



# redENERGY G4

Pulsed Fiber Laser  
Wavelength: 1060nm

## 20W HS-L



### Benefits



**Greater flexibility**

Range of pulses for new and improved applications



**Superior quality**

Industry leading reliability and product warranty



**Increased productivity**

Higher powers and pulse rates for faster processing



**Improved profitability**

Low cost of ownership with no service requirements

### Applications

- Ablation
- Cleaning
- Drilling
- Engraving
- Marking
- Micro-machining
- Precision cutting
- Scribing
- Solar cell processing
- Thin film patterning
- Thin foil cutting
- Welding

### 20W HS-L is ideal for...

**High quality marking**  
With larger spots ( $M^2 \sim 1.8$ )



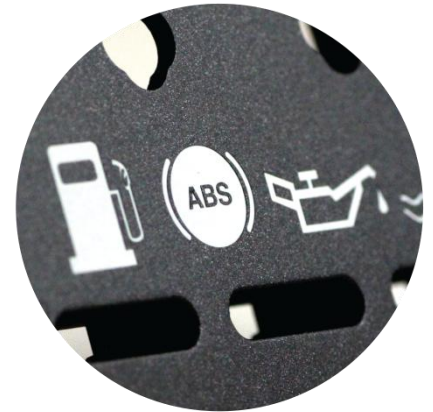
- Feature sizes visible to the eye
- Larger area coverage

**High speed marking**  
With PRF up to 1MHz



- White marking metals
- Non-transparent plastics

**Cost effective marking**  
With pulse duration 10-220ns



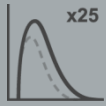
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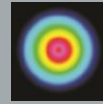
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### PulseTune functionality

#### HS Series

- Up to 25 PulseTune waveforms
- Single shot to 1 MHz pulse repetition frequency



### Beam quality

#### L Type (M<sup>2</sup> 1.6 – 2.0)

- For slightly larger feature sizes that are more visible to the naked eye

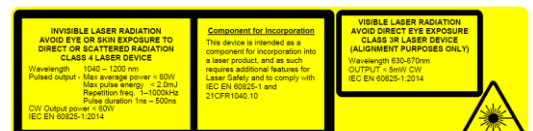
## Laser characteristics

Parameter	Unit	SP-020P-A-HS-L
Central emission wavelength	nm	1059 - 1065
Nominal average output power	W	20
M <sup>2</sup>		1.8
Collimated beam diameter	mm	3 / 5 / 7.5 / 10
PulseTune waveforms		25
Maximum pulse energy	mJ	>0.8
Maximum peak power	kW	>12
Pulse duration range	ns	10 - 220
Pulse repetition frequency (PRF) range	kHz	1 - 1000
CW mode (with modulation)	kHz	YES (1 - 100)

## System integration details

Parameter	Unit	SP-020P-A-HS-L
Cooling		Air
Beam delivery cable length	m	2 / 3
Laser module dimensions	mm	347 x 201 x 95
Power supply voltage	V DC	24
Power supply requirement	W	250
Operating temperature range	°C	0 to +45
Relative humidity range		5-95% RH (non-condensing)

To learn more about our **redENERGY G4** Fiber Laser products visit our website: [www.spilasers.com](http://www.spilasers.com)



### Terms and Conditions

All product information is believed to be accurate and subject to change without notice. A complete product specification will be issued on request and also at time of order acknowledgement. The user assumes all risks and liability whatsoever in connection with the use of the product and its application. These lasers are designed as products for incorporation or integration into other equipment.