JENOPTIK

Fiber-coupled diode lasers: cw, passively cooled, for medical applications JOLD-x-FCM-1x

JOLD-30-FCM-12 | Design 432104924
JOLD-30-FCM-14 | Design 432105124
JOLD-20-FCM-14 | Design 432135124

Features

- Wavelength: 808, 976 and 1470 nm
- High optical output power up to 30 W cw
- Fiber core diameter: 200 or 400 µm (NA 0.22)
- Integrated pilot laser and power monitor
- Internal fiber detector (interlock)
- Designed for medical applications

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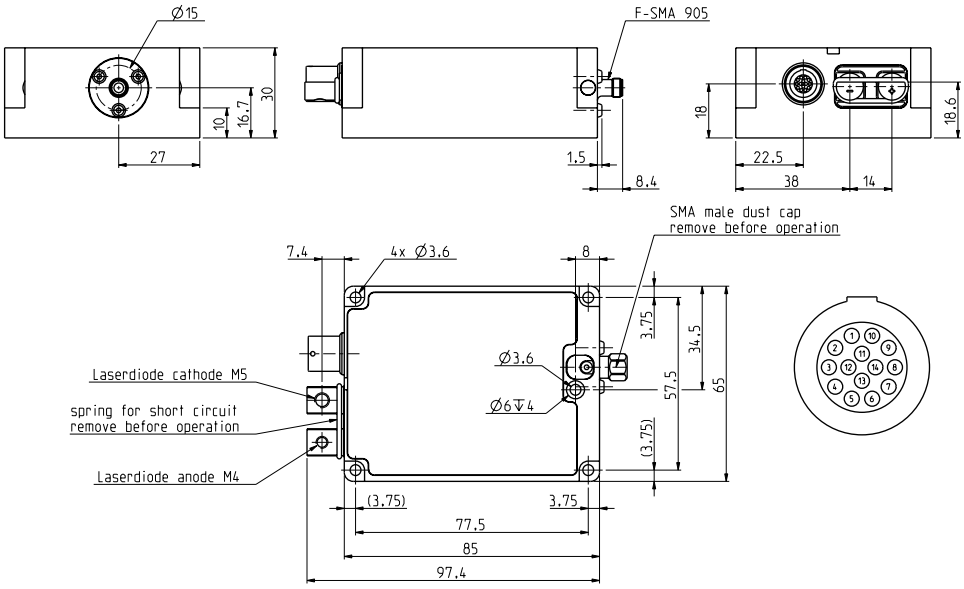
JOLD-x-FCM-1x

Specifications (start of life)	JOLD-30-FCM-12 Design 432104924	JOLD-30-FCM-14 Design 432105124	JOLD-20-FCM-14 Design 432135124	
Operation Mode	cw, power modulation only between threshold and maximum current			
Maximum Optical Output Power	30	30	20	W
Center Wavelength at 25 °C	808	976	1470	nm
Center Wavelength Variation at 25 °C	10	10	10	nm
Typical Operation Current	41	44	70	A
Maximum Operation Current	45	47	80	A
Typical Threshold Current	7	6	10	A
Maximum Threshold Current	10	9	12	A
Typical Slope	0.9	0.8	0.35	W/A
Minimum Slope	0.8	0.75	0.3	W/A
Maximum Operating Voltage	2.2	2	2	V
Fiber Core Diameter	200	400	400	µm
Numerical Aperture	0.22	0.22	0.22	
Fiber Centricity	< 10 µm			
Fiber Connector	F-SMA 905, free standing fiber towards the module			
Fiber Watch Dog	2 inductive fiber detectors			
Protection Glass	Externally changeable protection glass			
Power Monitor	2 photo diodes: 100 … 700 µA @ maximum optical output power			
Pilot Laser	1 mW, 635 nm ± 10 nm, 5 V, 100 mA			
Signal Connector	LEMO B-Series Fxx.1B.314.Cxxxx			
Anode, Cathode Connectors	M4, M5 (case isolated)			
Operation Conditions	Non-condensing			
Expected Lifetime	> 5,000 h (constant current)			
Dimensions (L x W x H) | weight	97.4 x 65 x 30 mm | 0.9 kg (net)			
Cooling				
Mounting	Via thermally conductive foil (thickness 25 …100 µm) on cooled surface			
Note	**Do not mount via any paste-like media!**			
Diode Laser Operating Temperature	15 … 30 °C, measured with internal temperature sensor			
Temperature Sensor	NTC 10k, 3988 k (PT100 on request)			

See general user information!

Options on request: 915 nm and 940 nm



Pin	Configuration	polarity
1	Fiber detector 1 and 2	+ 7.7...9VDC
2	n.c.	
3	Fiber detector 1	- (minus)
4	Pilot laser	+ (plus)
5	Pilot laser	- (minus)
6	n.c.	
7	Fiber detector 2	- (minus)
8	Thermistor	
9	Thermistor	
10	PT100 (optional)	
11	PT100 (optional)	
12	Monitor photodiode 1 and 2	cathode
13	Monitor photodiode 1	anode
14	Monitor photodiode 2	anode

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