561LS	OBIS 594LS
Wavelength[1] (nm)	532	552	561	594
Output Power[2] (mW)	20, 50, 80, 100, 150	20, 60, 80, 100, 150	20, 50, 80, 100, 150	20, 60, 100
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.1	≤1.1	≤1.1	≤1.1
Beam Asymmetry	≤1:1.1	≤1:1.1	≤1:1.1	≤1:1.1
Beam Diameter at $1/e^2$ (mm)	0.7 ±0.05	0.7 ±0.05	0.7 ±0.05	0.7 ±0.05
Beam Divergence (mrad, full-angle)	<1.2	<1.2	<1.2	<1.3
Pointing Stability (µrad) (over 2 hours after warm-up and ±3°C)	<30	<30	<30	<30
Pointing Stability Over Temp. (µrad/°C)	<5	<5	<5	<5
RMS Noise (%)(20 Hz to 20 MHz)	≤0.25	≤0.25	≤0.25	≤0.25
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	<1	<1	<1	<1
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2	<2
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5	<5
Polarization Ratio	Minimum 100:1, Vertical ±5°			
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control			
Digital Modulation				
Maximum Bandwidth (MHz)	0.05	0.05	0.05	0.05
Rise Time (10% to 90%)(nsec)	<18,000	<18,000	<18,000	<18,000
Fall Time (90% to 10%)(nsec)	<2000	<2000	<2000	<2000
Modulation Depth (extinction ratio)	Infinite at 0 Hz to 50 kHz			
Analog Modulation				
Maximum Bandwidth (kHz)	100	100	100	100
Rise Time (10% to 90%)(nsec)	<3000	<3000	<3000	<3000
Fall Time (90% to 10%)(nsec)	<3000	<3000	<3000	<3000
Modulation Depth (extinction ratio)	>50:1	>50:1	>50:1	>50:1
Static Alignment Tolerances				
Beam Position from Reference[5] (mm)	<0.5	<0.5	<0.5	<0.5
Beam Angle[5] (mrad)	<2.5	<2.5	<2.5	<2.5
Beam Waist Position at Exit Window (mm)	±200	±200	±200	±200
Laser Safety Classification	3b	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 8, Max. 12	Typical 8, Max. 12	Typical 8, Max. 12	Typical 8, Max. 12
Laser Head Baseplate Temp. (Max., °C)	40	40	40	40
Heat Dissipation of Laser Head[6] (W)	Typical 8, Max. 12	Typical 8, Max. 12	Typical 8, Max. 12	Typical 8, Max. 12
Ambient Temperature[7]				
Operating Condition[8] (°C)	15 to 40	15 to 40	15 to 40	15 to 40
Non-operating Condition (°C)	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Shock Tolerance (g)(6 ms)	30	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power. For LS versions all residual laser emission at 808 nm pumplight or fundamental <0.1 mW.

[3] For LX versions the M^2 measured with ModeMaster with 90/10 clip levels.

[4] For LS versions typical power-on delay 1 minute. For LX versions typical power-on delay 0.1 minutes.

[5] See mechanical drawing for exit beam location.

[6] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[7] Non-Condensing. See User Manual for more detail.

[8] For LS versions laser head baseplate temperature needs to be maintained at ≤40°C.

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System Specifications	OBIS 637LX	OBIS 640LX	OBIS 647LX	OBIS 660LX
Wavelength[1] (nm)	637	640	647	660
Output Power[2] (mW)	140	40, 100	120	100
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.2	≤1.2	≤1.2	≤1.2
Beam Asymmetry	≤1:1.2	≤1:1.2	≤1:1.2	≤1:1.2
Beam Diameter at $1/e^2$ (mm)	0.7 ±0.1	0.8 ±0.1	0.8 ±0.1	0.9 ±0.1
Beam Divergence (mrad, full-angle)	<1.3	<1.3	<1.3	<1.3
Pointing Stability (µrad) (over 2 hours after warm-up and ±3°C)	<30	<30	<30	<30
Pointing Stability Over Temp. (µrad/°C)	<5	<5	<5	<5
RMS Noise (%)(20 Hz to 20 MHz)	≤0.05	≤0.05	≤0.05	≤0.05
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	<0.5	<0.5	<0.5	<0.5
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2	<2
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5	<5
Polarization Ratio	Minimum 100:1, Vertical ±5°			
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control			
Digital Modulation				
Maximum Bandwidth (MHz)	150	150	150	150
Rise Time (10% to 90%)(nsec)	<2	<2	<2	<2
Fall Time (90% to 10%)(nsec)	<2	<2	<2	<2
Modulation Depth (extinction ratio)	>1,000,000:1 at 0 Hz, >250:1 at 150 MHz			
Analog Modulation				
Maximum Bandwidth (kHz)	300	500	500	500
Rise Time (10% to 90%)(nsec)	<1200	<700	<700	<700
Fall Time (90% to 10%)(nsec)	<800	<700	<700	<700
Modulation Depth (extinction ratio)	>1,000,000:1	>1,000,000:1	>1,000,000:1	>1,000,000:1
Static Alignment Tolerances				
Beam Position from Reference[5] (mm)	<1	<1	<1	<1
Beam Angle[5] (mrad)	<5	<5	<5	<5
Beam Waist Position at Exit Window (mm)	n/a	n/a	n/a	n/a
Laser Safety Classification	3b	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Laser Head Baseplate Temp. (Max., °C)	50	50	50	50
Heat Dissipation of Laser Head[6] (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Ambient Temperature[7]				
Operating Condition[8] (°C)	10 to 50	10 to 50	10 to 50	10 to 50
Non-operating Condition (°C)	-20 to 60	-20 to 60	-20 to 60	-20 to 60
Shock Tolerance (g)(6 ms)	30	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power. For LS versions all residual laser emission at 808 nm pumplight or fundamental <0.1 mW.

[3] For LX versions the M^2 measured with ModeMaster with 90/10 clip levels.

[4] For LS versions typical power-on delay 1 minute. For LX versions typical power-on delay 0.1 minutes.

[5] See mechanical drawing for exit beam location.

[6] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[7] Non-Condensing. See User Manual for more detail.

[8] For LS versions laser head baseplate temperature needs to be maintained at ≤40°C.

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System Specifications	OBIS 685LX	OBIS 730LX	OBIS 785LX
Wavelength[1] (nm)	685	730	785
Output Power[2] (mW)	40	30	100
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.2	≤1.2	≤1.2
Beam Asymmetry	≤1:1.2	≤1:1.2	≤1:1.2
Beam Diameter at $1/e^2$ (mm)	0.8 ±0.1	0.8 ±0.1	0.7 ±0.1
Beam Divergence (mrad, full-angle)	<1.3	<1.3	<1.7
Pointing Stability (µrad) (over 2 hours after warm-up and ±3°C)	<30	<30	<30
Pointing Stability Over Temp. (µrad/°C)	<5	<5	<5
RMS Noise (%)(20 Hz to 20 MHz)	≤0.05	≤0.05	≤0.05
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	<0.5	<0.5	<0.5
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5
Polarization Ratio	Minimum 100:1, Vertical ±5°	Minimum 100:1, Vertical ±5°	Minimum 100:1, Vertical ±5°
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control		
Digital Modulation			
Maximum Bandwidth (MHz)	150	150	150
Rise Time (10% to 90%)(nsec)	<2	<2	<2
Fall Time (90% to 10%)(nsec)	<2	<2	<2
Modulation Depth (extinction ratio)		>1,000,000:1 at 0 Hz, >250:1 at 150 MHz	
Analog Modulation			
Maximum Bandwidth (kHz)	500	500	500
Rise Time (10% to 90%)(nsec)	<700	<700	<700
Fall Time (90% to 10%)(nsec)	<700	<700	<700
Modulation Depth (extinction ratio)	>1,000,000:1	>1,000,000:1	>1,000,000:1
Static Alignment Tolerances			
Beam Position from Reference[5] (mm)	<1	<1	<1
Beam Angle[5] (mrad)	<5	<5	<5
Beam Waist Position at Exit Window (mm)	n/a	n/a	n/a
Laser Safety Classification	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Laser Head Baseplate Temp. (Max., °C)	50	50	50
Heat Dissipation of Laser Head[6] (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Ambient Temperature[7]			
Operating Condition[8] (°C)	10 to 50	10 to 50	10 to 50
Non-operating Condition (°C)	-20 to 60	-20 to 60	-20 to 60
Shock Tolerance (g)(6 ms)	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power. For LS versions all residual laser emission at 808 nm pumplight or fundamental <0.1 mW.

[3] For LX versions the M^2 measured with ModeMaster with 90/10 clip levels.

[4] For LS versions typical power-on delay 1 minute. For LX versions typical power-on delay 0.1 minutes.

[5] See mechanical drawing for exit beam location.

[6] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[7] Non-Condensing. See User Manual for more detail.

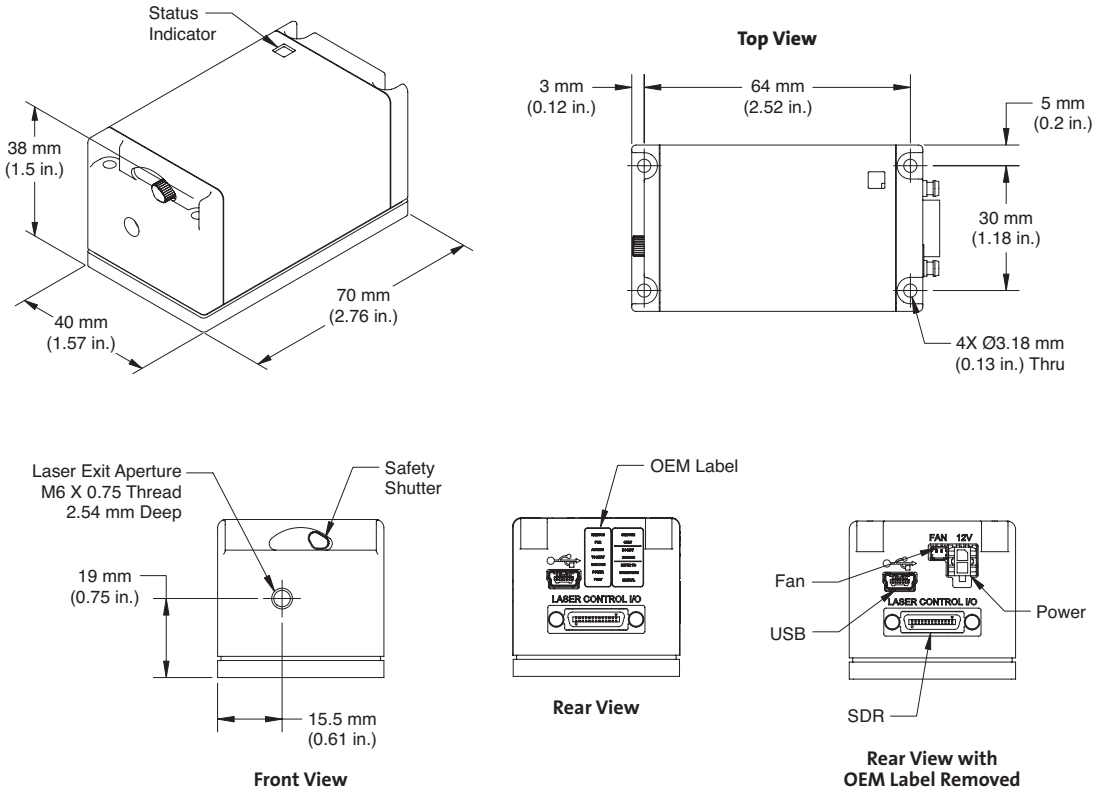
[8] For LS versions laser head baseplate temperature needs to be maintained at ≤40°C.

Utility and Environmental Requirements

Operating Voltage[1] (VDC)	12 ±2
Dimensions (L x W x H)	
Laser	70 x 40 x 38 mm (2.75 x 1.57 x 1.5 in.)
OBIS Remote (optional)	105 x 68 x 36 mm (4.13 x 2.68 x 1.42 in.)
DC Power Supply (optional)	105 x 42 x 33 mm (4.13 x 1.65 x 1.3 in.)
Cable, Laser to OBIS Remote (optional)	1 m (3.28 ft.)(3 meter and 0.3 meter sold separately)
Weights	
Laser	0.16 kg (0.35 lbs.)
OBIS Remote (optional)	0.24 kg (0.53 lbs.)
DC Power Supply (optional)	0.36 kg (0.79 lbs.)
Cable, Laser to OBIS Remote (optional)	0.1 kg (0.22 lbs.) for 1 meter

[1] If user supplied, the DC power supply has to meet the following requirements: power >20W; ripple <5% peak-to-peak; line regulation <0.5%.

Mechanical Specifications



COHERENT

OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

The OBIS Fiber Pigtailed (OBIS FP) suite of lasers delivers the simplicity of a plug-and-play platform for a wide range of wavelengths from the violet to the near IR. The fiber pigtail termination is complete with a FC/APC connector. The OBIS FP lasers are based on the OBIS laser platform, offering the same speed-to-market benefits.

The OBIS FP lasers offer superior performance, reliability, and hands-free operation. These lasers combine single-mode polarization-maintaining fiber with an FC/APC connector for a high-quality low-noise laser beam output. They utilize proprietary fiber technology to provide superior lifetimes, and permanent fiber attachments for guaranteed power over time.

OBIS FP lasers are also compatible with MetaMorph and µManager Software for microscopy automation and image analysis.

OBIS FP Features:

- **All OBIS advantages with fiber delivery**
- **Single mode, polarization maintaining fiber**
- **Extended life fiber design**

OBIS FP Applications:

- **Confocal Microscopy**
- **DNA Sequencing**
- **Flow Cytometry**
- **Medical Imaging and Instrumentation**

Superior Reliability & Performance

www.Coherent.com/OBISFP

OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

System Specifications	OBIS FP 405LX	OBIS FP 413LX*	OBIS FP 445LX
Wavelength[1] (nm)	405	413	445
Output Power[2] (mW)	50, 100	50	45
Output from Fiber	FC/APC; 8° angled[7]	FC/APC; 8° angled[7]	FC/APC; 8° angled[7]
Fiber Cable Type	3 mm Mono-Coil	3 mm Mono-Coil	3 mm Mono-Coil
Fiber Cable Length (m)(minimum)	1	1	1
Fiber Numerical Aperture (NA)(1/e²)	0.055	0.055	0.055
Fiber Core Diameter (µm)(typical)	3.5	3.5	3.5
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.1	≤1.1	≤1.1
Beam Asymmetry	≤1:1.1	≤1:1.1	≤1:1.1
RMS Noise (%)(20 Hz to 20 MHz)	≤0.2	≤0.2	≤0.2
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	≤2	≤2	≤2
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2
Long-term Output Power Average (%/hrs.)	≤5/1000	≤5/1000	≤5/1000
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5
Polarization Ratio	Minimum 100:1	Minimum 100:1	Minimum 100:1
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control		
Digital Modulation			
Maximum Bandwidth (MHz)	150	150	150
Rise Time (10% to 90%)(nsec)	<2	<2	<2
Fall Time (90% to 10%)(nsec)	<2	<2	<2
Modulation Depth (extinction ratio)		>1,000,000:1 at 0 Hz, >250:1 at 150 MHz	
Analog Modulation			
Maximum Bandwidth (kHz)	500	500	500
Rise Time (10% to 90%)(nsec)	<700	<700	<700
Fall Time (10% to 90%)(nsec)	<700	<700	<700
Modulation Depth (extinction ratio)	>1,000,000:1	>1,000,000:1	>1,000,000:1
Laser Safety Classification	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Laser Head Baseplate Temperature (Max., °C)	50	50	50
Heat Dissipation of Laser Head[5] (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Ambient Temperature[6]			
Operating Condition (°C)	10 to 50	10 to 50	10 to 50
Non-operating Condition (°C)	-20 to +60	-20 to +60	-20 to +60
Shock Tolerance (g)(6 ms)	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power.

[3] M^2 measured with ModeMaster with 90/10 clip levels.

[4] Typical power-on delay 0.1 minutes.

[5] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[6] Non-Condensing. See User Manual for more detail.

[7] Fiber FC/APC connector output not compatible for patchcord-to-patchcord connection.

* Preliminary version.

OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

System Specifications	OBIS FP 473LX	OBIS FP 488LX	OBIS FP 488LS
Wavelength[1] (nm)	473	488	488
Output Power[2] (mW)	50	30, 100	15 40, 60, 80, 120
Output from Fiber	FC/APC; 8° angled[7]	FC/APC; 8° angled[7]	FC/APC; 8° angled FC/APC; 8° angled[7]
Fiber Cable Type	3 mm Mono-Coil	3 mm Mono-Coil	5 mm Protective Tubing
Fiber Cable Length (m)(minimum)	1	1	1
Fiber Numerical Aperture (NA)(1/e^2)	0.055	0.055	0.1 0.06
Fiber Core Diameter (µm)(typical)	3.5	3.5	4
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.1	≤1.1	≤1.1
Beam Asymmetry	≤1:1.1	≤1:1.1	≤1:1.1
RMS Noise (%)(20 Hz to 20 MHz)	≤0.2	≤0.2	≤0.25
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	≤2	≤2	≤1
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2
Long-term Output Power Average (%/hrs.)	≤4/1000	≤4/1000	-
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5
Polarization Ratio	Minimum 100:1	Minimum 100:1	Minimum 100:1
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control		
Digital Modulation			
Maximum Bandwidth (MHz)	150	150	0.05
Rise Time (10% to 90%)(nsec)	<2	<2	<18,000
Fall Time (90% to 10%)(nsec)	<2	<2.5	<2000
Modulation Depth (extinction ratio)	>1,000,000:1 at 0 Hz, >250:1 at 150 MHz	>1,000,000:1 at 0 Hz, >250:1 at 150 MHz	Infinite at 0 Hz to 50 kHz
Analog Modulation			
Maximum Bandwidth (kHz)	500	500	100
Rise Time (10% to 90%)(nsec)	<700	<700	<3000
Fall Time (10% to 90%)(nsec)	<700	<700	<3000
Modulation Depth (extinction ratio)	>1,000,000:1	>1,000,000:1	>50:1
Laser Safety Classification	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 8, Max. 12
Laser Head Baseplate Temperature (Max., °C)	50	50	40
Heat Dissipation of Laser Head[5] (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 8, Max. 12
Ambient Temperature[6]			
Operating Condition (°C)	10 to 50	10 to 50	15 to 40
Non-operating Condition (°C)	-20 to +60	-20 to +60	-20 to +60
Shock Tolerance (g)(6 ms)	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power.

[3] M^2 measured with ModeMaster with 90/10 clip levels.

[4] Typical power-on delay 0.1 minutes.

[5] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[6] Non-Condensing. See User Manual for more detail.

[7] Fiber FC/APC connector output not compatible for patchcord-to-patchcord connection.

OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

System Specifications	OBIS FP 505LX	OBIS FP 514LS	OBIS FP 514LX	OBIS FP 520LX
Wavelength[1] (nm)	505	514	514	520
Output Power[2] (mW)	50	15	30	25
Output from Fiber	FC/APC; 8° angled[7]	FC/APC; 8° angled	FC/APC; 8° angled[7]	FC/APC; 8° angled[7]
Fiber Cable Type	3 mm Mono-Coil	5 mm Protective Tubing	3 mm Mono-Coil	3 mm Mono-Coil
Fiber Cable Length (m)(minimum)	1	1	1	1
Fiber Numerical Aperture (NA)(1/e^2)	0.055	0.1	0.055	0.055
Fiber Core Diameter (µm)(typical)	3.5	4	4.5	4.5
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.1	≤1.1	≤1.1	≤1.1
Beam Asymmetry	≤1:1.1	≤1:1.1	≤1:1.1	≤1:1.1
RMS Noise (%)(20 Hz to 20 MHz)	≤0.2	≤0.2	≤0.25	≤0.25
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	≤2	≤1	≤2	≤2
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2	<2
Long-term Output Power Average (%/hrs.)	≤4/1000	-	≤3/1000	≤3/1000
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5	<5
Polarization Ratio	Minimum 100:1	Minimum 100:1	Minimum 100:1	Minimum 100:1
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control			
Digital Modulation				
Maximum Bandwidth (MHz)	150	0.05	100	100
Rise Time (10% to 90%)(nsec)	<2	<18,000	<3.5	<3.5
Fall Time (90% to 10%)(nsec)	<2	<2000	<2	<2
Modulation Depth (extinction ratio)	>1,000,000:1 at 0 Hz, >250:1 at 150 MHz	Infinite at 0 Hz to 50 kHz	>1,000,000:1 at 0 Hz, >250:1 at 100 MHz	>1,000,000:1 at 0 Hz, >250:1 at 100 MHz
Analog Modulation				
Maximum Bandwidth (kHz)	500	100	500	500
Rise Time (10% to 90%)(nsec)	700	<3000	<700	<700
Fall Time (10% to 90%)(nsec)	700	<3000	<700	<700
Modulation Depth (extinction ratio)	>1,000,000:1	>50:1	>1,000,000:1	>1,000,000:1
Laser Safety Classification	3b	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 8, Max. 12	Typical 5, Max. 13	Typical 5, Max. 13
Laser Head Baseplate Temperature (Max., °C)	50	40	50	50
Heat Dissipation of Laser Head[5] (W)	Typical 5, Max. 13	Typical 8, Max. 12	Typical 5, Max. 13	Typical 5, Max. 13
Ambient Temperature[6]				
Operating Condition (°C)	10 to 50	15 to 40	10 to 50	10 to 50
Non-operating Condition (°C)	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Shock Tolerance (g)(6 ms)	30	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power.

[3] M^2 measured with ModeMaster with 90/10 clip levels.

[4] Typical power-on delay 0.1 minutes.

[5] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[6] Non-Condensing. See User Manual for more detail.

[7] Fiber FC/APC connector output not compatible for patchcord-to-patchcord connection.

OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

System Specifications	OBIS FP 532LS		OBIS FP 552LS		OBIS FP 561LS	OBIS FP 594LS
Wavelength[1] (nm)	532		552		561	594
Output Power[2] (mW)	20	40, 60, 80, 120	15	40, 60, 80, 120	40, 60, 80, 120	40
Output from Fiber	FC/APC; 8° angled	FC/APC; 8° angled[7]	FC/APC; 8° angled	FC/APC; 8° angled[7]	FC/APC; 8° angled[7]	FC/APC; 8° angled[7]
Fiber Cable Type	5 mm Protective Tubing		5 mm Protective Tubing		5 mm Protective Tubing	5 mm Protective Tubing
Fiber Cable Length (m)(minimum)	1		1		1	1
Fiber Numerical Aperture (NA)(1/e^2)	0.1	0.06	0.1	0.06	0.06	0.06
Fiber Core Diameter (µm)(typical)	4		4		4	4
Spatial Mode	TEM_{00}		TEM_{00}		TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.1		≤1.1		≤1.1	≤1.1
Beam Asymmetry	≤1:1.1		≤1:1.1		≤1:1.1	≤1:1.1
RMS Noise (%)(20 Hz to 20 MHz)	≤0.25		≤0.25		≤0.25	≤0.25
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	≤1		≤1		≤1	≤1
Long-term Power Stability (%)(8 hrs., ±3°C)	<2		<2		<2	<2
Long-term Output Power Average (%/hrs.)	-		-		-	-
Warm-up Time[4] (minutes)(from Cold Start)	<5		<5		<5	<5
Polarization Ratio	Minimum 100:1		Minimum 100:1		Minimum 100:1	Minimum 100:1
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control					
Digital Modulation						
Maximum Bandwidth (MHz)	0.05		0.05		0.05	0.05
Rise Time (10% to 90%)(nsec)	<18,000		<18,000		<18,000	<18,000
Fall Time (90% to 10%)(nsec)	<2000		<2000		<2000	<2000
Modulation Depth (extinction ratio)	Infinite at 0 Hz to 50 kHz					
Analog Modulation						
Maximum Bandwidth (kHz)	100		100		100	100
Rise Time (10% to 90%)(nsec)	<3000		<3000		<3000	<3000
Fall Time (10% to 90%)(nsec)	<3000		<3000		<3000	<3000
Modulation Depth (extinction ratio)	>50:1		>50:1		>50:1	>50:1
Laser Safety Classification	3b		3b		3b	3b
ESD Protection	EN61326-1		EN61326-1		EN61326-1	EN61326-1
Power Consumption (W)	Typical 8, Max. 12		Typical 8, Max. 12		Typical 8, Max. 12	Typical 8, Max. 12
Laser Head Baseplate Temperature (Max., °C)	40		40		40	40
Heat Dissipation of Laser Head[5] (W)	Typical 8, Max. 12		Typical 8, Max. 12		Typical 8, Max. 12	Typical 8, Max. 12
Ambient Temperature[6]						
Operating Condition (°C)	15 to 40		15 to 40		15 to 40	15 to 40
Non-operating Condition (°C)	-20 to +60		-20 to +60		-20 to +60	-20 to +60
Shock Tolerance (g)(6 ms)	30		30		30	30

1 Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

2 Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power.

3 M^2 measured with ModeMaster with 90/10 clip levels.

4 Typical power-on delay 0.1 minutes.

5 Typically 85% of heat load through the base plate. See Users Manual for more detail.

6 Non-Condensing. See User Manual for more detail.

7 Fiber FC/APC connector output not compatible for patchcord-to-patchcord connection.

OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

System Specifications	OBIS FP 637LX	OBIS FP 640LX	OBIS FP 647LX	OBIS FP 660LX
Wavelength[1] (nm)	637	640	647	660
Output Power[2] (mW)	100	75	100	75
Output from Fiber	FC/APC; 8° angled	FC/APC; 8° angled	FC/APC; 8° angled	FC/APC; 8° angled
Fiber Cable Type	3 mm Mono-Coil	3 mm Mono-Coil	3 mm Mono-Coil	3 mm Mono-Coil
Fiber Cable Length (m)(minimum)	1	1	1	1
Fiber Numerical Aperture (NA)(1/e²)	0.09	0.09	0.09	0.09
Fiber Core Diameter (µm)(typical)	4.5	4.5	4.5	4.5
Spatial Mode	TEM_{00}	TEM_{00}	TEM_{00}	TEM_{00}
M^2 (Beam Quality)[3]	≤1.1	≤1.1	≤1.1	≤1.1
Beam Asymmetry	≤1:1.1	≤1:1.1	≤1:1.1	≤1:1.1
RMS Noise (%)(20 Hz to 20 MHz)	≤0.2	≤0.2	≤0.2	≤0.2
Peak-to-Peak Noise (%)(20 Hz to 20 kHz)	≤2	≤2	≤2	≤2
Long-term Power Stability (%)(8 hrs., ±3°C)	<2	<2	<2	<2
Long-term Output Power Average (%/hrs.)	≤3/1000	≤3/1000	≤3/1000	≤3/1000
Warm-up Time[4] (minutes)(from cold start)	<5	<5	<5	<5
Polarization Ratio	Minimum 100:1	Minimum 100:1	Minimum 100:1	Minimum 100:1
Laser Drive Modes	CW, Analog Modulation, Digital Modulation and Computer Control			
Digital Modulation				
Maximum Bandwidth (MHz)	150	150	150	150
Rise Time (10% to 90%)(nsec)	<2	<2	<2	<2
Fall Time (90% to 10%)(nsec)	<2	<2	<2	<2
Modulation Depth (extinction ratio)	>1,000,000:1 at 0 Hz, >250:1 at 150 MHz			
Analog Modulation				
Maximum Bandwidth (kHz)	300	500	500	500
Rise Time (10% to 90%)(nsec)	<1200	<700	<700	<700
Fall Time (10% to 90%)(nsec)	<800	<700	<700	<700
Modulation Depth (extinction ratio)	>1,000,000:1	>1,000,000:1	>1,000,000:1	>1,000,000:1
Laser Safety Classification	3b	3b	3b	3b
ESD Protection	EN61326-1	EN61326-1	EN61326-1	EN61326-1
Power Consumption (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Laser Head Baseplate Temperature (Max., °C)	50	50	50	50
Heat Dissipation of Laser Head[5] (W)	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13	Typical 5, Max. 13
Ambient Temperature[6]				
Operating Condition (°C)	10 to 50	10 to 50	10 to 50	10 to 50
Non-operating Condition (°C)	-20 to +60	-20 to +60	-20 to +60	-20 to +60
Shock Tolerance (g)(6 ms)	30	30	30	30

[1] Laser-to-laser wavelength tolerance ±2 nm for all OBIS LS versions. For OBIS LX wavelength tolerance of ±5 nm except for 413LX with a 410 nm to 420 nm range, 520LX with a 520 nm to 530 nm range, 640LX with 635 nm to 644 nm range, 660LX with 652 nm to 665 nm range and 685LX with 675 nm to 695 nm range.

[2] Output power is variable in CW Mode from 1 mW (1% for LX Models) to 110% of rated power. Specifications are valid for 100% power.

[3] M^2 measured with ModeMaster with 90/10 clip levels.

[4] Typical power-on delay 0.1 minutes.

[5] Typically 85% of heat load through the base plate. See Users Manual for more detail.

[6] Non-Condensing. See User Manual for more detail.

OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

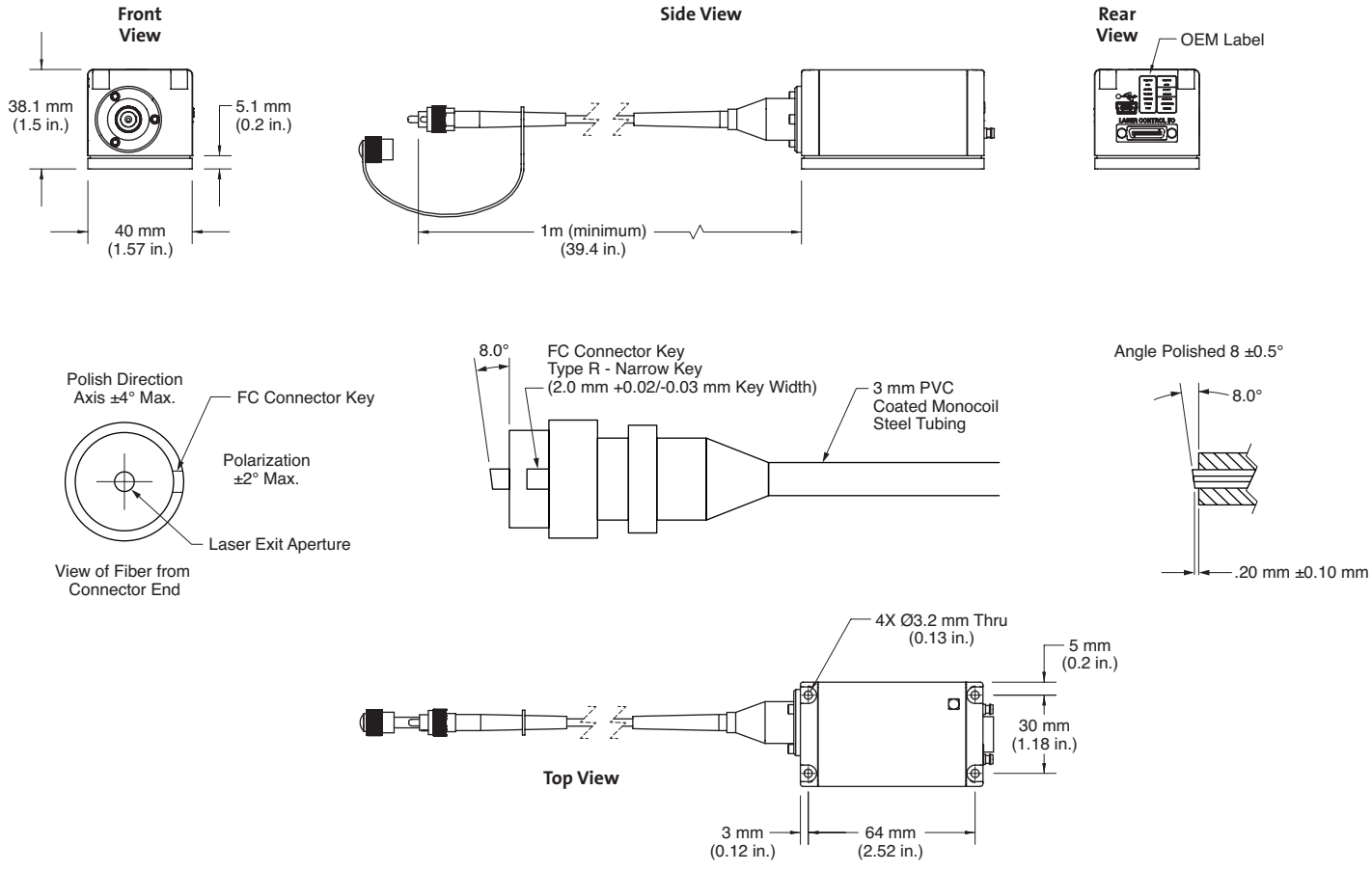
Utility and Environmental Requirements

Operating Voltage[1] (VDC)	12 ±2
Dimensions (L x W x H)	
Laser	70 x 40 x 38 mm (2.75 x 1.57 x 1.5 in.)
OBIS Remote (optional)	105 x 68 x 36 mm (4.13 x 2.68 x 1.42 in.)
DC Power Supply (optional)	105 x 42 x 33 mm (4.13 x 1.65 x 1.3 in.)
Cable, Laser to OBIS Remote (optional)	1 m (3.28 ft.)(3 meter and 0.3 meter sold separately)
Fiber Minimum Bend Radius	51 mm (2.0 in.)
Weights	
Laser	0.23 kg (0.5 lbs.)
OBIS Remote (optional)	0.23 kg (0.5 lbs.)
DC Power Supply (optional)	0.36 kg (0.79 lbs.)
Cable, Laser to OBIS Remote (optional)	0.1 kg (0.22 lbs.) for 1 meter
Fiber Tensile Load (max.)	1 kg (2.2 lbs.)

[1] If user supplied, the DC power supply has to meet the following requirements: power >20W; ripple <5% peak-to-peak; line regulation <0.5%.

Mechanical Specifications

OBIS FP LX



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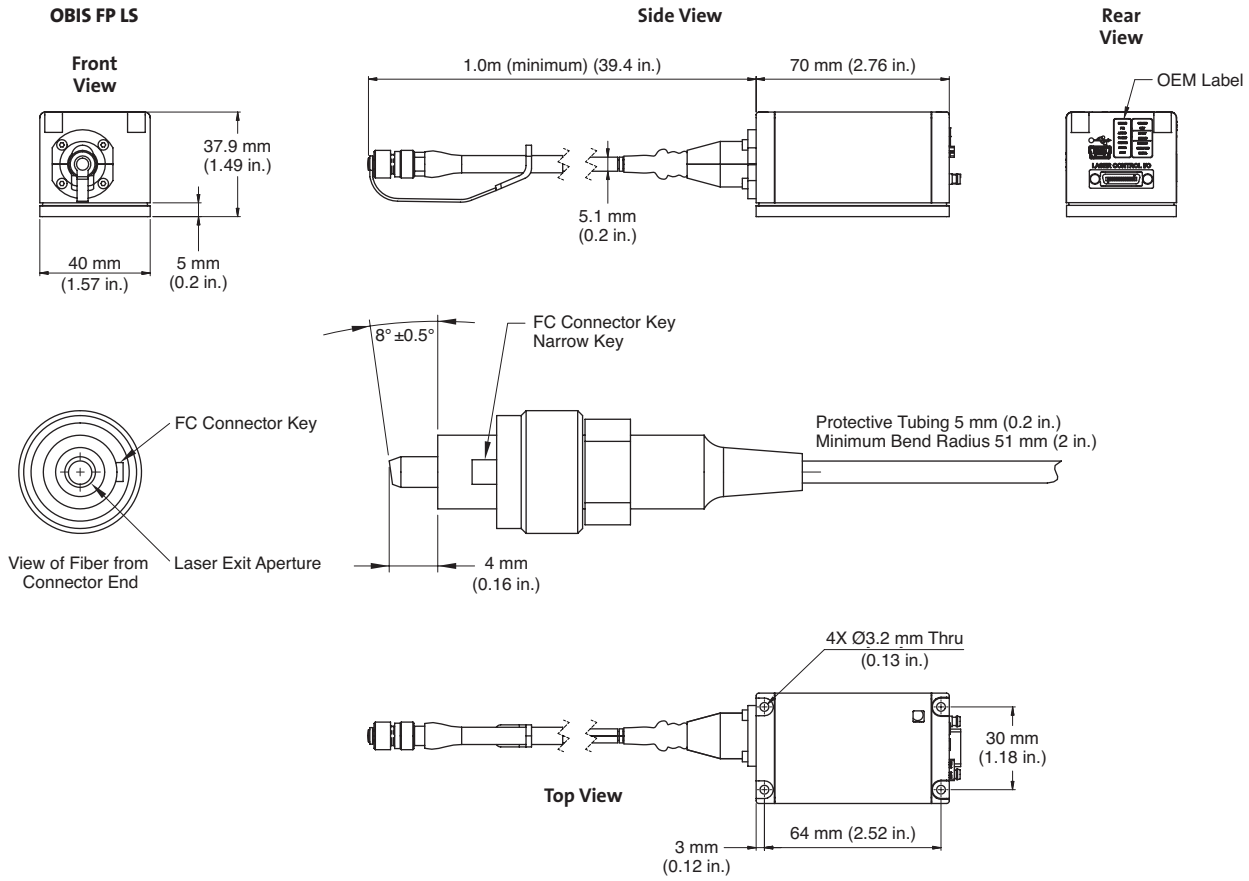
OBIS FP

Fiber Pigtailed Lasers in a Plug-and-Play Platform

Mechanical Specifications



Looking for OBIS Galaxy Lasers? Please refer to the OBIS Galaxy data sheet and/or web page.

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Switzerland +49 (6071) 968 333
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Coherent's scientific and industrial lasers are certified to comply with the Federal Regulations (21 CFR Subchapter J) as administered by the Center for Devices and Radiological Health on all systems ordered for shipment after August 2, 1976.

Coherent offers a limited warranty for all OBIS Lasers. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.

CE ISO 9001 Registered

OBIS LX/LS Single Laser Remote

Full Feature Laser Remote and Power Supply

OBIS LX and OBIS LS laser products come with a variety of accessories to support your application needs.

The OBIS Single Laser Remote for OBIS LS and OBIS LX offers all the features from the laser in a convenient CDRH-compliant interface.

As with all OBIS LX and OBIS LS lasers, the laser itself offers a stand-alone all-in-one laser solution. The OBIS laser comes with a Power Connection, USB Connection, Fan Connection and a SDR-type Connection for laser control I/O. All of these are on the back panel of every OBIS LX/LS laser.

To simplify integration the OBIS Single Laser Remote connects to the single SDR-type connector for power, signals and communication. The OBIS Single Laser Remote then brings all of these features to controls and connectors on the Remotes front and back panel.

OBIS Single Laser Remotes can even be stacked together with the provided mounting hardware for applications using multiple OBIS LX/LS lasers.

Superior Reliability & Performance

OBIS LX/LS Single Laser Remote Features:

- **Compact size**
- **Laser safety features (CDRH) such as key switch and interlock**
- **Laser status indicators**
- **Full input and output connections for control, analog modulation and digital modulation**
- **Compact power supply for single laser included**
- **Brackets for mounting and stacking included**

OBIS LX/LS Single Laser Remote Applications:

- **Laboratories needing CDRH features**
- **Applications wanting a simple Analog or Digital inputs to control the laser**
- **Applications wanting laser control at a remote location away from the laser**

www.Coherent.com/OBISSingleLaserRemote

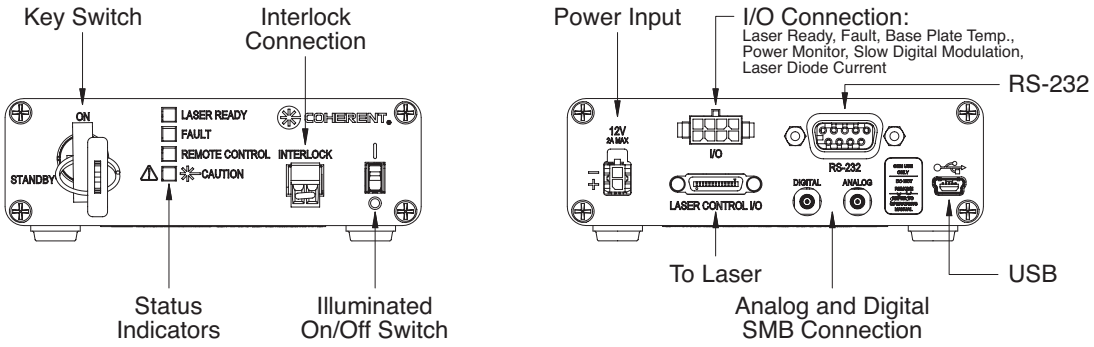
OBIS LX/LS Single Laser Remote

Full Feature Laser Remote and Power Supply

System Specifications	OBIS LX/LS Single Laser Remote
Host Computer Remote Control via USB[1]	USB 2.0, Mini B
Host Computer Remote Control via RS-232[1]	RS-232 115.2K, 8N1
Interlock	Yes, included with shorting wire
Laser Status Indicators	Yes
Analog Modulation Input	SMB, 50 Ohm OR 2KOhm, 0 to 5V
Digital Modulation Input[2]	SMB, 50 Ohm, 0 to 3V
Warm-up Time (minutes)(from cold start)	<2
OBIS Connection Software[3]	Included on USB drive with user manual
Power Consumption (W)(typical)	1 (laser not included)
Power Consumption (W)(maximum)	2 (laser not included)
Power Input	Universal IEC-320
Power Cord (USA)	2.4m (8 ft.)
Operating Condition[4] (°C)	0 to 40
Non-operating Condition[4] (°C)	-10 to +70
Shock Tolerance (6 ms)	20 g
Operating Voltage	90 to 264 VAC, 47 to 63 Hz
Dimensions (L x W x H)	105 x 68 x 36 mm (4.1 x 2.7 x 1.4 on.)
Weight	
OBIS Single Laser Remote	0.23 kg (0.5 lbs.)
Power Supply (included)	0.23 kg (0.5 lbs.)
Part Number for OBIS Single Laser Remote	1173961
Part Number for OBIS LX/LS SDR-Type Cable from Laser to Remote	
1-meter	1179451
3-meter	1179858
0.3-meter	1197523
Part Number for OBIS Power Supply, 12VDC	1184491

[1] Host computer not provided. USB cable provided. RS-232 cable not provided.
[2] Digital modulation can be driven up to 5V.
[3] Software operates on Windows 7.
[4] Non-condensing.

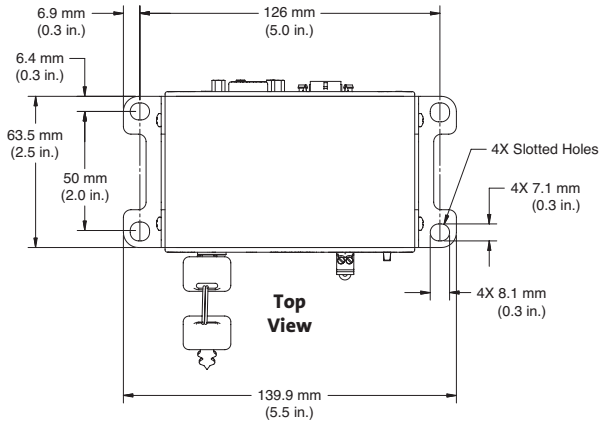
OBIS LX/LS Single Laser Remote Controls

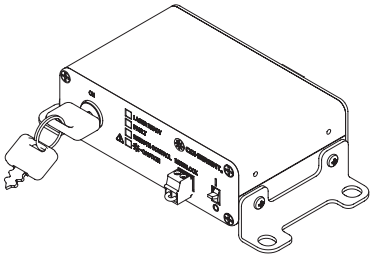


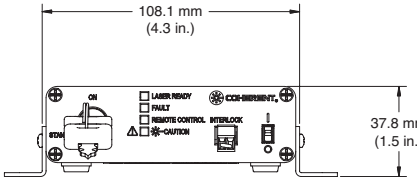
OBIS LX/LS Single Laser Remote

Full Feature Laser Remote and Power Supply

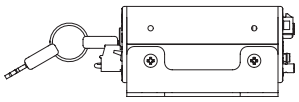
OBIS LX/LS Single Laser Remote
Mounting Brackets and Stacking Brackets
(included with OBIS LX/LS Single Laser Remote)





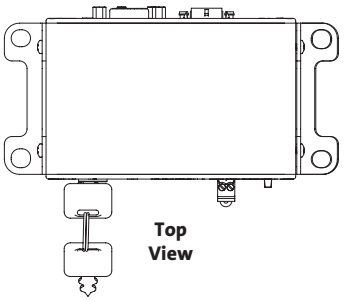


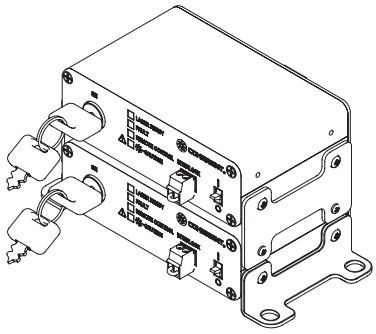
Front View

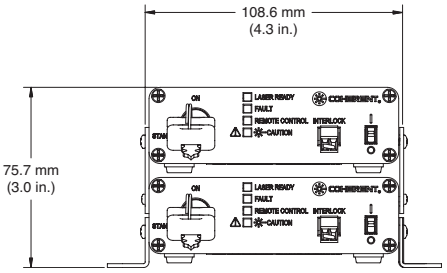


Side View

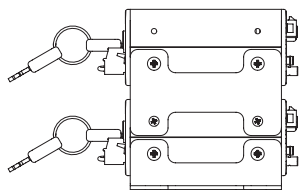
Example of Stacking OBIS LX/LS Single Laser Remotes
(mounting bracket included, second remote sold separately)







Front View



Side View

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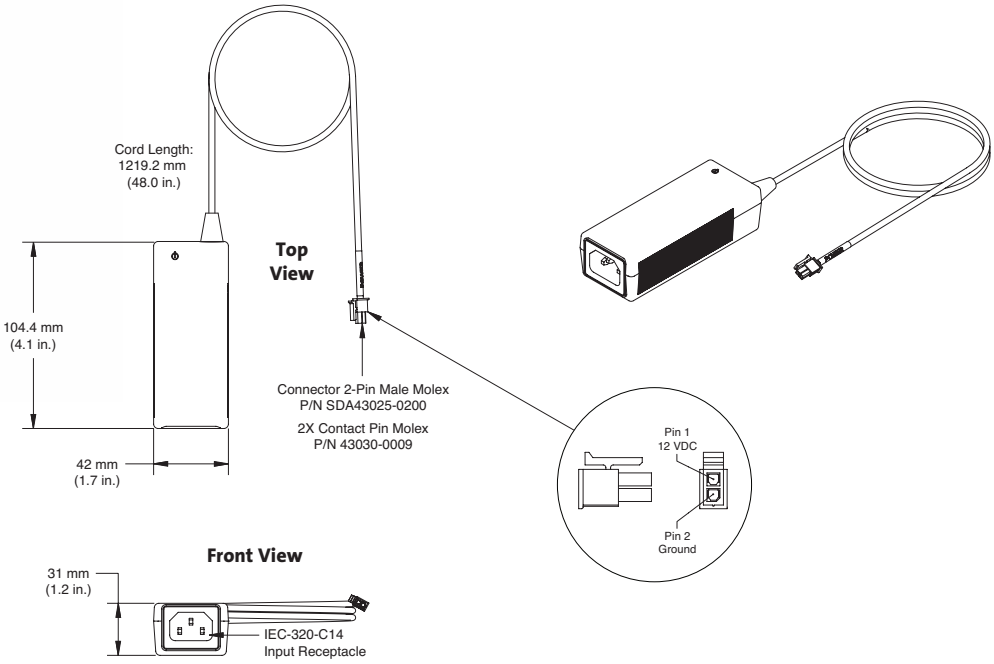
OBIS LX/LS Single Laser Remote

Full Feature Laser Remote and Power Supply

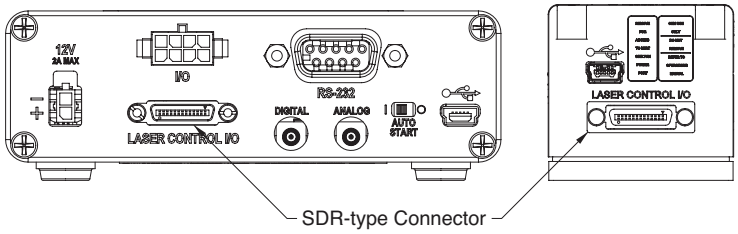
OBIS Single Laser Power Supply
(included with OBIS LX/LS Single Laser Remote)

Power Cord sold separately



OBIS Single Laser Remote Power Supply offers 12VDC output to the OBIS Remote and has an universal input of 100-240 VAC (47-63 Hz).

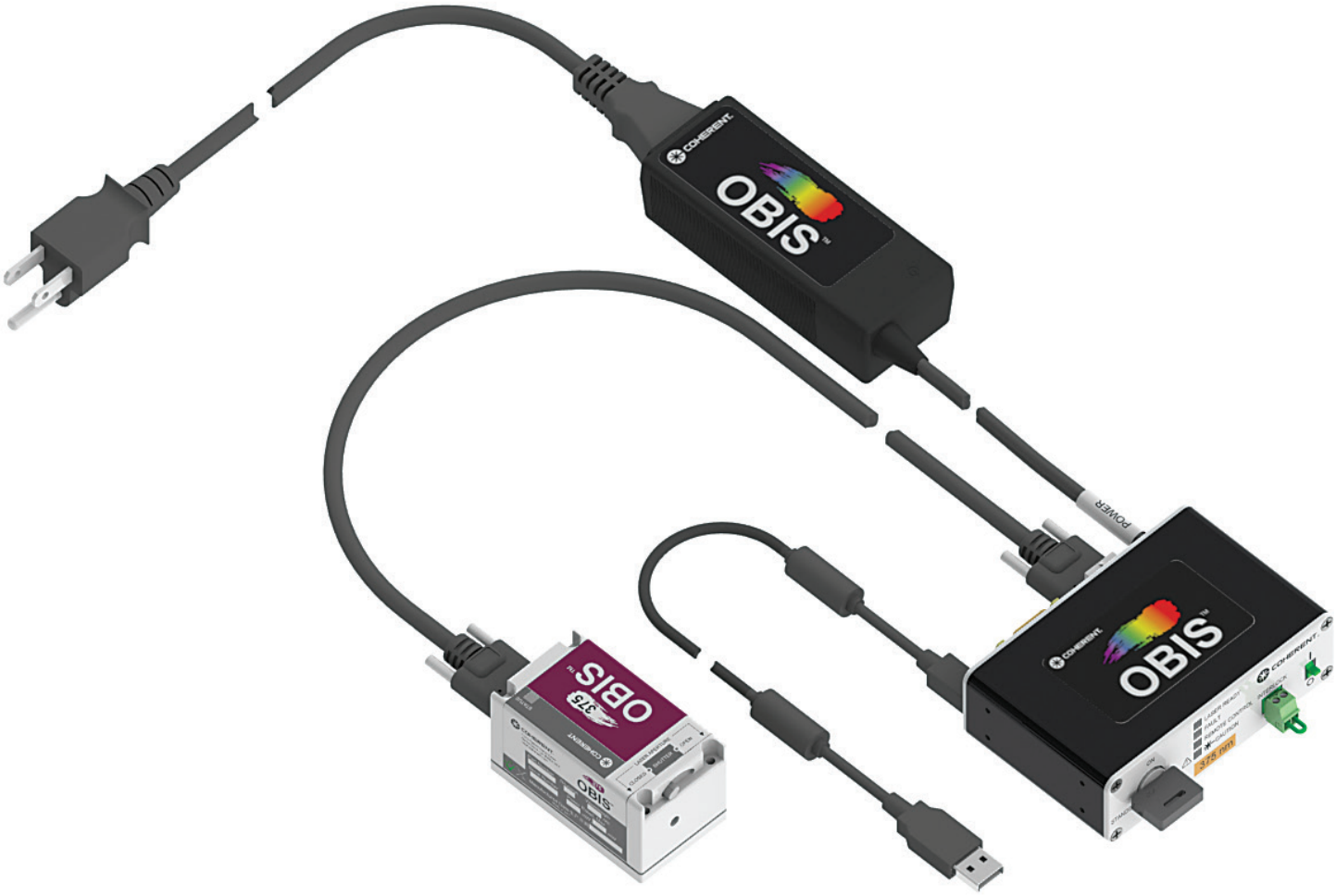
OBIS Single Laser Remote requires a SDR-type cable to connect the Laser to the Remote. This cable carries power, signals and communications. Available in 0.3m, 1m and 3m lengths. Sold separately. (Note: if buying an OBIS Laser System then the OBIS laser is shipped with the OBIS Single Laser Remote and a 1-meter SDR-type cable.)



OBIS LX/LS Single Laser Remote

Full Feature Laser Remote and Power Supply

Example of the OBIS LX/LS Laser System including:
OBIS Single Laser Remote, SDR-type Cable from the Laser to the remote, USB cable, OBIS Single Laser Power Supply.



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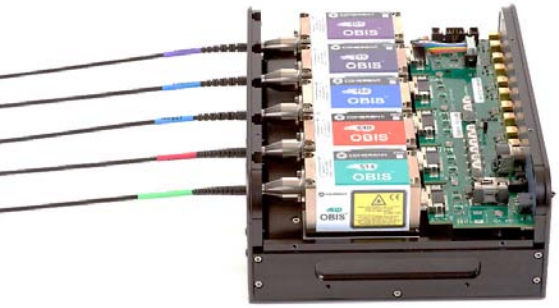
OBIS LX/LS Single Laser Remote

Full Feature Laser Remote and Power Supply

Other OBIS Laser Remotes	Description
	OBIS LX/LS Single Laser Remote with full features for control with analog/digital inputs. Includes USB and RS-232 on the Remote.
	OBIS LX/LS 6-Laser Remote with CDRH features. Separate power switches and power cables for each laser.
	OBIS LX/LS Scientific Remote with full features for control with analog/digital inputs for up to six lasers. User interface touch screen and connectivity through USB. RS-232 and Ethernet.
	OBIS LX/LS Laser Box with five laser mounting bays with thermal management, cooling fans, analog/digital inputs, RS-232, USB, key-switch and interlock in one compact package. Lasers sold separately.

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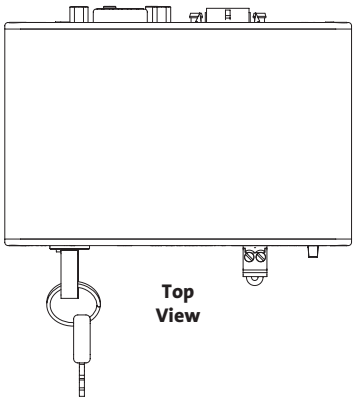
OBIS LX/LS Single Laser Remote

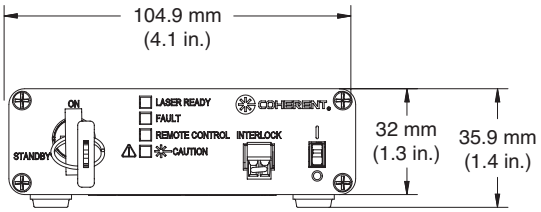
Full Feature Laser Remote and Power Supply

Mechanical Specifications

OBIS LX/LS Single Laser Remote

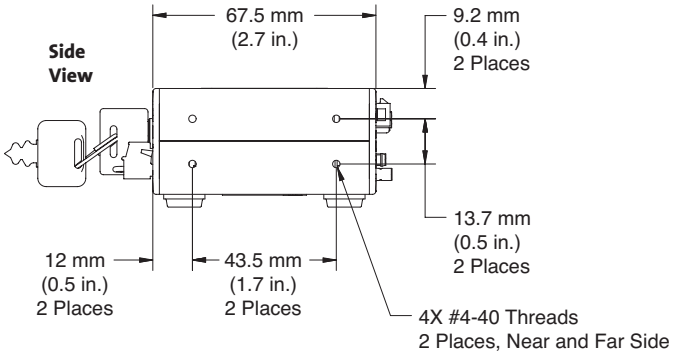


Top View

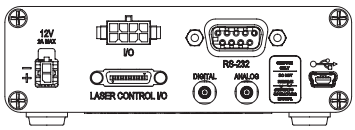


Front View

Side View



Rear View



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Coherent offers a limited warranty for all OBIS LX/LS Single Laser Remotes. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.

OBIS LX/LS Heat Sink

Heat Sink with Fan for Thermal Management

OBIS LX and OBIS LS laser products come with a variety of accessories to support your application needs.

As with all OBIS LX and OBIS LS lasers, the laser itself offers a stand-alone all-in-one laser solution. The OBIS laser comes with a Power Connection, USB Connection, Fan Connection and a SDR-type Connection for laser control I/O. All of these are on the back panel of every OBIS LX/LS laser.

To simplify integration, the OBIS LX/LS accessories offer a separate Heat Sink with an integrated fan. The Heat Sink offers a convenient way to raise the laser beam height off the table and provide thermal management. The fan simply plugs into the back of the OBIS LX or OBIS LS laser to receive 12V DC power.

Superior Reliability & Performance

OBIS LX/LS Heat Sink Features:

- **Small footprint**
- **Rugged design**
- **Precision dowel pin laser positioning**
- **Convenient 69 mm (2.7 inch) beam height**
- **Integrated cooling fan with vibration isolation**
- **Output beam centered on standard table bolt pattern**
- **Universal mounting to imperial or metric bolt pattern**
- **Proven stable performance over time and temperature**
- **Fan power connector plugs directly to OBIS Laser Head**
- **Laser can be mounted on top or side for opposite polarization**

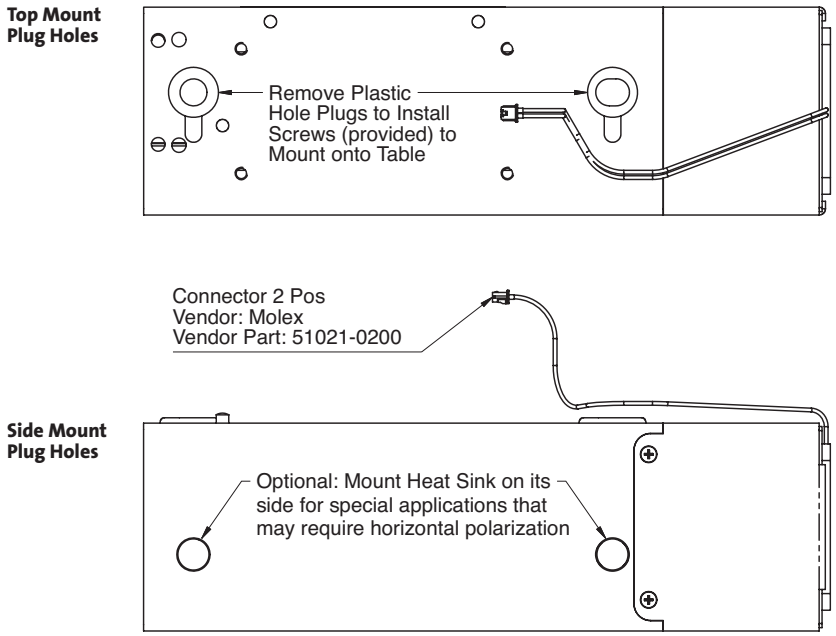
www.Coherent.com/OBISHeatSink

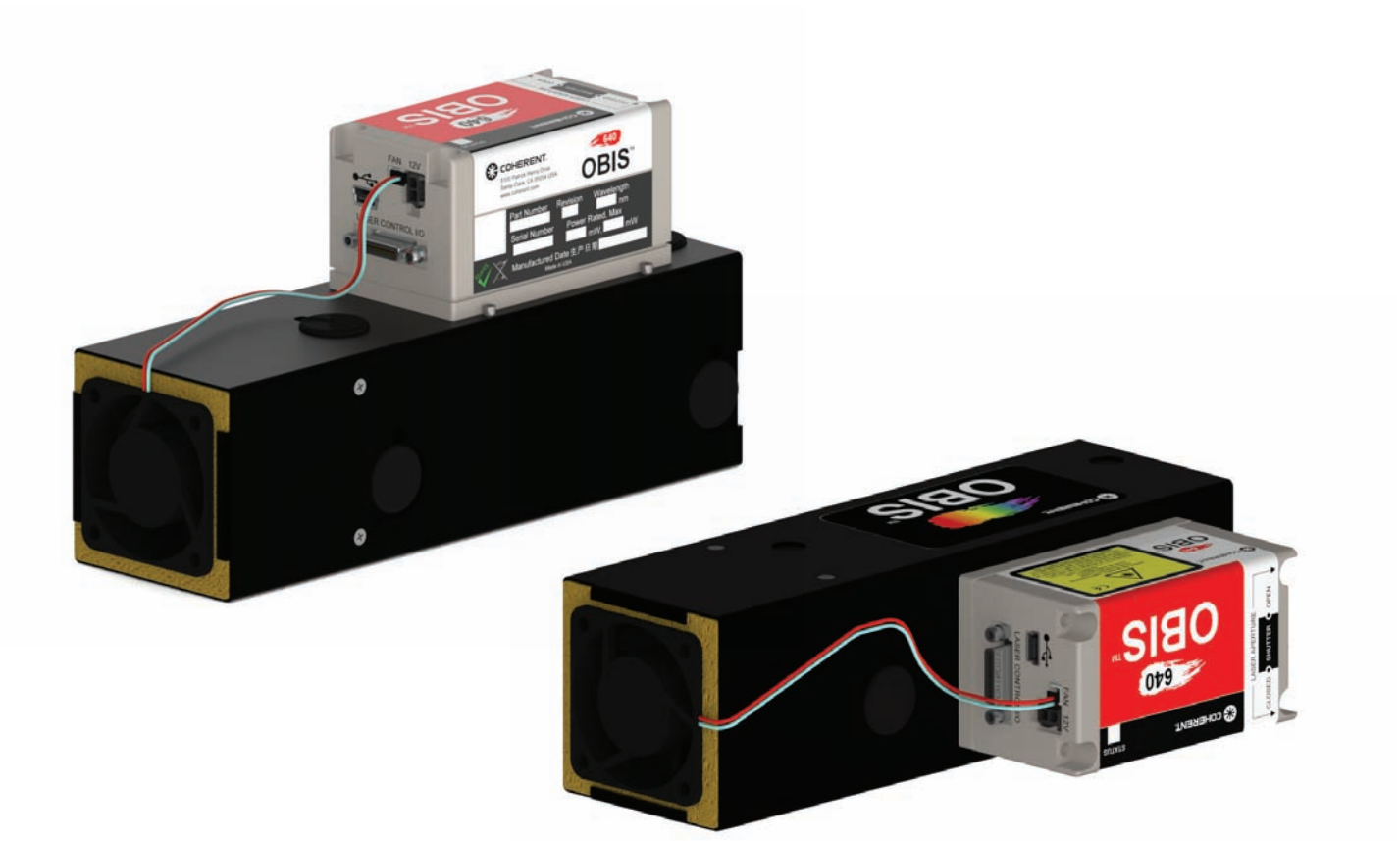
OBIS LX/LS Heat Sink

Heat Sink with Fan for Thermal Management

Top and Side Mount Plug Holes

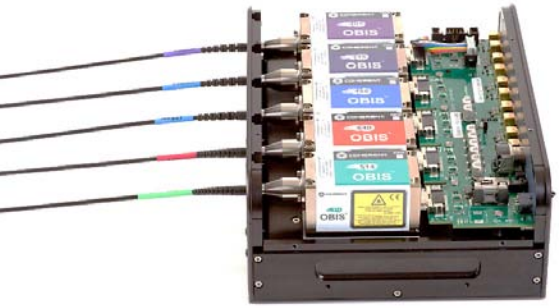
Allow for Heat Sink to be mounted in either direction. Need horizontal polarization – mount the Heat Sink with the laser on the side.





OBIS LX/LS Heat Sink

Heat Sink with Fan for Thermal Management

OBIS Laser Remotes	Description
	OBIS LX/LS Single Laser Remote with full features for control with analog/digital inputs. Includes USB and RS-232 on the Remote.
	OBIS LX/LS 6-Laser Remote with CDRH features. Separate power switches and power cables for each laser.
	OBIS LX/LS Scientific Remote with full features for control with analog/digital inputs for up to six lasers. User interface touch screen and connectivity through USB. RS-232 and Ethernet.
	OBIS LX/LS Laser Box with five laser mounting bays with thermal management, cooling fans, analog/digital inputs, RS-232, USB, key-switch and interlock in one compact package. Lasers sold separately.

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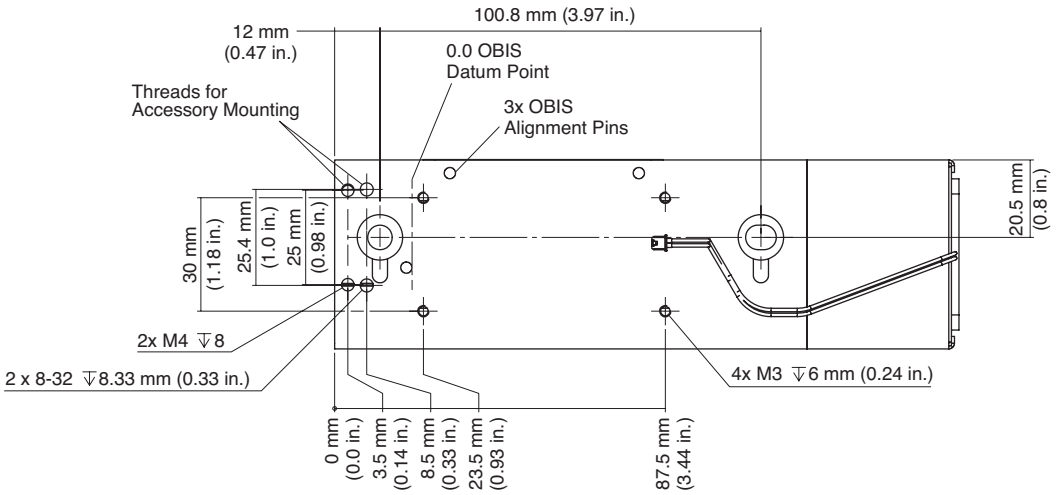
OBIS LX/LS Heat Sink

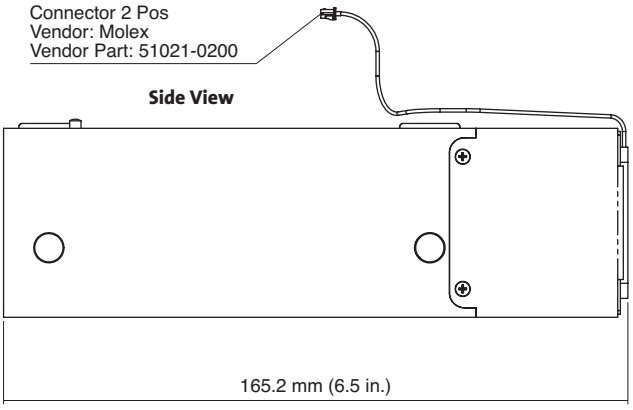
Heat Sink with Fan for Thermal Management

Mechanical Specifications

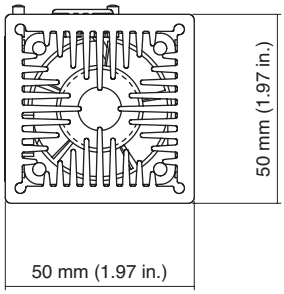
OBIS LX/LS Heat Sink

Top View



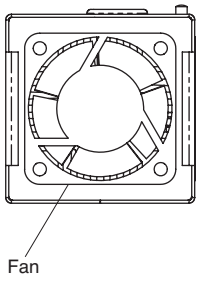


Front View



Side View

Rear View



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Coherent offers a limited warranty for all OBIS LS/LX Heat Sinks. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.

COHERENT

OBIS LX/LS Laser Box

Laser Mount with Cooling, Interface and Power Supply

OBIS LX and OBIS LS laser products come with a variety of accessories to support your application needs.

The OBIS Laser Box for OBIS LS and OBIS LX offers all the features from the laser in a convenient CDRH-compliant interface with convection cooling for five lasers.

As with all OBIS LX and OBIS LS lasers, the laser itself offers a stand-alone all-in-one laser solution. OBIS lasers come with a Power Connection, USB Connection, Fan Connection and a SDR-type Connection for laser control I/O. All of these are on the back panel of every OBIS LX/LS laser.

To simplify integration, the OBIS Laser Box connects to the single SDR-type connector for power, signals and communication. The OBIS Laser Box then brings all of these features to the front panel controls and connectors.

The OBIS Laser Box offers stability over temperature with conduction cooling for the laser baseplate and cooling fans to maintain the convection cooling.

Every OBIS Laser Box comes with a separate 12V DC power supply with capacity to drive the five lasers, interface and cooling.

Superior Reliability & Performance

OBIS LX/LS Laser Box Features:

- **Integrated five bay mount for OBIS lasers**
- **Heat sinks and cooling fans**
- **Modulation inputs for analog and digital for five lasers**
- **USB and RS-232 interface for additional control from host computer**
- **Coherent Connection software for PC**
- **Status indicators for each laser**
- **External power supply**
- **Laser safety features such as key switch and interlock**

OBIS LX/LS Laser Box Applications:

- **Laboratories needing CDRH features**
- **Applications wanting a simple Analog or Digital inputs to control the laser**
- **Applications wanting thermal management (cooling) for the lasers**

www.Coherent.com/OBISLaserBox

OBIS LX/LS Laser Box

Laser Mount with Cooling, Interface and Power Supply

System Specifications	OBIS LS/LX Laser Box
OBIS Laser Box	
Laser Box – five bay[1]	Part #1228877
Power Supply[2]	Included
Host Computer Remote Control via USB[3]	USB 2.0, Mini B
Host Computer Remote Control via RS-232[3]	RS-232, 115.2K, 8N1, DB-9F
Analog Inputs, 5 each	SMB Connector, 0V to 5V, 2000 Ohm input impedance
Digital Inputs[4], 5 each	SMB Connector, 0V to 3V, 50 Ohm input impedance
Interlock	Yes, included with shorting wire
Laser Status Indicators	Yes, Individual LED for each Laser
Warm-up Time (minutes)(from cold start)	<2
Coherent Connection Software for PC	Included on USB drive with user manual
Safety	Key switch and interlock

Utility and Environmental Requirements

Power Consumption (W)(typical)	5 (without lasers)
Power Consumption (W)(maximum)	140 (with 5 lasers)
Internal Cooling Fan	Yes, 3 each
Power Input to Laser Box, 6 Pin (VDC)	10 to 14 at 10A maximum, Molex P/N 43025-0600 for mating connector
Power Cord (USA)	2.4m (8 ft.)
Operating Condition[5] (°C)	10 to 40 for OBIS LX, 10 to 35 for OBIS LS
Non-operating Condition[5] (°C)	-10 to 60
Shock Tolerance (g)(6 ms)	20
Operating Voltage (VAC)	90 to 264, 47 to 63 Hz
Dimensions (L x W x H)	
Laser Box	241 x 184 x 88 mm (9.5 x 7.3 x 3.5 in.)
Power Supply	189 x 89.4 x 47.1 mm (7.4 x 3.5 x 1.9 in.)
Weight	
Laser Box	3.9 kg (8.5 lbs.)
Power Supply	0.9 kg (2.0 lbs.)

[1] Lasers sold separately.
[2] Power supply included. Order item number 1211389 for spare or replacement.
[3] Host computer not provided. RS-232 and USB cable not provided.
[4] Digital Modulation can be driven up to 5 Volts.
[5] Non-condensing.

Example of OBIS Laser System

Figure 1: Laser Box with the lid removed

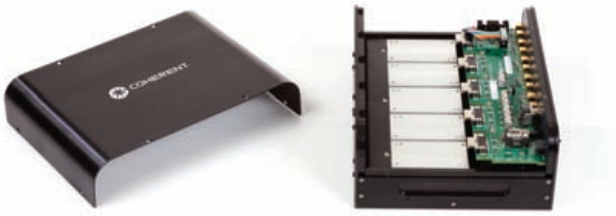


Figure 2: Laser Box example as part of a Galaxy beam combiner system. Lasers and Galaxy Beam Combiner sold separately.

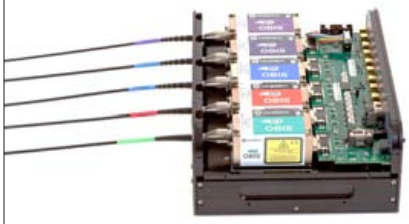
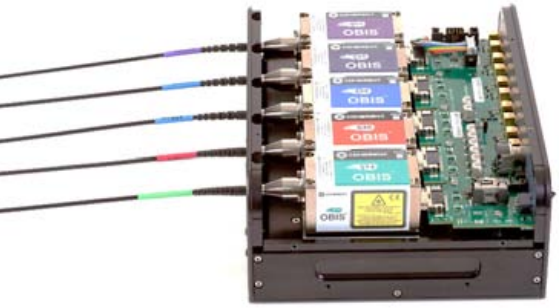


Figure 3: Laser Box example with 5 lasers installed. Lasers sold separately.

OBIS LX/LS Laser Box

Laser Mount with Cooling, Interface and Power Supply

Other OBIS Laser Remotes	Description
	OBIS LX/LS Single Laser Remote with full features for control with analog/digital inputs. Includes USB and RS-232 on the Remote.
	OBIS LX/LS 6-Laser Remote with CDRH features. Separate power switches and power cables for each laser.
	OBIS LX/LS Scientific Remote with full features for control with analog/digital inputs for up to six lasers. User interface touch screen and connectivity through USB. RS-232 and Ethernet.
	OBIS LX/LS Laser Box with five laser mounting bays with thermal management, cooling fans, analog/digital inputs, RS-232, USB, key-switch and interlock in one compact package. Lasers sold separately.

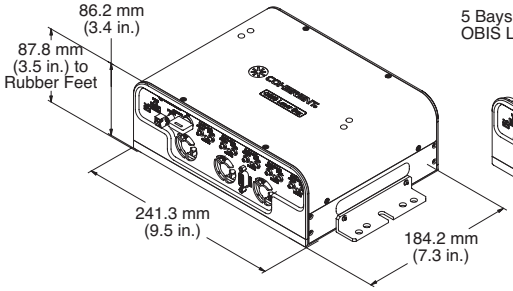
COHERENT

OBIS LX/LS Laser Box

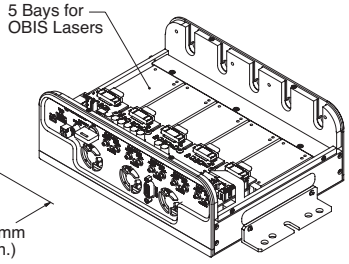
Laser Mount with Cooling, Interface and Power Supply

Mechanical Specifications

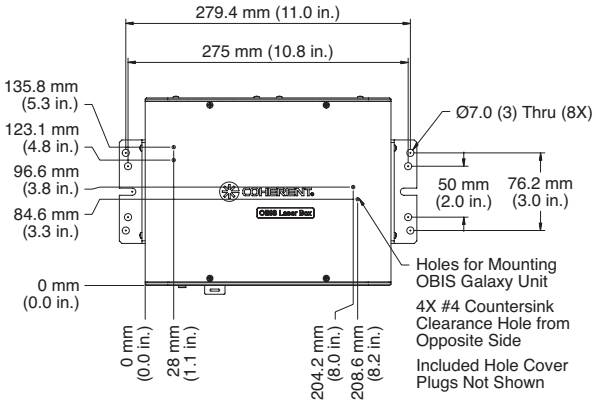
OBIS LS/LX Laser Box

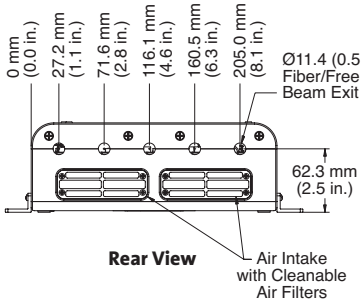


With Top Cover Removed

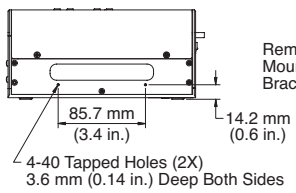


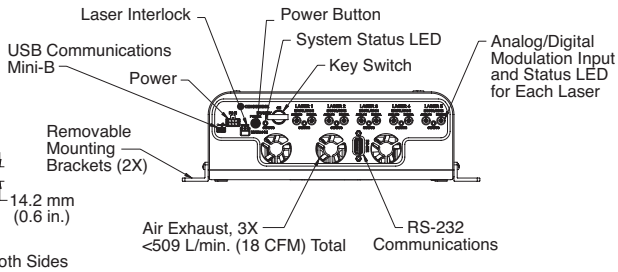
Top View





Side View (Mounting Bracket Shown Removed)

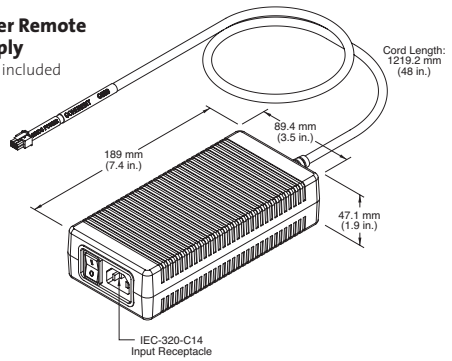




Front View

OBIS 6-Laser Remote Power Supply

Part #1211389 included



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Coherent offers a limited warranty for all OBIS Laser Boxes. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.

COHERENT

OBIS LX/LS Scientific Remote

Laser Remote and Power Supply for up to Six Lasers

OBIS LX and OBIS LS laser products come with a variety of accessories to support your application needs.

The OBIS Scientific Remote for OBIS LS and OBIS LX offers all the features from the laser in a convenient CDRH-compliant interface with a touch-screen and internal power supply for up to six lasers.

As with all OBIS LX and OBIS LS lasers, the laser itself offers a stand-alone all-in-one laser solution. The OBIS laser comes with a Power Connection, USB Connection, Fan Connection and a SDR-type Connection for laser control I/O. All of these are on the back panel of every OBIS LX/LS laser.

To simplify integration the OBIS Scientific Remote connects to the single SDR-type connector for power, signals and communication. The OBIS Scientific Remote then brings all of these features to controls and connectors on the Remotes front panel.

OBIS Scientific Remote offers a convenient handle to angle the unit for easier display.

Figure 1: OBIS LX/LS Scientific Remote for up to six lasers. Lasers sold separately.

OBIS LX/LS Scientific Remote Features:

- Complete remote control of up to six OBIS lasers
- Touchscreen interface with audio
- Modulation inputs for analog and digital for six lasers
- USB, RS-232 and Ethernet for additional control from host computer
- OBIS connection software for PC
- Single SDR connection to each laser
- Internal power supply remote and six lasers
- Laser safety features such as key switch and interlock

OBIS LX/LS Scientific Remote Applications:

- Laboratories needing CDRH features
- Applications wanting a simple Analog or Digital inputs to control the laser
- Applications wanting laser control at a remote location away from the laser

www.Coherent.com/OBISHeatSink

Superior Reliability & Performance

OBIS LX/LS Scientific Remote

Laser Remote and Power Supply for up to Six Lasers

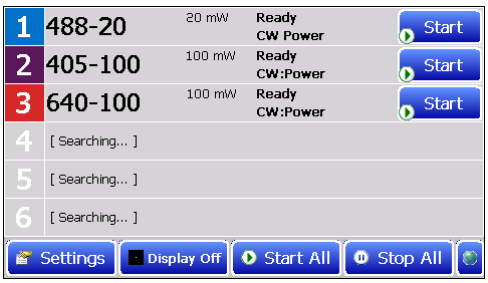
System Specifications	OBIS LS/LX Scientific Remote
Touchscreen Display Size	108 mm (4.3 in.) diagonal
Touchscreen Display Resolution, Type	480 x 272 pixel, QVGA, TFT, 24-bit color
Touchscreen Display Mode[1]	Resistive Touchscreen
Audio	Yes
Internal Power Supply	Yes
OBIS Lasers that can be connected	1 to 6 lasers with power to optional 1 to 6 heat sink cooling fans
Host Computer Remote Control via USB[2]	USB 2.0, Mini B
Host Computer Remote Control via RS-232[2]	RS-232 115.2K, 8N1
Host Computer Remote via Ethernet[2]	Ethernet 10/100 (Mb) RJ45
Carry Handle and Stand	3-Position
Interlock	Yes, included with shorting wire
Laser Status Indicators	Yes, Individual LED for each laser
Analog Modulation Input	SMB, 2000 Ohm, 0 to 5V
Digital Modulation Input[3]	SMB, 50 Ohm, 0 to 3V
Warm-up Time (minutes)(from cold start)	<2
OBIS Connection Software[2]	Included on USB drive with user manual

Utility and Environmental Requirements

Power Consumption (W)(typical)	5 (without lasers)
Power Consumption (W)(maximum)	110 (with 6 lasers)
Internal Cooling Fan	Yes
Power Input - Universal	IEC-320
Power Cord (USA)	2.4m (8 ft.)
Operating Condition[4] (°C)	0 to 50
Non-operating Condition[4] (°C)	-10 to +70
Shock Tolerance (6 ms)	20 g
Operating Voltage	90 to 264 VAC, 47 to 63 Hz
Dimensions (L x W x H)	180 x 293.5 x 104.4 mm (7.09 x 11.55 x 4.11 in.)
Weight	1.75 kg (3.86 lbs.)
Weight, Laser-to-Remote Cable (optional)	0.1 kg for 1 meter (0.25 kg for 3 meter)
Part Number for OBIS Scientific Remote	1234465
Part Number for OBIS Scientific Remote with Six Laser-to-Remote SDR Cables Included (1m each)	1234466
Part Number for OBIS LX/LS SDR-Type Cable from Laser to Remote	
1-meter	1179451
3-meter	1179858
0.3-meter	1197523

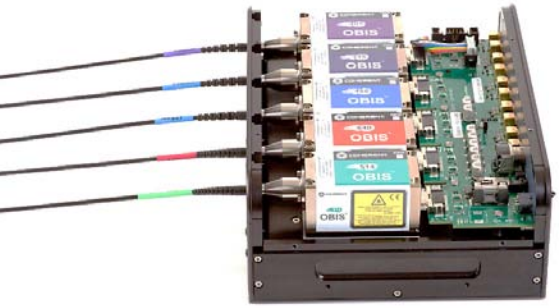
[1] Resistive touchscreen will work with gloves. This is a pressure sensitive touchscreen - not capacitive.
[2] Host computer not provided. RS-232 and USB cable not provided. Software operates on Windows 7.
[3] Digital modulation can be driven up to 5V.
[4] Non-condensing.

Screen Shot



OBIS LX/LS Scientific Remote

Laser Remote and Power Supply for up to Six Lasers

Other OBIS Laser Remotes	Description
	OBIS LX/LS Single Laser Remote with full features for control with analog/digital inputs. Includes USB and RS-232 on the Remote.
	OBIS LX/LS 6-Laser Remote with CDRH features. Separate power switches and power cables for each laser.
	OBIS LX/LS Scientific Remote with full features for control with analog/digital inputs for up to six lasers. User interface touch screen and connectivity through USB. RS-232 and Ethernet.
	OBIS LX/LS Laser Box with five laser mounting bays with thermal management, cooling fans, analog/digital inputs, RS-232, USB, key-switch and interlock in one compact package. Lasers sold separately.

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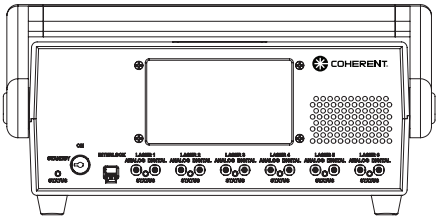
OBIS LX/LS Scientific Remote

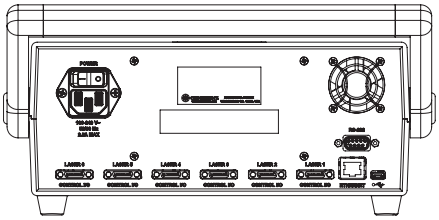
Laser Remote and Power Supply for up to Six Lasers

Mechanical Specifications

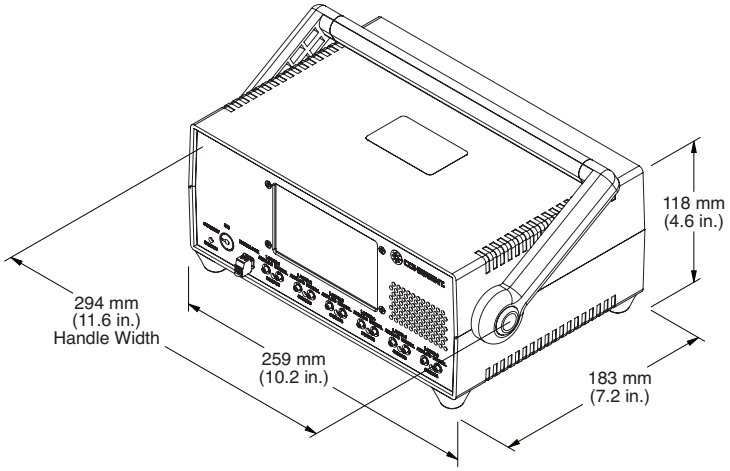
OBIS LX/LS Scientific Remote

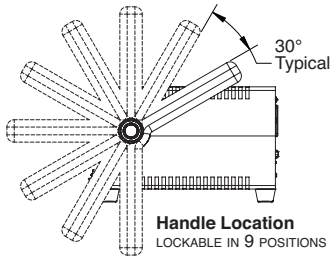
Front View





Rear View





Handle Location
LOCKABLE IN 9 POSITIONS

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Switzerland +49 (6071) 968 333
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Coherent offers a limited warranty for all OBIS LS/LX Scientific Remotes. For full details of this warranty coverage, please refer to the Service section at www.Coherent.com or contact your local Sales or Service Representative.

COHERENT

OBIS LX/LS 6-Laser Remote

Laser Remote and Power Supply for up to Six Lasers

OBIS LX and OBIS LS laser products come with a variety of accessories to support your application needs.

The OBIS 6-Laser Remote for OBIS LS and OBIS LX offers power to six lasers in a convenient CDRH-compliant interface.

As with all OBIS LX and OBIS LS lasers, the laser itself offers a stand-alone all-in-one laser solution. The OBIS laser comes with a Power Connection, USB Connection, Fan Connection and a SDR-type Connection for laser control I/O. All of these are on the back panel of every OBIS LX/LS laser.

To simplify integration the OBIS 6-Laser Remote connects to the 12VDC Power Input on the back of the OBIS Laser. This allows the OBIS 6-Laser Remote to provide power On/Off to the laser.

For applications requiring laser status and control, the USB on the back of each OBIS Laser can be used to communicate with the laser directly.

The OBIS 6-Laser Remote is not recommended for applications that require Analog or Digital Modulation.

OBIS 6-Laser Remote comes complete with mounting brackets and hardware to mount the remote to a table or stack remotes.

Figure 1: Individual labels included for the laser wavelength identification.

Superior Reliability & Performance

OBIS LX/LS 6-Laser Remote Features:

- Compact size
- Laser safety features (CDRH) such as key switch and interlock
- Laser On/Off status indicators
- Compact single power supply included
- Brackets for mounting and stacking included

OBIS LX/LS 6-Laser Remote Applications:

- Laboratories needing CDRH features
- Applications wanting a simple remote control to turn the lasers On and Off
- Applications that do not require Analog or Digital modulation

www.Coherent.com/OBIS6-LaserRemote

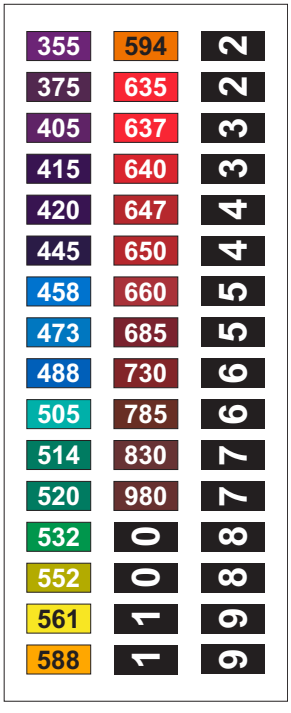
OBIS LX/LS 6-Laser Remote

Laser Remote and Power Supply for up to Six Lasers

System Specifications	OBIS LS/LX 6-Laser Remote
Laser Power Cables	Six, 1 meter each, color coded
Interlock	Yes, included with shorting wire
Laser Status Indicators	Yes
System and Key Switch Indicator	Yes
Warm-up Time (minutes)(from cold start)	<1
Power Consumption (W)	
Typical	1 (laser not included)
Maximum	2 (laser not included)
Power Input	Universal IEC-320
Power Cord (USA)	2.4m (8 ft.)
Operating Condition[1]	0 to 50°C (32 to 122°F)
Non-operating Condition[1]	-10 to +70°C (14 to 158°F)
Shock Tolerance (g)(6 ms)	20
Operating Voltage	90 to 264 VAC, 47 to 63 Hz
Dimensions (L x W x H)	
OBIS 6-Laser Remote	105 x 68 x 36 mm (4.1 x 2.7 x 1.4 in.)
Power Supply (included)	189 x 89.4 x 47.1 (7.4 x 3.5 x 1.9 in.)
Weight	
OBIS 6-Laser Remote	0.23 kg (0.5 lbs.)
Power Supply (included)	0.9 kg (2.0 lbs.)
Part Number	
OBIS 6-Laser Remote	1203909
OBIS Power Supply, 12VDC	1211389

[1] Non-condensing.

Figure 2: FRONT VIEW. The OBIS 6-Laser Remote comes with wavelength tags to identify each laser connected.



COHERENT

OBIS LX/LS 6-Laser Remote

Laser Remote and Power Supply for up to Six Lasers

Figure 3: REAR VIEW. Six color coded power cables included. Interlock included. Laser sold separately.

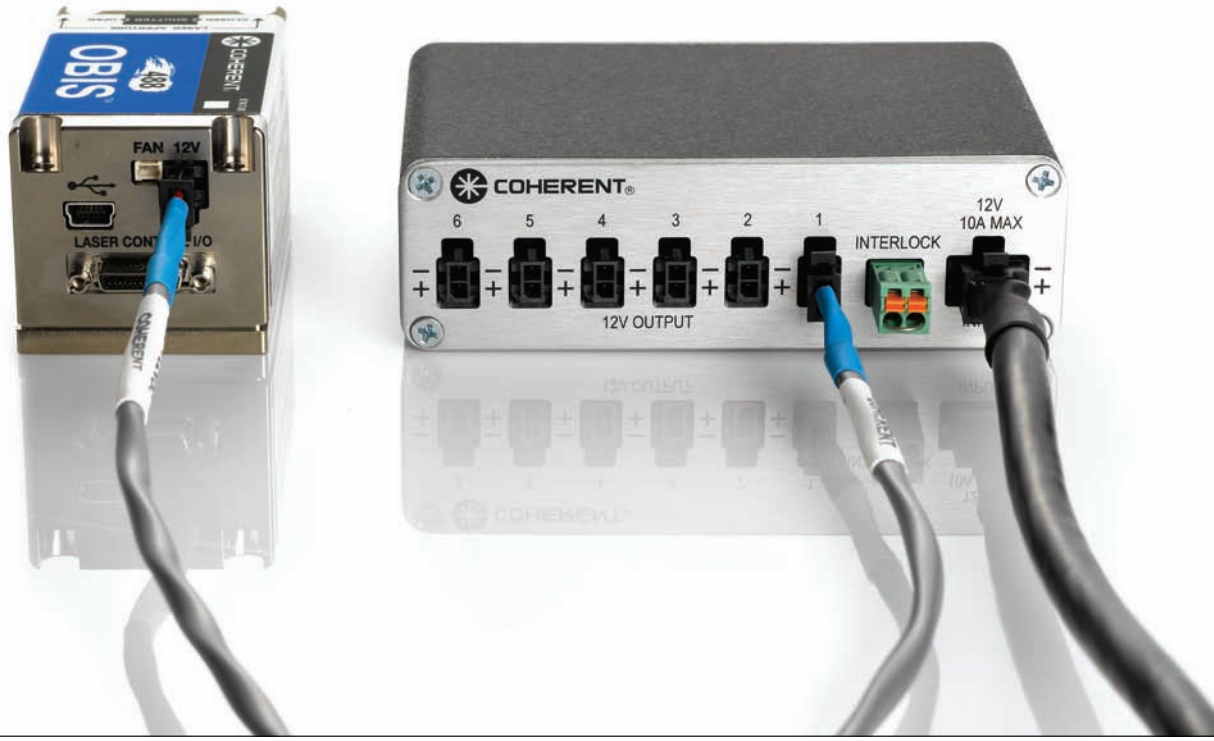


Figure 4: Single power supply included to drive six lasers with remote.

Figure 5: Six remote-to-laser power cables included. Color coded for easy installation and identification. One meter length.

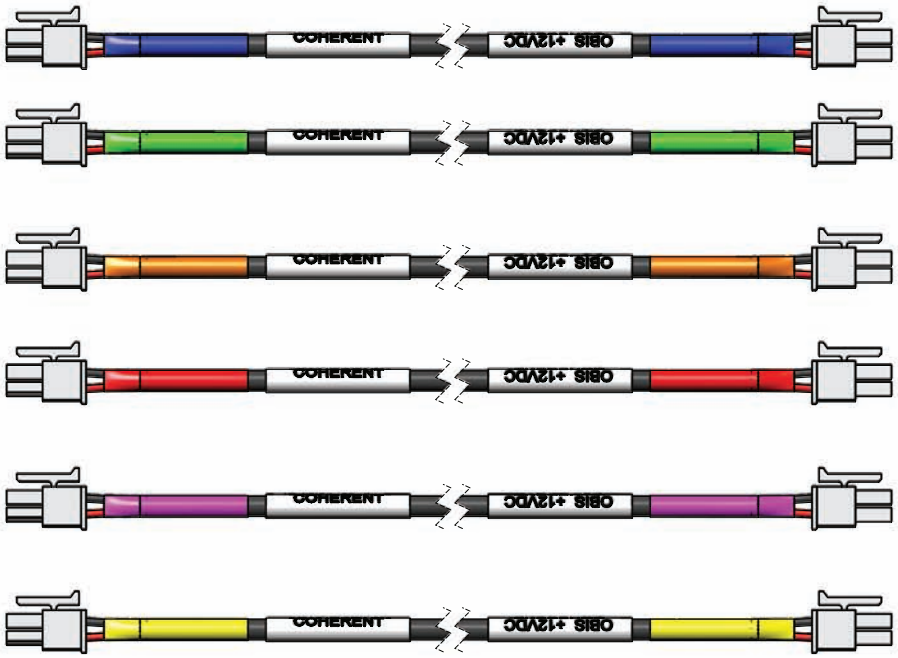
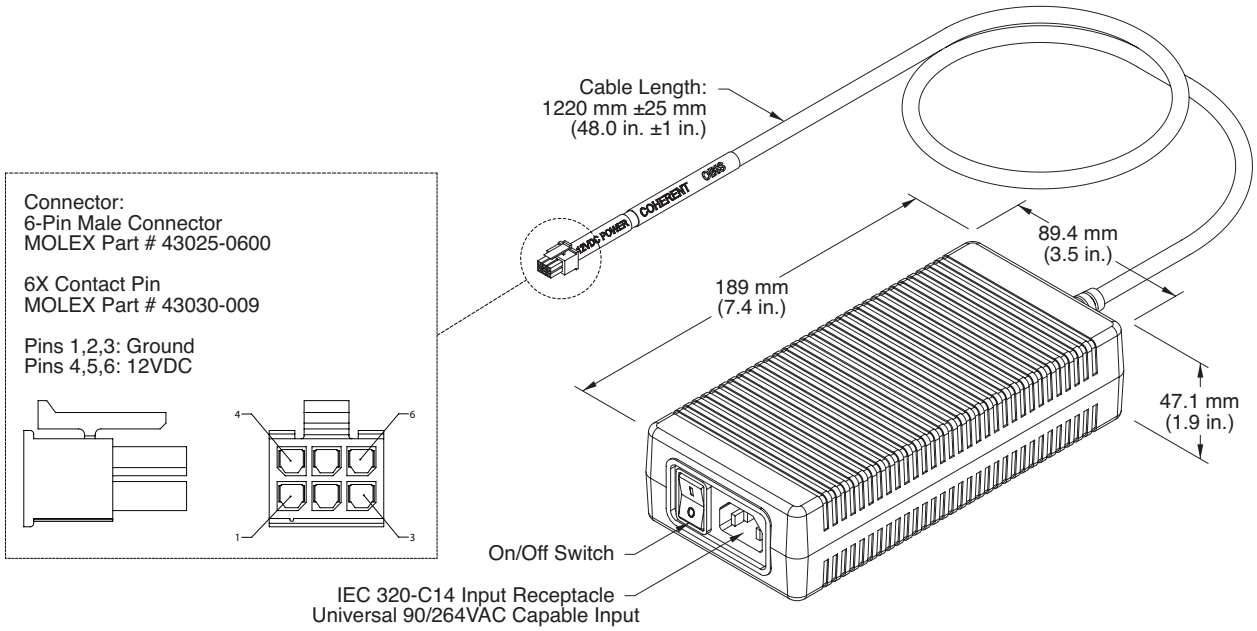


Figure 6: Power Supply with IEC-320 universal input. Includes On/Off switch.



OBIS LX/LS 6-Laser Remote

Laser Remote and Power Supply for up to Six Lasers

Other OBIS Laser Remotes	Description
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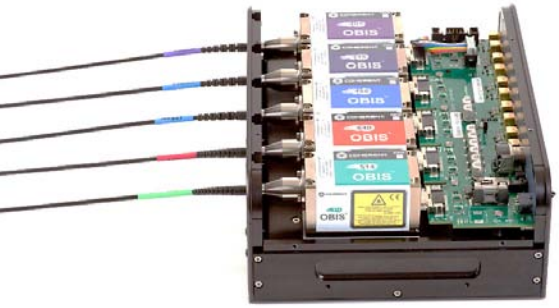
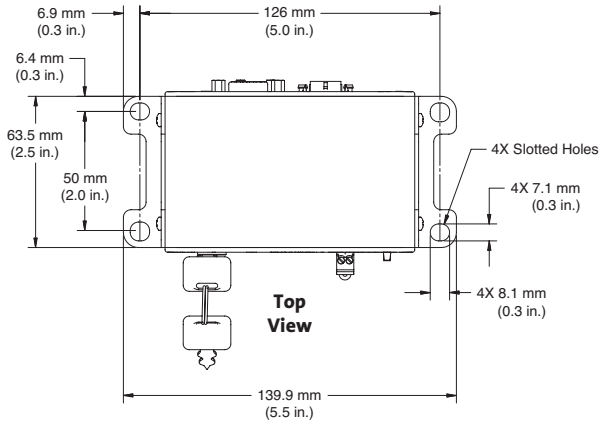
	OBIS LX/LS Laser Box with five laser mounting bays with thermal management, cooling fans, analog/digital inputs, RS-232, USB, key-switch and interlock in one compact package. Lasers sold separately.

COHERENT

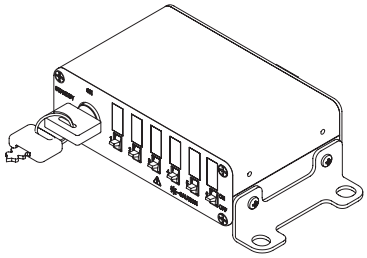
OBIS LX/LS 6-Laser Remote

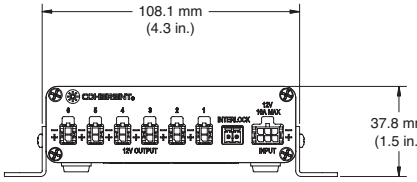
Laser Remote and Power Supply for up to Six Lasers

OBIS LX/LS 6-Laser Remote
Mounting Brackets and Stacking Brackets
(included with OBIS LX/LS 6-Laser Remote)

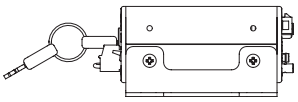


Top View



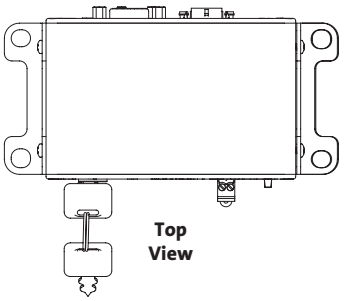


Front View

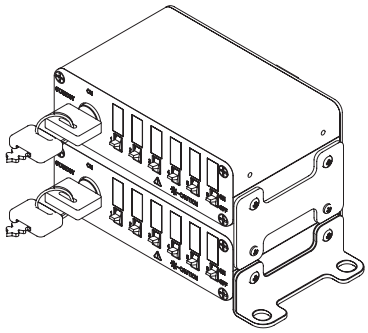


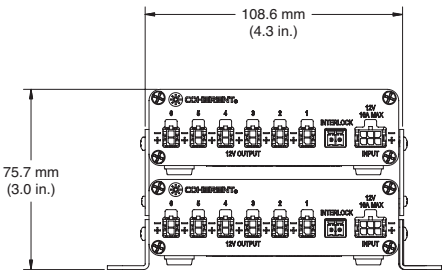
Side View

Example of Stacking OBIS LX/LS 6-Laser Remotes
(mounting bracket included, second remote sold separately)

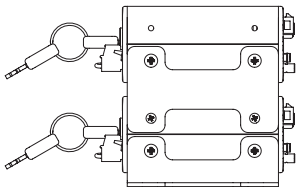


Top View





Front View



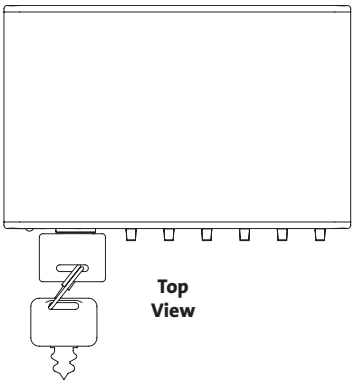
Side View

OBIS LX/LS 6-Laser Remote

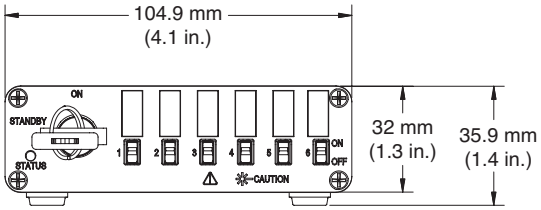
Laser Remote and Power Supply for up to Six Lasers

Mechanical Specifications

OBIS LX/LS 6-Laser Remote

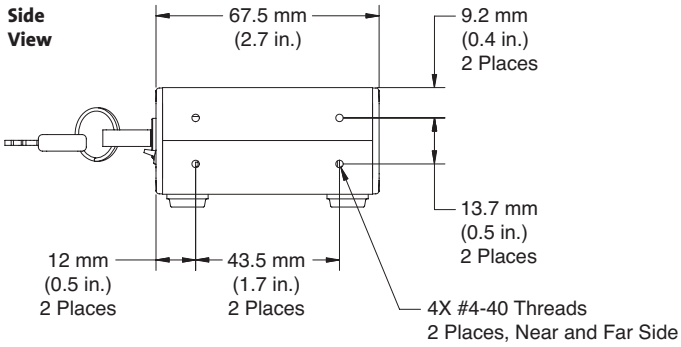


Top View

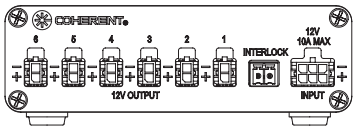


Front View

Side View



Rear View



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