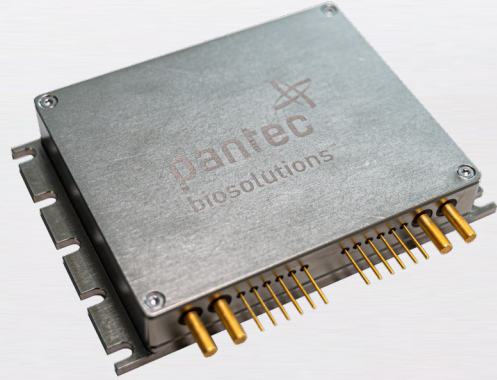


High Brightness Diode Laser Module

fam™
Fast Axis Matching

- . Highest brightness
- . High power
- . Spectrally stabilized
- . CW/Microsecond pulses
- . Gaussian beam profile



Specifications

MiFeM

Optical Parameters	
. Wavelength	~ 980 nm
. Output Power (cw)	12 W
. Pulse Duration	50 μ s - ∞
. Duty Cycle	(0 - 100 %)
. Mode of Operation	CW & Pulsed
. Spectral Width (FWHM)	< 1 nm
. M ² Factor	< 2
. Polarization	Random
. Beam Diameter	< 1 mm
Electrical Parameters (with optional Tapered Laser Diode Driver)	
. Input Voltage	12 V
. Input Current	< 8 A
Mechanical Dimensions	
. W x D x H	~ 80 x 65 x 15 mm ³
. Weight	~ 250 g
Thermal Parameters	
. Operating Temperature	15 - 30 °C
. Heat Sink Capacity	50 W
Interface	
. Communication	RS232 / Mini USB
. Emergency Stop	Potential free / dual
. Current Monitor	Analog 0 - 4 V
. Trigger In / Out	TTL 5 V
. Current Set	Analog 0 - 4 V
Operation Data	
. Lifetime	10'000 h



Pantec Biosolutions AG · Medical Laser

Industriering 21 · 9491 Ruggell · Liechtenstein

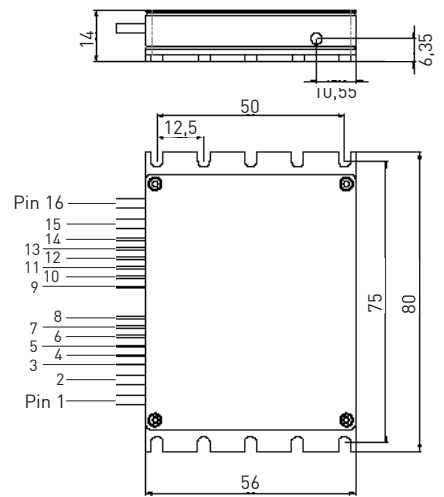
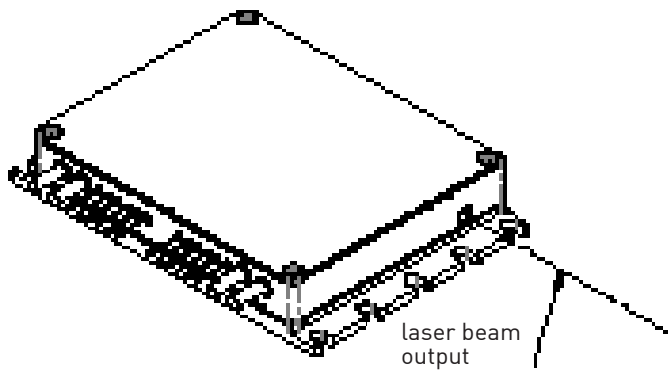
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pantec

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301661A-01-DTS DLM 980nm



Typical spectral properties in CW operation

Spectral drift (typical):	
$d\lambda/dT$	0.08 nm/K
$d\lambda/dI_{TP}$	0.08 nm/A
$d\lambda/dI_{RW}$	1 pm/mA

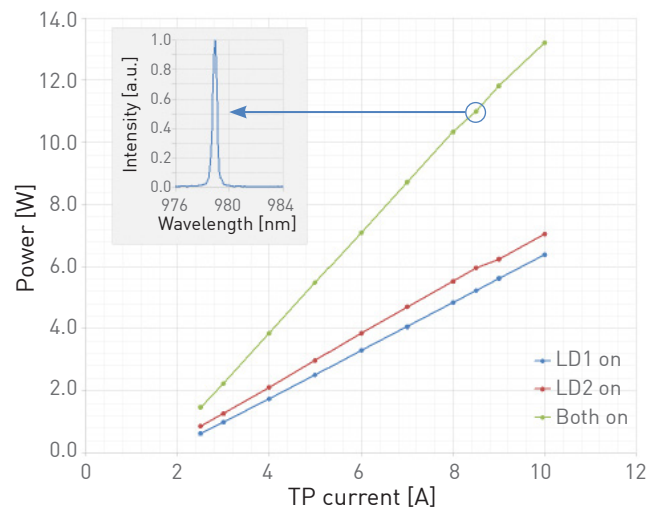
Tuning range with integrated DBR heaters	2 nm
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Typical spatial beam characteristics in CW operation at the operating point

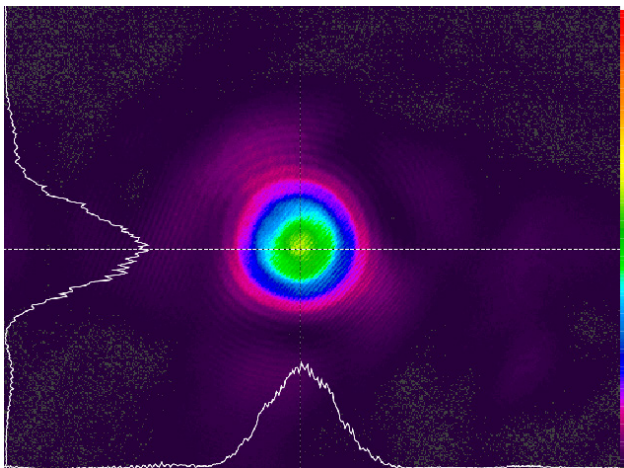
Collimated output beam (typical)	
Beam waist diameter ($1/e^2$) [mm]	0.8
Beam full divergence ($1/e^2$) [mrad]	2.0
M^2 ($1/e^2$)	<1.5

Typical power-current characteristics in CW operation

$I_{TP1/2}$ [A]	LD 1 on P [W]	LD 2 on P [W]	Both on P [W]
2.5	0.6	0.9	1.5
3.0	1.0	1.3	2.2
4.0	1.7	2.1	3.9
5.0	2.5	3.0	5.5
6.0	3.3	3.9	7.1
7.0	4.1	4.7	8.7
8.0	4.8	5.5	10.3
8.5	5.2	6.0	11.0
9.0	5.6	6.2	11.8
10.0	6.4	7.0	13.2



Beam waist profile (typical)



Far field profile (typical)

