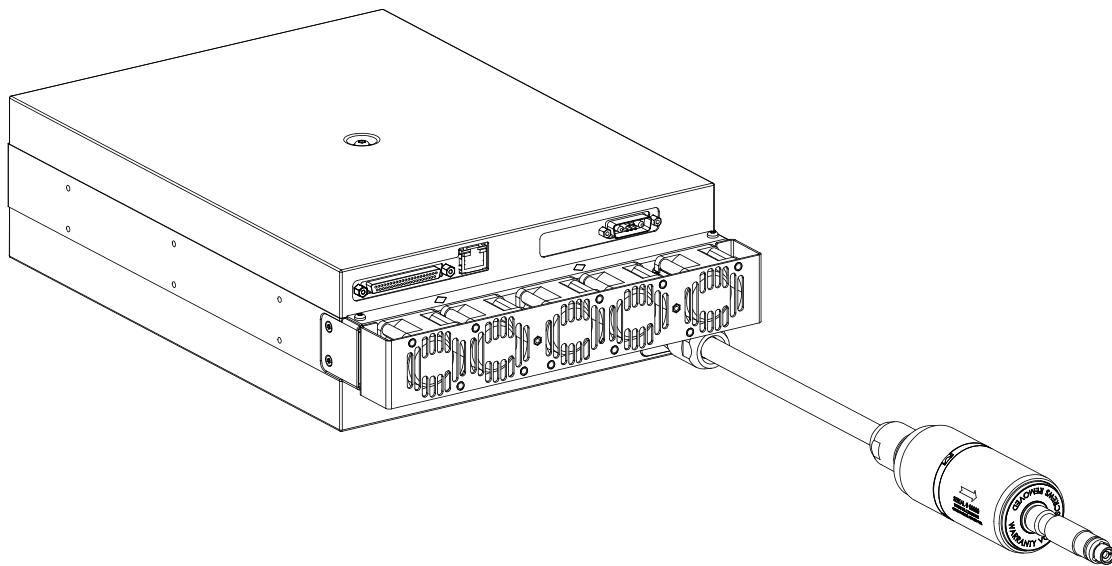


# G4 Pulsed Fibre Laser Specification

## Applicable Part numbers

Part number	Options
SP-070P-A-EP-Z-B-Y	3m optical cable, with pilot laser



## System Integration Details

parameter	unit	range
Laser Module type		B1
Laser Module Dimensions	mm	377 x 249 x 95
Beam delivery type		ILLK
Control interface version		V8
Power Supply Voltage	V DC	24 ± 2
Logic Power Supply Requirement	W	50
Laser Diode Power Supply Requirement	W	480
Operating temperature range	C	0 to +40
Storage temperature range	C	-10 to +60

## Related Documents

Document number	Description
SM-S00310	OEM Safety and System Integration Manual: Module Types B1 and B2
SM-S00360	V8 Control Interface Manual
SM-S00220	G4 Accessories Datasheet

## Laser Characteristics

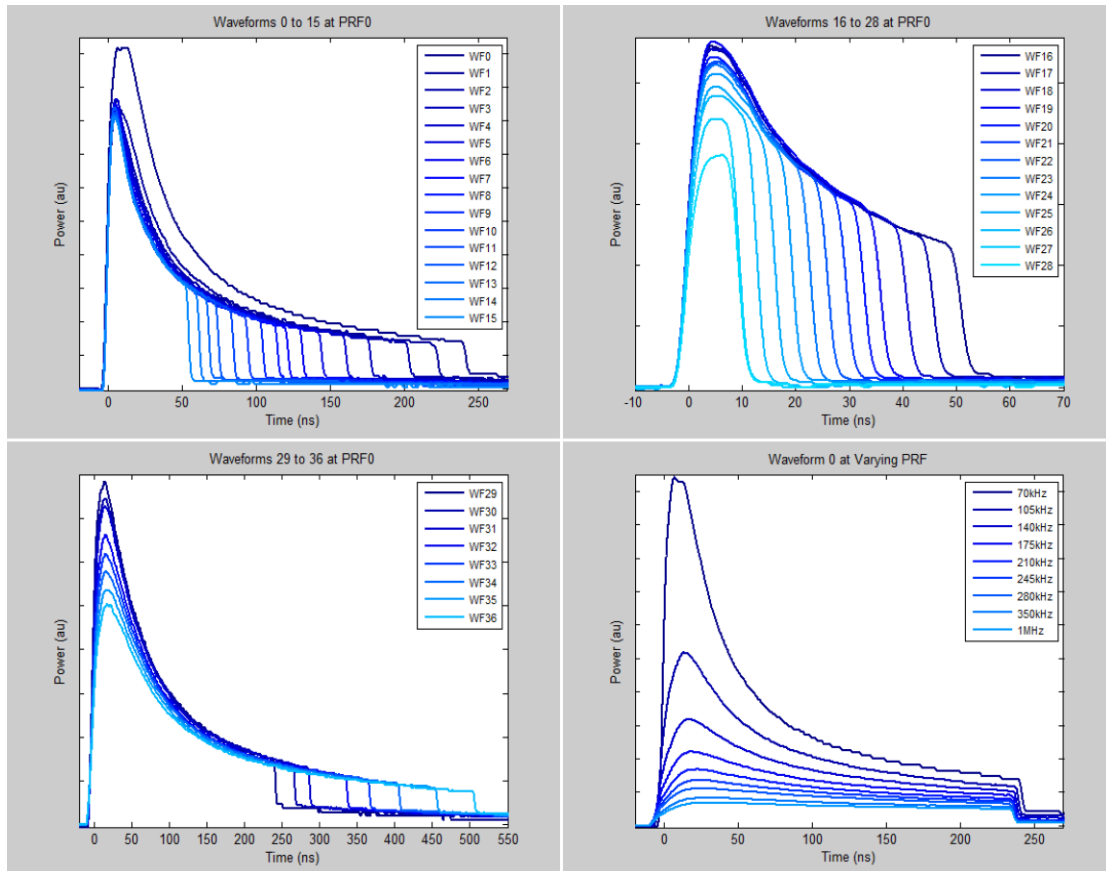
All parameters specified at wfm 0 (70kHz), rated power, over operating temperature range unless otherwise stated.

parameter	unit	range
Average Output Power	W	> 70
Output Power Stability	% p-p	< 5
Maximum Pulse Energy	mJ	> 1.0
Maximum Peak Power	kW	> 10
Pulse Width Range (see pulse waveform table)	ns	10 – 500
Pulse-to-Pulse Energy Stability (at stable temperature)	% rms	< 3
CW Mode		yes
Central Emission Wavelength	nm	1059 – 1065
Emission Bandwidth	nm	< 12
Fraction of power within $\lambda_0 \pm 20$ nm	%	> 80
$M^2$		< 1.6
Full-angle divergence	mrad	80 – 120
Circularity	%	> 90
Beam pointing error	mrad	< 10
Beam offset	mm	< 0.1
Astigmatism	$1/z_R$	< 0.3
Degree of polarisation	%	< 20

## Pulse Waveform Table

wfm	PRF0 (kHz)	PRFmax (kHz)	Max. pulse energy, Emax (mJ)	Typ. FWHM pulse width at Emax (ns)	Pulse width at 10% (ns)	Typ. peak power at Emax (kW)
0	70	1000	1.0	46	240	13
1	88	1000	0.87	45	220	10
2	95	1000	0.76	42	200	10
3	102	1000	0.71	40	175	10
4	105	1000	0.69	38	160	11
5	112	1000	0.64	40	145	10
6	119	1000	0.61	35	130	11
7	126	1000	0.57	33	120	11
8	130	1000	0.56	32	115	11
9	137	1000	0.53	35	105	10
10	144	1000	0.50	30	100	10
11	151	1000	0.48	36	90	10
12	158	1000	0.46	37	80	11
13	168	1000	0.43	26	65	10
14	179	1000	0.40	33	58	10
15	189	1000	0.38	27	60	10
16	200	1000	0.36	34	55	10
17	214	1000	0.34	34	50	10
18	228	1000	0.32	33	45	10
19	245	1000	0.29	32	40	10
20	266	1000	0.27	26	36	10
21	291	1000	0.25	26	33	10
22	315	1000	0.23	25	30	10
23	350	1000	0.21	23	26	10
24	403	1000	0.18	19	23	9
25	490	1000	0.15	16	20	9
26	600	1000	0.12	13	16	9
27	850	1000	0.08	9	10	8
28	1000	1000	0.07	9	10	7

29	70	900	1.0	72	270	8
30	70	800	1.0	75	295	8
31	70	600	1.0	85	320	7
32	70	600	1.0	90	350	7
33	70	600	1.0	95	380	6
34	70	600	1.0	100	420	6
35	70	500	1.0	110	470	6
36	70	500	1.0	115	520	5



	<p><b>INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION CLASS 4 LASER PRODUCT</b></p> <p>Wavelength 1040 – 1200nm  Pulsed output - Max average power &lt;120W  Max pulse energy &lt;2.0mJ  Repetition freq. 1-1000kHz  Pulse duration 1ns – 500ns  CW Output power &lt; 120W IEC/EN 60825-1:2007</p>	<p>Wavelength 630 – 670nm  Output power &lt; 5mW CW</p> <p><b>VISIBLE LASER RADIATION AVOID DIRECT EYE EXPOSURE CLASS 3R LASER PRODUCT</b>  IEC/EN 60825-1:2007</p>	<p><b>COMPONENT FOR INCORPORATION</b></p> <p>This product is intended as a component for incorporation into a laser product, and as such requires additional features for Laser Safety and to comply with IEC/EN60825-1 and 21CFR1040.10</p>
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