

YLPN-MCPL Series

Multi-channel Pulsed Fiber Lasers

Flexibility and Ease of
Automation

2, 3 or 4
Independent Channels



APPLICATIONS

- ▶ Cleaning, Ablation, Texturing
- ▶ Integrated Production Lines



FEATURES

- ▶ 2, 3 or 4 Channels
- ▶ Up to 2 kW for 2 channels
- ▶ Up to 1 kW for 3 and 4 channels
- ▶ Max. Pulse Energy 100 mJ
- ▶ Selectable Pulse Durations
- ▶ Independent Channel Control
- ▶ The Highest Efficiency on the Market > 31%



BENEFITS

- ▶ Reduction in Footprint and Volume
- ▶ Higher Reliability
- ▶ Lower cost, Easier to Install and Service

YLPN MCPL lasers integrate multiple independent lasers into a single enclosure, sharing a common power supply, safety electronics, and cooling system.

Simultaneous operation of independent channels is demanded in production lines using multiple identical sources such as battery case texturing. One multichannel system is simpler to install and takes less space comparing with several individual laser sources. The power and pulse duration adjustments for channels are flexible and independent, a significant advantage over alternatives with fixed power ratio and pulse duration per channel. Ability to add a spare channel minimizes production down time in case of a module failure. Because laser modules are considered spare parts, they are easier to import than individual lasers.

YLPN-MCPL Series

Multi-channel Pulsed Fiber Lasers

Optical Characteristics	
Wavelength Range, nm	1062-1066, Typ. 1064
Mode of Operation	Pulsed/ CW option
Number of Channels	2, 3 or 4
Maximum Power per Channel, kW	1 kW up to 4 channels 2 kW up to 2 channels
Selectable Pulse Durations, ns	20, 30, 50, 70, 100
Nominal Energy, mJ	33.3 @ 20 ns 50 @ 30 ns 71.4 @ 50 ns 100 @ 70 and 100 ns
Pulse Repetition Rate, kHz	2 - 300
Output Power Tuning Range, %	10 - 100
Power Stability, %	<±1.5, over 8 hours
Processing Fiber Core Diameter, µm	400
Beam Parameter Product*, mm × mrad	<13
Processing Fiber Length**, m	Default 10, maximum 20

* For round fiber core. Square core fiber is available upon request.

** Custom fiber length is available upon request.

General Characteristics	
Operating Voltage, 3 phases	400-480 V/3P + PE @ 50-60 Hz
Cooling	Tap and DI water
Dimensions, W×D×H, mm	1006 × 806 × 806
Weight, kg	<300
Wall Plug Efficiency %	>31

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MAX. AVERAGE OUTPUT POWER: 4 kW
MAX. PEAK OUTPUT POWER: 10 MW
PULSE DURATION: 15-120 ns
PULSE REPETITION RATE: 2-300 kHz
WAVELENGTH RANGE: 900-1200 nm

DANGER - INVISIBLE LASER
RADIATION AVOID EYE OR SKIN
EXPOSURE TO DIRECT OR
SCATTERED RADIATION
CLASS 4 LASER PRODUCT
IEC 60825-1:2014