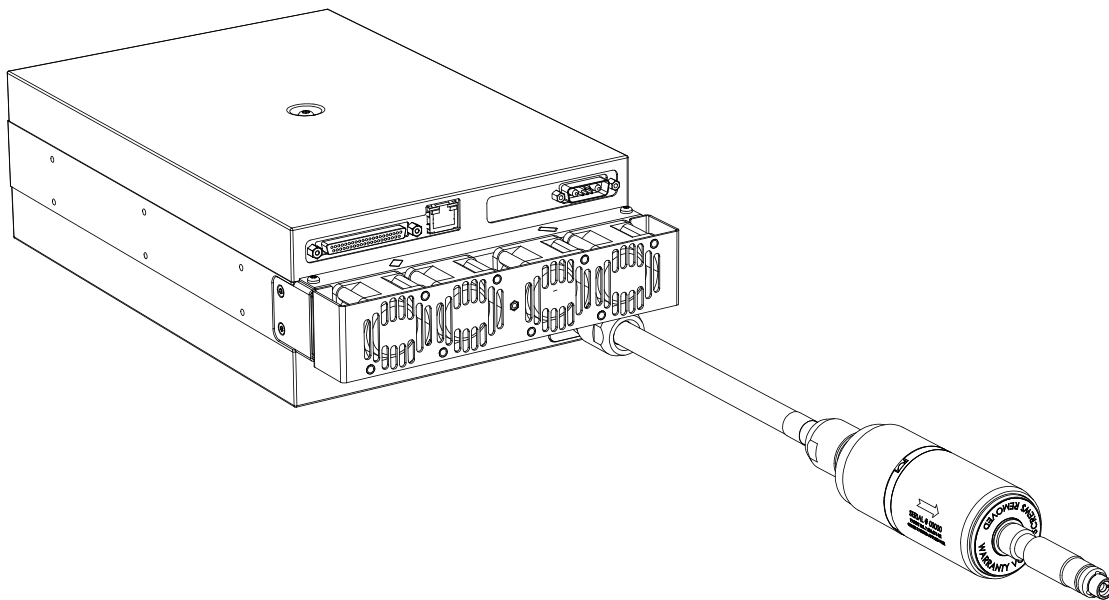


G4 Pulsed Fibre Laser Specification

Applicable Part numbers

Part number	Options
SP-050P-A-RM-Z-B-Y	3m optical cable, with pilot laser



System Integration Details

parameter	unit	range
Laser Module type		A1
Laser Module Dimensions	mm	347 x 201 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	250
Operating temperature range	°C	0 to +40
Storage temperature range	°C	-10 to +60

Related Documents

Document number	Description
SM-S00227	OEM Safety and System Integration Manual: Module Types A1 and A2
SM-S00360	V8 Control Interface Manual
SM-S00220	G4 Accessories Datasheet

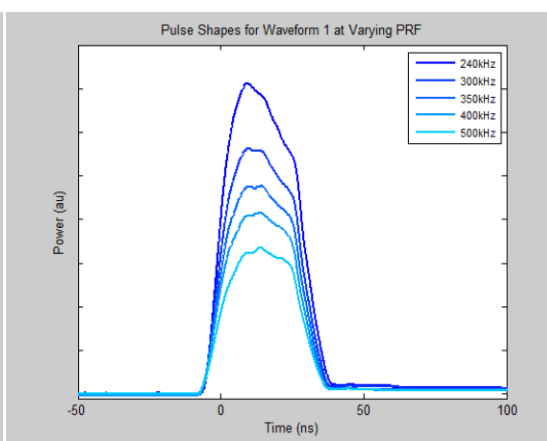
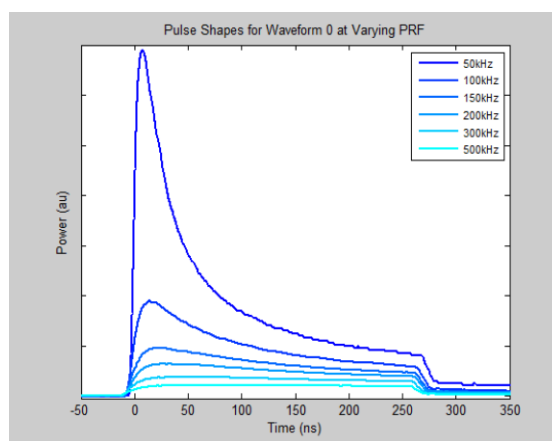
Laser Characteristics

All parameters specified for wfm 0 (50kHz), rated power, over operating temperature range unless otherwise stated.

parameter	unit	range
Average Output Power	W	> 50
Output Power Stability	% p-p	< 5
Maximum Pulse Energy	mJ	> 1.0
Maximum Peak Power	kW	> 10
Pulse Width (FWHM)	ns	Typ. 40
Pulse Width (at 10% level)	ns	250
Pulse-to-Pulse Energy Stability (at stable temperature)	% rms	< 3
Pulse repetition frequency range	kHz	1 – 500
Full-power PRF range	kHz	50 – 500
Reduced power PRF range	kHz	1 – 50
CW Mode		No
Central Emission Wavelength	nm	1059 – 1065
Emission Bandwidth	nm	< 10
Fraction of power within $\lambda_0 \pm 20$ nm	%	> 80
M^2		1.0 – 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 polarization	%	< 20

Pulse Waveform Table

wfm	PRF0 (kHz)	PRFmax (kHz)	Max. pulse energy, E_{max} (mJ)	Typ. FWHM pulse width at E_{max} (ns)	Pulse width at 10% (ns)	Typ. peak power at E_{max} (kW)
0	50	500	1.00	40	250	12
1	240	500	0.21	26	40	8



	INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION CLASS 4 LASER PRODUCT Wavelength 1040 – 1200nm Pulsed output - Max average power <120W Max pulse energy <2.0mJ Repetition freq. 1-1000kHz Pulse duration 1ns – 500ns CW Output power < 120W IEC/EN 60825-1:2007	Wavelength 630 – 670nm Output power < 5mW CW VISIBLE LASER RADIATION AVOID DIRECT EYE EXPOSURE CLASS 3R LASER PRODUCT IEC/EN 60825-1:2007	COMPONENT FOR INCORPORATION 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
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