



MFE High Power Fibre Amplifier System



The Santec MFE is a modular high-power fibre amplifier system based on Er and Yb doped active fibres. It uses an internal or external seed laser and up to three amplification stages providing output power from 500 mW to 20 W. The operating wavelength ranges include 1000 nm to 1100 nm for Yb and 1530 nm to 1610 nm for Er active fibres. An external second harmonic generation (SHG) module can be connected directly to the amplifier via a standard USB-C cable.

Currently available wavelengths and peak power:
1040 – 1100 nm, up to 20 W
1550 – 1590 nm, up to 20 W

Features

- Fully modular system
- High output power
- Access to unique wavelengths
- Optional SHG module
- Internal or external seed

Applications

- Telecom test and measurement
- Atomic physics
- Quantum computing

MFE High Power Fibre Amplifier

Specifications MFE

Optical

| | |
|-----------------------|--|
| Wavelengths | 1040 – 1100 nm, up to 20 W 1550 – 1590 nm, up to 20 W |
| Power | 500 mW to 20 W (wavelength dependent) |
| Modulation | 10 kHz bandwidth, 0 – 1.2 V control input |
| Power stability | 2% RMS |
| Operating temperature | 20 ± 10 °C |
| Warmup time | 30 min |

SHG oven

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|---------------------|--|
| Oven temperature | Ambient to 130 °C |
| Accuracy | ± 0.02 °C |
| Long-term stability | ± 0.05 °C |
| Regulator type | PID, hysteresis |
| Interface | USB-C (USB 3.0-3.2) with 60 W PD feature |
| Warmup time | 15 min |

Communications

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|----------|--------------------------|
| Ethernet | 10/100 TP, RJ45 |
| USB | USB 2.0, plug type USB-A |
| Display | 2.8" 240x320 TFT |

Protection

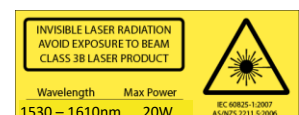
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|--------------------|-----------------------------------|
| External interlock | M8 5-pin connector |
| Key interlock | STANDBY/RUN |
| Emergency stop | Front panel button |
| Photodetector | Seed/amplification stage failsafe |

Electronics

| | |
|------------------|--|
| Indicator | Amplifier ON/OFF (LED), Oven ON/OFF (LED) |
| Modulation input | BNC 10 kHz |
| Connector | Santec DLC Diode Laser Controller (single cable connect) |

Dimensions

| | |
|------------|-----------------------------------|
| Dimensions | 422 x 88.5 x 400 mm (WxHxD), 7 kg |
|------------|-----------------------------------|



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