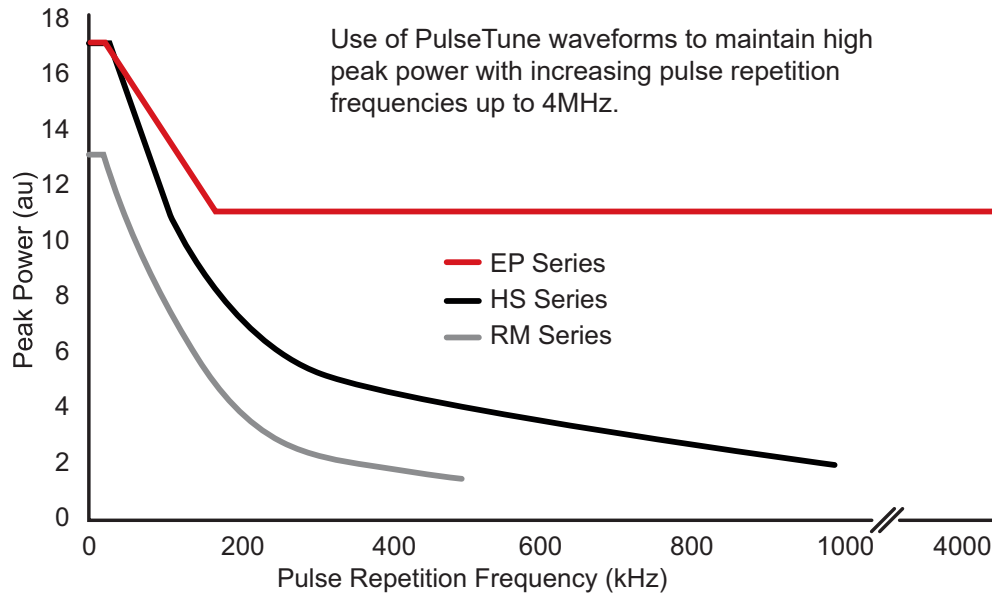
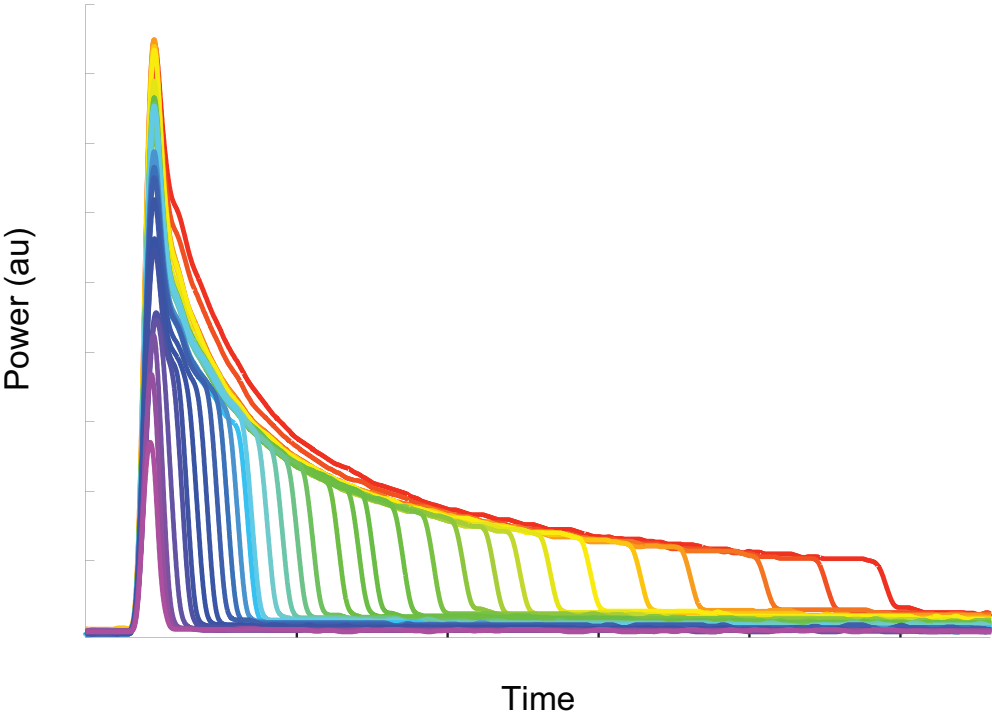
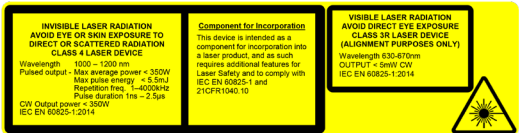


PulseTune Technology

Our PulseTune technology provides the ability to select waveforms, offering pulse durations from 3 ns - 2000 ns. Each pulse waveform is designed for maximum peak power and pulse energy at an optimised pulse repetition frequency.



Visit our **NEWLY** configured redENERGY G4 Page
Still not sure which is the ideal solution, use our online selector tool.



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✓✓= Optimal for ✓= Good for

Product range by beam quality		S Type	Z Type	L Type	H Type	M Type
Key Applications						
Ablation		✓✓	✓✓	✓	✓	✓
Cleaning			✓	✓	✓✓	✓✓
Drilling		✓✓	✓✓	✓	✓	✓
Engraving, deep		✓	✓✓	✓	✓✓	✓✓
Engraving, fine		✓✓	✓✓	✓		
Marking anodised & painted materials		✓	✓✓	✓✓	✓	✓✓
Marking, general		✓	✓✓	✓✓	✓	
Marking, metal		✓	✓✓	✓✓	✓	✓
Marking, plastic (night & day)		✓✓	✓	✓✓	✓	
Micro-machining		✓✓	✓			
Precision cutting		✓✓	✓✓		✓	✓
Scribing		✓✓	✓✓	✓		
Solar cell processing		✓✓	✓✓	✓	✓	
Thin film patterning		✓✓	✓✓	✓	✓✓	
Thin foil cutting		✓✓	✓✓	✓	✓✓	
Welding		✓	✓✓		✓✓	✓✓

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.



redENERGY® G4
20W - 250W
ns Pulsed Fiber Lasers

WITH GTwave®
AND PulseTune TECHNOLOGY

GREATER FLEXIBILITY

SUPERIOR QUALITY

INCREASED PRODUCTIVITY

IMPROVED PROFITABILITY





redENERGY G4 20W - 250W ns Pulsed Fiber Lasers



redENERGY G4 70W



redENERGY G4 200W

Product selection parameters

Wavelength																	1060nm				
Beam quality options ⁽¹⁾	S Type					Z Type										L Type		H Type		M Type	
M²	<1.3					<1.6										1.8		3		5	
Rated average power (W)	20		30	50	100	20		30	50		70		100	130	200	250	20		40	70	200
PulseTune Functionality ⁽²⁾	HS	EP	HS	HS	EP	RM	EP	RM	RM	EP	RM	EP	EP	EP	EP	EP	HS	EP	HS	HS	EP
Beam delivery cable length (m)	2					2/3		3				3/5		3			2/3	2	3/5		
Beam delivery optic / connector	ILOC / ILLK		ILLK	ILOC / ILLK										ILOC+	IBeam		ILOC / ILLK	ILLK	ILOC / ILLK		IBeam
Pulse parameters																					
Max peak power (kW)*	>7					>10										>12		>20		>50	
Max pulse energy (mJ)	>0.6	>0.8	>0.6		>1		>1.2	>1		>1.2	>1	>1.2	>1.3	>1.5		>0.8	>1	>1.25		>5	
Pulse repetition frequency range (kHz)	1-1000	1-4000	1-1000		1-4000	1-500	1-4000	1-500		1-4000	1-500	1-4000	1-4000			1-1000				1-4000	
Pulse duration range (ns)	10-240	3-2000	10-240	11-220	4-2000	26-250	3-2000	26-250		3-2000	28-260	3-2000	4-2000	3-2000	9-2000	10-1400	10-220	2-500	10-240	10-250	12-2000
PulseTune waveforms	24	48	24		47	2	48	2		48	2	48		47	45	42	25	40	24		45
CW mode	Yes				No	No	Yes	No		Yes	No	Yes		No			Yes				No
Modulation range in CW mode (kHz)	1-100				N/A	N/A	1-100	N/A		1-100	N/A	1-100		N/A			1-100				N/A
Output power stability (%p-p)*	<5															<8	<5	<5			
Cooling options																					
Air cooled or Water cooled	Air											Air		Water	Air						
Environmental																					
Ambient temperature range (°C)	0-45			0-42	5-40	0-45			0-40			5-40	10-45	10-40	15-35	0-45			0-40	10-40	
Relative humidity range	5-95% RH (non-codensing)																				

*Measured at rated average power, waveform 0, max pulse energy and over full operating temperature range. Models with longer beam delivery cables may have lower peak power than stated.

1. Beam quality options

S Type - Single mode (M² <1.3)
Generating very fine spot size <20 microns with high power stability and large depth of focus. Ideally suited to applications requiring small feature sizes.

Z Type - General purpose - (M² <1.6)
Offering higher peak power and pulse energy with only minor increase in spot size and good depth of focus.

L Type - Low mode (M² 1.6 - 2.0)
General marking applications giving slightly larger spots and features that are more appropriate to making marks visible to the naked eye.

H Type - High mode (M² 2.5 - 3.5)
Offering higher pulse energies, peak powers and even larger spots ideal for wide lines, filled font type applications and large area coverage.

M Type - Multimode (M² 4.0 - 6.0)
Highest pulse energies and longer pulse durations ideal for welding and cleaning.

Feature Combinations

At a glance				PulseTune Functionality ⁽²⁾		
				RM	HS	EP
Beam Quality ⁽¹⁾	S Type				20W, 30W, 50W	20W, 100W
	Z Type			20W, 30W, 50W, 70W		20W, 50W, 70W, 100W, 130W, 200W, 250W
	L Type				20W	20W
	H Type				40W, 70W	
	M Type					200W

2. PulseTune Functionality

Gives users greater control of pulse conditions providing increased pulse energy, peak power and pulse repetition frequency.



- RM Series (Reduced Mode)**
- Models benefit from 2 PulseTune waveforms
 - Up to 0.5 MHz pulse repetition frequency



- HS Series (High Specification)**
- Up to 25 PulseTune waveforms
 - Up to 1 MHz pulse repetition frequency



- EP Series (Extended Performance)**
- Up to 48 optimised PulseTune waveforms
 - Up to 4 MHz pulse repetition frequency

