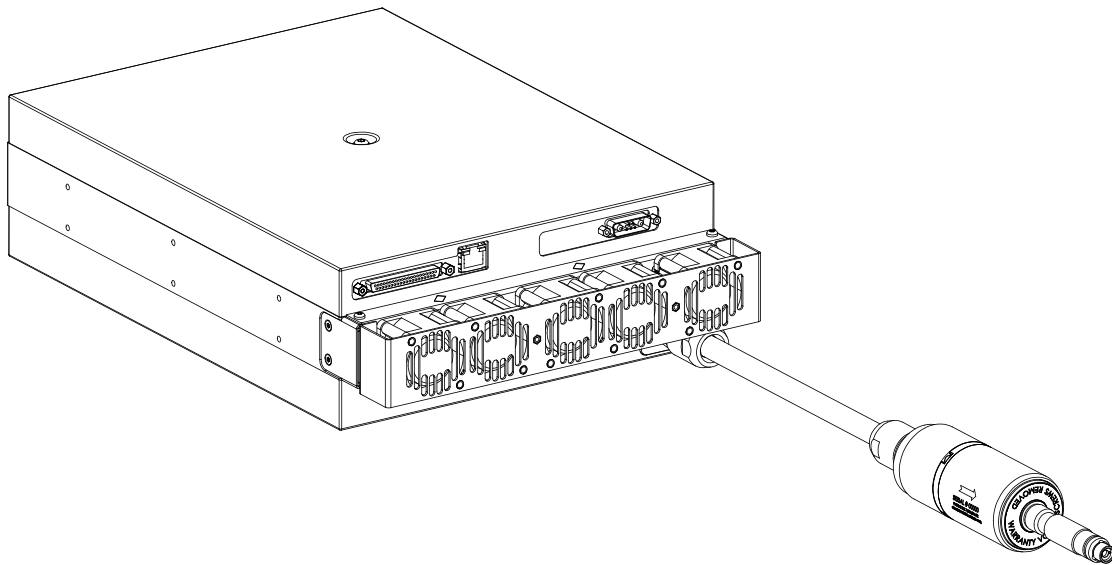


G4 Pulsed Fibre Laser Specification

Applicable Part numbers

| Part number | Options |
|--------------------|------------------------------------|
| SP-070P-A-RM-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 |

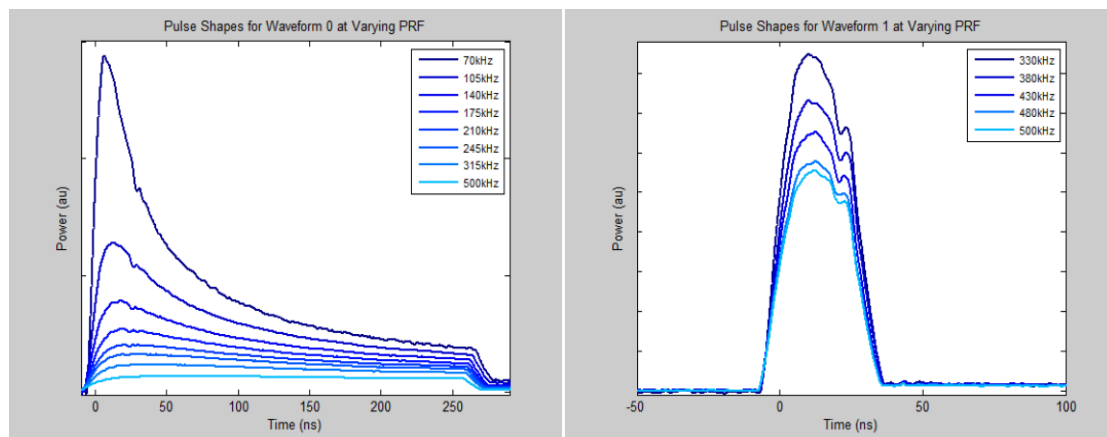
Laser Characteristics


All parameters specified at PRF0 for waveform 0, 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 (at FWHM) | ns | Typ. 40 |
| Pulse Width (at 10% level) | ns | 250 |
| Pulse-to-Pulse Energy Stability (at stable temperature) | % rms | < 3 |
| Pulse Rate Range | kHz | 1 – 500 |
| Full-power pulse rate range | kHz | 70 - 500 |
| Reduced power pulse rate range | kHz | 1 – 70 |
| 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, Emax (mJ) | Typ. FWHM pulse width at Emax (ns) | Pulse width at 10% (ns) | Typ. peak power at Emax (kW) |
|-----|------------|--------------|------------------------------|------------------------------------|-------------------------|------------------------------|
| 0 | 70 | 500 | 1.0 | 40 | 260 | 13 |
| 1 | 330 | 500 | 0.21 | 28 | 40 | 8 |



| | | | |
|---|--|---|--|
|  | <p>INVISIBLE LASER RADIATION AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION CLASS 4 LASER PRODUCT</p> <p>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</p> | <p>Wavelength 630 – 670nm Output power < 5mW CW</p> <p>VISIBLE LASER RADIATION AVOID DIRECT EYE EXPOSURE CLASS 3R LASER PRODUCT IEC/EN 60825-1:2007</p> | <p>COMPONENT FOR INCORPORATION</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> |
|---|--|---|--|