

# PyroFlex™ 25-GR

**ADJUSTABLE PULSE  
PARAMETER LASER**

**532  
nm**



Versatile and user friendly, the PyroFlex™ 25-GR pulsed fiber laser platform sets the new standard for accelerated process development, enabling users to shape laser pulses to exact specifications.

## Create new processes.

Introducing the PyroFlex™ 25-GR, combining the benefits of fiber laser technology and ESI proprietary tailored pulse capability, the PyroFlex™ 25-GR is the enabling technology for a new generation of laser processing applications that lie beyond the capabilities of Q switched and picosecond lasers. The PyroFlex™ 25-GR tailored pulse fiber laser platform provides users with complete, individual control over the waveform parameters, including width, energy and repetition rate. It also provides fine and detailed control over precise pulse shape and complex pulse trains. The PyroFlex™ technology sets a new standard in productivity and accelerated process development, offering OEM and integrators a robust and flexible platform on which to build processing equipment covering broad arrays of applications.

The green version of the PyroFlex™ 25 Series delivers pulses with a maximum peak power of 10 kW, at an average power up to 10 Watts, in continuously programmable pulse durations from 1–600 nanoseconds. It operates at 532 nm using non-linear frequency conversion.

[www.eolite.com](http://www.eolite.com)

## Highlights

### PyroFlex™ advantages

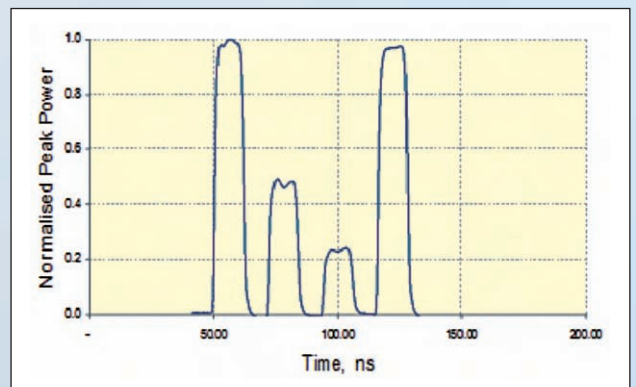
- 1 ns to 600 ns variable pulse length
- Independently variable pulse characteristics
- Independently variable repetition rates
- Programmable pulse trains
- Arbitrary pulse shape control with 1 ns resolution
- TEM<sub>00</sub> beam quality
- High efficiency
- High reliability

### Sample applications

- Wafer and ceramic processing
- Via drilling
- Micromachining
- Precision drilling
- Micro-welding
- Solar cell processing
- Ablative processes

The PyroFlex™ 25-GR laser platform combines the advantages of proven high reliability fiber coupled laser diode pumping technology with the benefits of programming control and incorporates an optical isolator for superior pulse stability.

Uncover the possibilities. Make light do what you want with PyroFlex™.



**PYROPHOTONICS**  
THE SHAPE OF LIGHT TO COME

**EOLITE**  
LASERS  
as part of **esi**

# PyroFlex™ 25-GR

**ADJUSTABLE PULSE PARAMETER LASER**

**up to 10 W @ 532 nm**

**Specifications summary**

### Mechanical parameters

- Control unit: (3U Rack Mounted)  
19"W x 8.75"H x 16"D.
- Laser head: 10"W x 4"H x 25"D.

### Electrical parameters

- RS232 interface.
- POWER SUPPLY: 85–260 VAC, 47–63 Hz.

### Environmental ratings

- Storage: -20 to 60°C, relative humidity 5 to 90% non-condensing.
- Operating: 15 to 35°C, relative humidity 5 to 80% non-condensing.

### Wavelength

- 532 nm.

### Mode of operation

- Programmable pulsed.

### Pulse repetition frequency\*

- Adjustable 0-500 kHz.

### Pulse width\*

- Adjustable 1-600 ns.

### Average power\*

- Adjustable 0-10 W.

### Energy per pulse\*

- Adjustable 0–100 µJ.

### Peak power\*

- Adjustable 0–10 kW.

### Polarization

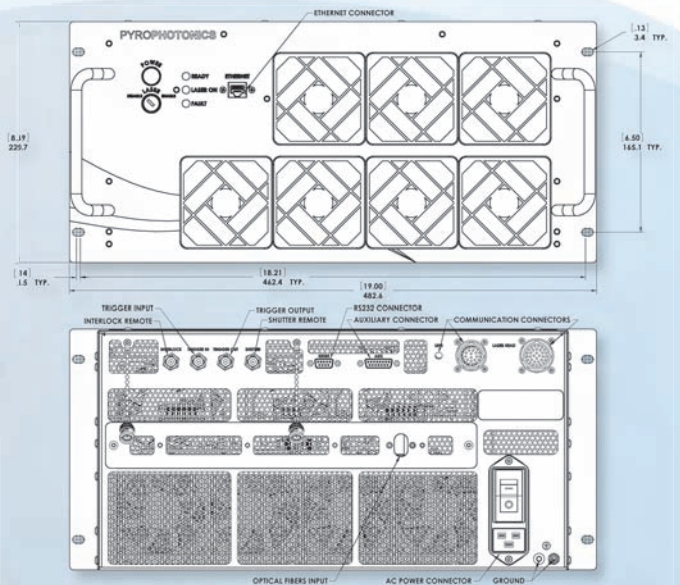
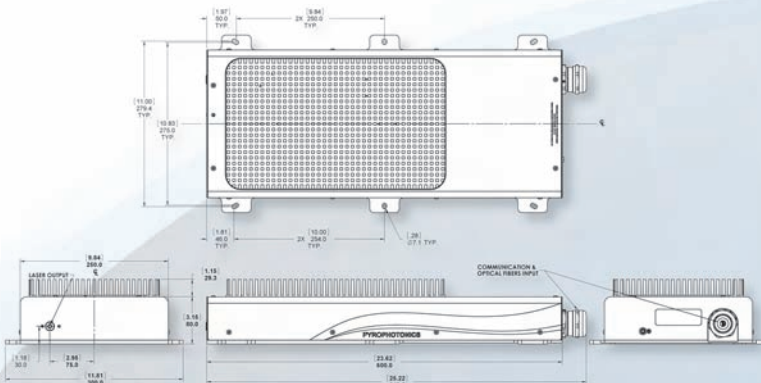
- Linear: > 20 dB extinction ratio

### Spatial Mode

- TEM<sub>00</sub>

### Beam quality

- M<sup>2</sup> < 1.3



\*Some parameters are interrelated. Not all maximum operating parameters may be achieved simultaneously.  
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Patents: US 7,443,893, US 7,428,253, US 7,796,655, US 7,742,511, US 7,796,654

**USA**

Phone: +1.800.547.5746  
or +1.503.641.4141

**Canada**

Phone: +1.514.904.9000

**China**

Phone: +86.21.3392.7070

**Japan**

Phone: +81.3.5625.5100

**Korea**

Phone: +82.2.3473.9900

**Singapore**

Phone: +65.6603.0199

**Taiwan, R.O.C.**

Phone: +886.3.552.6788

**Europe**

Phone: +33.556.46.45.50

