

FocusFiber®

Fiber Coupled Single Emitter FCSE04 Series (CW)

FCSE04



Features

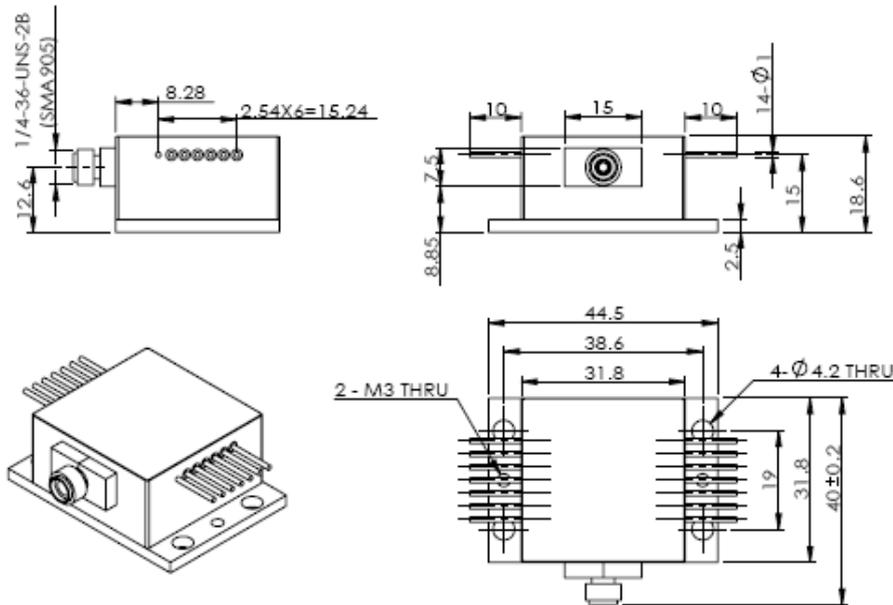
- Thermal energy converter
- Monitor thermister
- Fiber detection sensor
- High coupling efficiency
- Aiming beam
- Monitor photodiode
- High power
- High brightness

Applications

- Medical
- Scientific research
- Pumping fiber laser
- Material processing

Device Dimension (mm)

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2014030601 zhenyuf 20140307		2013062402 zhenyuf 20130626		TITLE		DRAWING No.		SHEET	
NOTES		ECN	APVD	DATE	DESCRIPTION				
UNLESS OTHERWISE SPECIFIED					FCSE		FL-FCSE04-SMA905		1 OF 1
DIMENSIONS ARE IN mm									REV AC
TOLERANCES ARE					MATERIAL		QUALITY		WEIGHT
X ± 0.20 X* ± 1.5*		DWN: zhenyuf 20130626					UNITS		SCALE
.X ± 0.10 .X* ± 1.0*		CHD: liangju 20130626			FINISH		mm		1:1
.XX ± 0.06 .XX* ± 0.5*		APPO: sun 20130626							
.XXX ± .XXX* ±									

FL-QR-MED-003 Rev 02

This structure drawing is only for reference. For any other special requirement, please feel free to contact us.

Specification

Module Type ¹	Units	FL-FCSE04-8-808	FL-FCSE04-10-976
Optical ^{3,7}			
Center Wavelength λ	nm	808	976
Wavelength Tolerance	nm	± 3	± 5
Output Power ²	W	8	10
Spectral Width FWHM	nm	≤ 4	≤ 6
Wavelength Temp. Coeffici	nm/°C	~ 0.28	~ 0.34
Fiber Parameters			
Fiber Numerical Aperture	NA	0.22	0.22
Fiber Core/Cladding Diame	μm	200/220	200/220
Connector Type ⁶	-	SMA905	SMA905
Fiber length ⁵	m	1.5	1.5
Electrical Parameters ^{3,7}			
Operating Current I_{op}	A	≤ 10.5	≤ 11.5
Threshold Current I_{th}	A	≤ 1.8	≤ 0.9
Operating Voltage V_{op}	V	≤ 2.2	≤ 2
Slope Efficiency	W/A	≥ 0.9	≥ 0.9
Power Conversion Efficiency	%	≥ 40	≥ 45
Operating Current I_{mo}	mA	0~2	0~2
Thermistor R_t	(K Ω)/ $\beta(25^\circ\text{C})$	10 \pm 0.5%/3862	10 \pm 0.5%/3862
Aiming Beam Parameters ⁸	mA	< 40@2mW 650nm	< 40@2mW 650nm
TEC Parameters ⁸			
Operating Current I_t	A	6	6
Operating Voltage V_t	V	8.8	8.8
Thermal Parameters			
Operating Temperature	°C	15~30	15~30
Storage Temperature ⁴	°C	-20~80	-20~80
Recommended Thermal Dissipation Capacity	W	≥ 25	≥ 30

¹Explanation for the name of Module Type: FL (abbreviation of Focuslight) -FCSE04 (structure code) -10(output power) -976 (center wavelength).

²Reduced lifetime if used above nominal operating conditions.

³Data at 25°C temperature, unless otherwise stated.

⁴A non-condensing environment is required for storage and operation below ambient dew point.

⁵Customised fiber length.

⁶Customised fiber connector type.

⁷If there are any other requirements, please contact us.

⁸The customer can choose the four options(Aiming Beam, Thermistor, TEC and PD)

⁹ $R_T = R_0 \cdot \exp(\beta(1/T - 1/T_0))$, ($T_0 = 25^\circ\text{C} = 298\text{K}$).

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