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HBFC450P28W
High Brightness 450nm 28W Fiber Coupled Laser Diode

Overview

The HBFC450P28W laser diode is a 450nm multimode fiber-coupled laser diode that offers high brightness with up to 28W of optical power output with a 105um core optical fiber. The laser diode is ideal for direct processing, laser display, medical, and scientific analysis.

Features

- Single emitter-based laser diode module
- 450nm wavelength
- 28W output power
- 0.12NA, 105um fiber core diameter

Applications

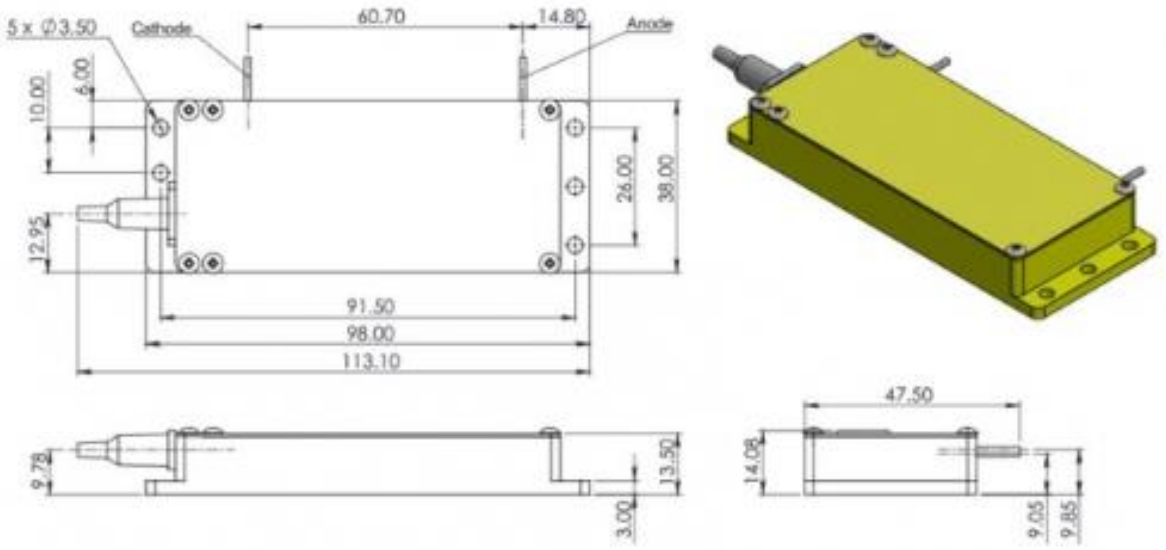
- Direct processing
- Laser display
- Medical
- Scientific analysis

Specifications

Absolute Maximum Ratings				
Parameter	Symbol	Min.	Max.	Unit
Output power	P_O		30	W
Forward current	I_{OP}		3.5	A
Reverse voltage	V_{rvs}		2	V
Case operating temperature	T_{op}	15	30	°C
Storage temperature	T_{stg}	-20	70	°C

Electrical-Optical Characteristics (Top = 25oC)					
Parameter	Symbol	Min.	Typ.	Max.	Unit
Output power	P_O	28			W
Center wavelength	λ_c	430	450	470	nm
Spectral width (FWHM)	$\Delta\lambda$		4		nm
Electrical-to-optical efficiency	PE	29	35		%
Threshold current	Ith		0.3		A
Operating current	Iop		3.1	3.5	A
Operating voltage	Vop		25.4	27	V
Slope efficiency	η		12.5		W/A
Core diameter	D_{core}		105		um
NA	NA		0.12		
Cladding diameter	D_{clad}		125		um

Outline Dimensions (unit: mm)



Additional Notes

- The HBFC450P28W laser diodes are designated solely as OEM components for incorporation into the customer's end products. Therefore, it is the customer's responsibility to comply with the appropriate requirements of FDA 21CFR, section 1040.10 and 1040.11 for complete laser products. For the code of FDA regulations, please refer to FDA Performance Standards for Light-Emitting Products for detailed information.
- Avoid eye and skin exposure to direct radiation during operation.
- ESD precautions must be taken during storage, transportation and operation. For ESD precaution, short-circuit is required between pins during storage and transportation.
- Soldering point should be close to the root of the pins. Soldering temperature should be lower than 260°C and time shorter than 10 seconds. Use a transformer to reduce the secondary voltage and ground the tip of the soldering iron.
- Make sure that the fiber output end is properly cleaned before operation of laser. Follow safety protocols to avoid injury when handling and cutting the fiber.
- Specifications are subject to change without notice.