# Rigel i800

## 800W High Power Diode-Pumped Short-Pulse Laser

A 600 W Q-switched DPSS Laser delivering high average power and high peak power at 1064 nm, unpolarised. With a well proven rugged head design, state of the art universal system control based power supply architecture and simple synchronisation with OEM equipment and process lines, this platform is ideally suited to high volume industrial applications.

Rigel i200
Rigel i400
Rigel i600
Rigel i800
Rigel i1000
Rigel i1600
Rigel i3200

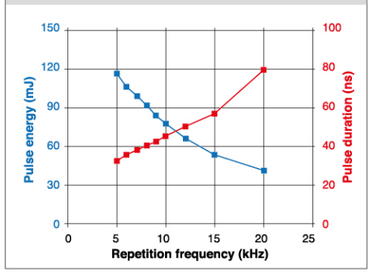
### Features

- Energy per Pulse > 100mJ
- 5 - 50kHz Repetition Rate Available
- $M^2$ between 17 and 20
- Excellent Stability
- Condition Monitoring
- Optional Fibre Delivery (Round or Square)
- Optional Computer Controlled Attenuation

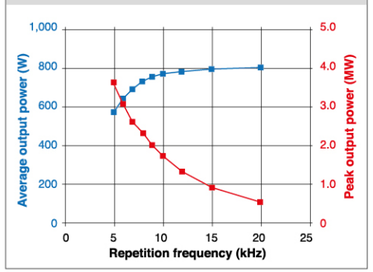
### Applications

- Material Processing
- Photovoltaic Processing
- Thin Film Removal
- Rapid Laser Patterning (RLP)
- Precision Micro Machining

Pulse energy and pulse duration




Average power and peak power



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## Specified Laser Performance

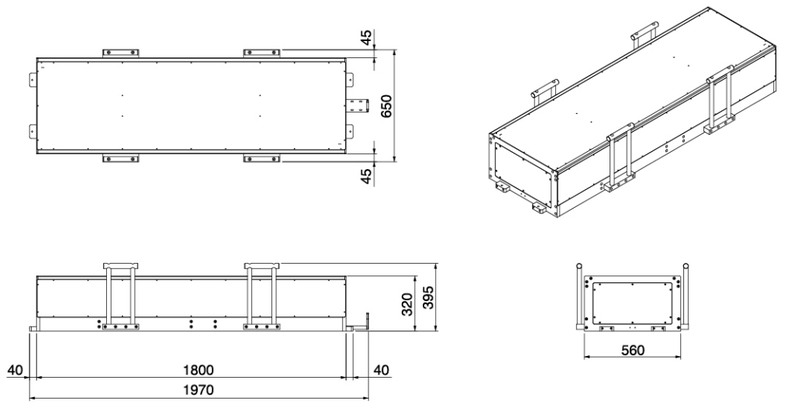
| Pulse Repetition Freq. (kHz) | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|
| Average Power (W) | 550 | 605 | 640 | 660 | 680 | 690 |
| Pulse Energy (mJ) | 110 | 101 | 91 | 83 | 76 | 69 |
| Pulse Duration (ns) | 32 | 35 | 37 | 40 | 43 | 46 |
| Divergence (mrad, $1/e^2$ FA) | < 15 | | | | | |
| $M^2$ | 17 to 20 | | | | | |
| Typical Power Stability | ± 1 % pk-pk | | | | | |
| Typical Fibre Option | 800$\mu$m (Square or Round) | | | | | |

## Facility Requirements

| Supply Voltage | 400 VAC (±10%) |
|---|---|
| Supply Frequency | 50/60 Hz |
| Nominal Power Consumption | 18 kVA |
| Cooling Water | 40 litres/min at 11-17°C |
| Gas Purge | $N_2$ or Air (Grade N5.0, <1 ppm THC) |
| Laser Dimensions | 1800 x 560 x 320mm |
| Control Rack Dimensions | 1195 x 600 x 970mm (h x w x d) |
| Environmental Conditions | Temp. 15-32°C and RH <60% (90% max, non condensing) |

Specifications subject to change without notice

### Dimensions




LASER RADIATION
AVOID EYE OR SKIN EXPOSURE TO
DIRECT OR SCATTERED RADIATION
CLASS 4 LASER PRODUCT

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