

# PyroFlex™ 25-IR

ADJUSTABLE PULSE  
PARAMETER LASER

1064  
nm



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

## Create new processes.

Introducing the PyroFlex™ 25-IR, combining the benefits of fiber laser technology and ESI proprietary tailored pulse capability, the PyroFlex™ 25-IR 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-IR 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 infrared version is the foundation of the PyroFlex™ 25 Series. It delivers a maximum peak power of 25kW with an average power up to 25 watts, in continuously tunable pulse durations from 1 to 600 nanoseconds in 1 nanosecond increments.

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

## Highlights

### PyroFlex™ advantages

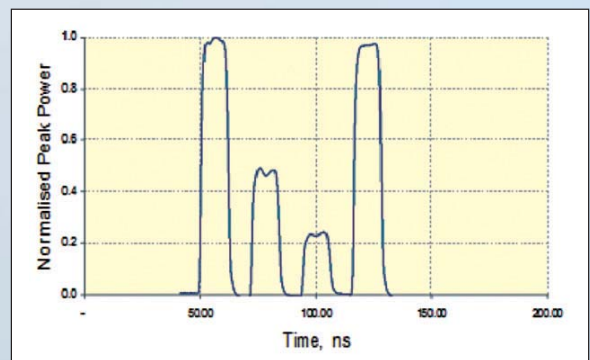
- 1 ns to 600 ns variable pulse length
- Independently variable pulse characteristics
- Independently variable repetition rates
- Programmable pulse trains
- Arbitrary pulse shape control with 1 ns resolution
- TEM<sub>00</sub> beam quality
- High efficiency
- High reliability

### Sample applications

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

The PyroFlex™ 25-IR 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

as part of

a division of **esi**

# PyroFlex™ 25-IR

ADJUSTABLE PULSE PARAMETER LASER

up to 25 W @ 1064 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

- 1064 nm.

### Mode of operation

- Programmable pulsed.

### Pulse repetition frequency \*

- Adjustable 0-500 kHz.

### Pulse width \*

- Adjustable 1-600 ns.

### Average power\*

- Adjustable 0-25 W.

### Energy per pulse \*

- Adjustable 0–500 µJ.

### Peak power\*

- Adjustable 0–25 kW.

### Polarization

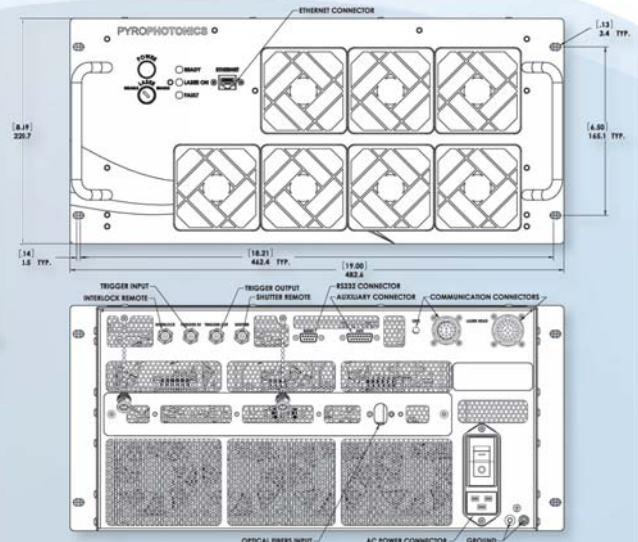
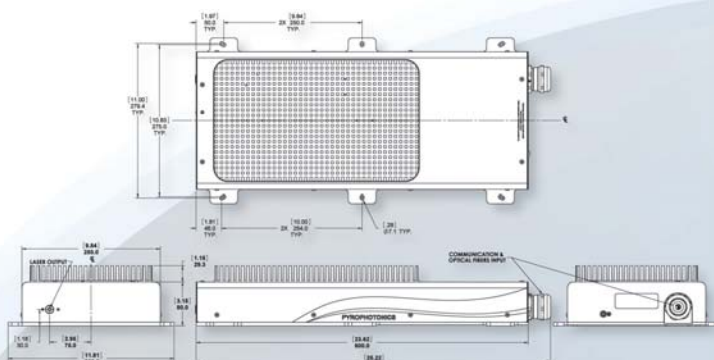
- Linear: > 20 dB extinction ratio

### 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.  
© 2011 Electro Scientific Industries, Inc. Printed in U.S.A. ESI reserves the right to change specifications and other product information without notice. Effective January 2010. System and products offered by ESI and its subsidiaries are covered by issued and pending US and foreign patents. Products mentioned are for identification purposes only and may be trademarks or registered of their respective companies. ESI, the ESI logo, and Electro Scientific Industries, Inc. are registered trademarks of Electro Scientific Industries, Inc. Patents: US 7,443,893, US 7,428,253, US 7,796,655, US 7,742,511, US 7,796,654

Japan

**PNEUM Co., Ltd.**

5-15-3 Minamikoshigaya, Koshigaya-shi,  
Saitama-ken, 343-0845, Japan

TEL: 81-48-985-2720  
FAX: 81-48-985-2721  
info@pneum.co.jp 1503

