

# Optromix - DSE

## CW Single-Frequency Fiber Laser

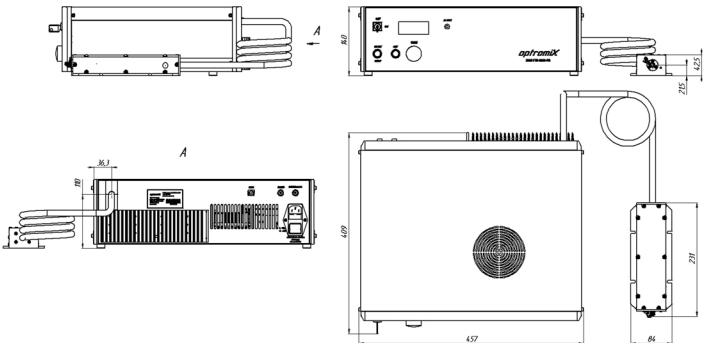
Wavelengths Standard 775 nm, 778 nm, 780 nm  
Custom: 765-790 nm

### KEY FEATURES

- Ultra-Narrow Linewidth
- High Beam Quality
- Thermal Wavelength Tuning
- Fast Piezo Tuning
- Low RIN Level
- Computer Control



### DIMENSIONS



# Specifications

## Optical

Parameter	Optromix-DSE-7xx
Operating mode	CW, Single Frequency, TEM00
Central Wavelength <sup>1</sup>	775 nm, 778 nm, 780 nm
Nominal Output Power	50mW, 100mW, 200mW, 500mW, 1000mW
Linewidth (FWHM) <sup>2</sup>	<10 kHz (typical < 5kHz)
Power Tunability	10 – 100%
Power Stability <sup>3</sup>	< 0.5% (typical <0.2%)
Wavelength Stability <sup>4</sup>	< 200 MHz
Pointing Stability	< +/- 0.5 $\mu$ rad/°C
Thermal Tuning Range	+/- 80 pm
Piezo Tuning Range <sup>5</sup>	+/- 15 pm
Optical Output <sup>6</sup>	Free Space (Laser Head)
RIN level (peak: app 1.4 MHz)	< -120 dB/Hz@0.3MHz < -105 dB/Hz@peak, < -140 dB/Hz@10MHz
Beam quality (M <sup>2</sup> )	< 1.05 (typical <1.02)
Beam Diameter <sup>7</sup>	0,7 mm
Beam divergence <sup>8</sup>	< 2 mrad

### Notes

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|---|--|
| <ol style="list-style-type: none"> <li>1. 7xx-0 nm +/- 0.3 nm by demand. Custom wavelengths 767 – 785 nm.</li> <li>2. Custom Linewidth &lt; 1 kHz</li> <li>3. Over 1 Hour with base temperature constant within 0.2 °C after 30 minute warm-up</li> <li>4. Over 1 Hour with base temperature constant within 0.2 °C after 30 minute warm-up.</li> </ol> | <ol style="list-style-type: none"> <li>5. External PZT Driver 0-120V, modulation up to 100 kHz</li> <li>6. Optional Output: Fiber Port</li> <li>7. 0.5 - 1.0 mm by demand</li> <li>8. By demand (Depending on the required beam diameter)</li> </ol> |
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## Electrical / Mechanical / Environmental

Parameter	Optromix-DSE-7xx
Power Supply Requirements	100 – 240 V, 50 – 60 Hz, Single Phase
Power Consumption (1W output)	< 500 W
Control Connector <sup>1</sup>	USB
Cooling	Forced Air
Dimensions (WxHxL)	Electro-optical Unit: 449 mm x 140 mm x 365 mm, Head: 84 mm x 42 mm x 229 mm
Weight	< 20 kg
Operation temperature	10 – 35 °C
Storage temperature	- 40 – +70 °C
Operation Humidity	10 – 85 %
MTBF	> 10,000 Hrs
Standard Umbilical Cable Length <sup>2</sup>	1.2 m

### Notes

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|---|--|
| <ol style="list-style-type: none"> <li>1. Optional Connectors: RS232, Ethernet</li> </ol> | <ol style="list-style-type: none"> <li>2. Optional lengths: up to 5 m</li> </ol> |
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Warranty: Standard Warranty - 12 months from the date of delivery.

Product code:

Optromix-DSE-7xx-yyyy-cc

xx	Wavelength (nm)
yyyy	Output power (mW)
cc	Optical output: FS - free space, FP-Fiber Port



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