1. Optical characteristics

N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Operation Mode			CW / Modulated			
2	Polarization			Random			
3	Nominal Output Power*		P_{nom}	6000*			W
4	Output Power Tuning Range			10		105	%
5	Emission Wavelength	Output power: 6000 W	λ	1068		1080	nm
6	Emission Linewidth	Output power: 6000 W	Δλ		3	6	nm
7	Switching ON/OFF Time	Output power: 6000 W			50	100	µs
8	Output Power Modulation Rate	Output power: 6000 W				5	kHz
9	Output Power Instability	Output power: 6000 W Time interval: 1 hour (T=Constant)				±2	%
10	Red Guide Laser Power				0.4		mW

** Measurement accuracy by means of Primes Power Monitor ± 5 %*

2. Optical output

N	Characteristics	Test conditions	Symbol	Min.	Typ.	Max.	Unit
1	Delivery Fiber Connector			HLC-8, QBH-compatible			
2	Beam Parameter Product* (86 %)	Delivery fiber core diameter 100 µ	BPP*			4.0	mm*mrad
3	Beam Parameter Product* (86 %)	Delivery fiber core diameter 150 µ	BPP*			6.0	mm*mrad
4	Beam Parameter Product* (86 %)	Delivery fiber core diameter 200 µ	BPP*			8.0	mm*mrad
5	Maximum Delivery Fiber Length: • 100 µ • 150 µ • 200 µ		L			30 30 30	m
6	Delivery Fiber Bending Radius - unstressed - stressed		R	100 200			mm

** Measurement accuracy by means of Primes Focus Monitor ± 10 %*

3. General characteristics

N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Ambient Temperature Range	5		45	°C
2	Humidity, Ambient Temperature Range ≤ 40°C	10		95	%
3	Storage Temperature without water	- 40		+ 75	°C
4	Dimensions (w/o interface plugs, w/o castors), WxDxH:	430 x 808 x 700			mm
5	Weight		200		kg

4. Cooling

N	Characteristics	Test conditions	Min.	Typ.	Max.	Unit
1	Method		Tap and slightly DI-water			
2	Cooling Water Temperature for Laser		20		25	°C
3	Cooling Water Temperature for Optics		27		33	°C
4	Laser "Cold Start" Temperature		20			°C
5	Optics cooling water conductivity		30		50	µS/cm
6	Water Pressure		2.5		3.5	bar
7	Water Flow for Laser Cooling		37	57		l/min
8	Fiber Connector Cooling Water Flow Rate		1.2		2.5	l/min

5. Electrical characteristics

N	Characteristics	Min.	Typ.	Max.	Unit
1	Operating Voltage, 3 phases	400-460 V/3P + PE @ 50-60 Hz			
2	Laser Power Consumption at 6000 W power		17	18.3	kW
3	Laser Operation Current at 6000 W power and 400 VAC			28.2	A
4	Input fuses, 400 V			32	A

6. Fast power supplies

6.1. Switching OFF of laser main power supplies during 130 msec accordingly Category 3 PL d EN ISO 13849-1

6.2. Maximal quantity of main power supplies switching ON/OFF cycles per minute is 20 times.

7. Possible options

a. LCA (QD automotive standard compatible) fiber connector
b. HLC-16 fiber connector
c. Pulse Generator
d. Customized Fieldbus interface
e. Customized Analog Control interface

8. External layout