


# 8W 940nm Uncooled Multimode Laser Diode Module

## MU8-940-01/04

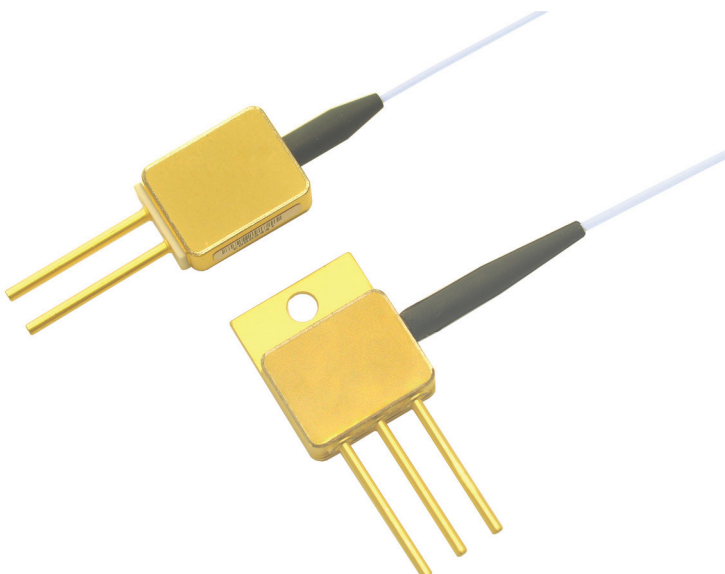
The Bookham new MU8-940-01/04 multimode laser diode module series has been designed to provide the increased power and reliability required for pumping next generation solid-state and fiber lasers, and for direct applications. The module includes a multimode laser diode chip with E2 front mirror passivation that prevents Catastrophic Optical Damage (COD) to the laser diode facet even at very high power levels. The coupling process allows for high output powers that are very stable with both time and temperature.

### Features:

- High output power of 8W
- 0.22NA 105µm core multimode fiber pigtail (0.15NA upon request)
- Hermetically sealed 3-pin and 2-pin packages
- Floating anode/cathode
- High reliability
- Excellent solderability
- Standard wavelengths at 940nm
- RoHS compliant 

### Applications:

- Fiber laser pumping
- Direct applications
- Material processing
- Printing
- Medical



## Characteristics

Conditions unless otherwise stated:

Parameters at 25°C heat sink temperature and use of a thermal interface material rated for a thermal contact resistance of less than 1.3cm<sup>2</sup> K/W (0.2in<sup>2</sup> K/W). Pigtail fiber with 105µm core diameter and 0.22NA.

Parameter	Symbol	Typical	Unit
CW Output Power	$P_{op}$	8	W
Center Wavelength	$\lambda_c$	940 ± 10	nm
Spectral Width (95% of Power)	$\Delta\lambda$	6	nm
Threshold Current	$I_{th}$	500	mA
Slope Efficiency	$\eta_D = P_{op} / (I_{op} - I_{th})$	0.95	W/A
Operating Current	$I_{op}$	9.5	A
Operating Voltage	$V_{op}$	1.9	V
Operating Temperature	$T_{op}$	25 ± 5	°C

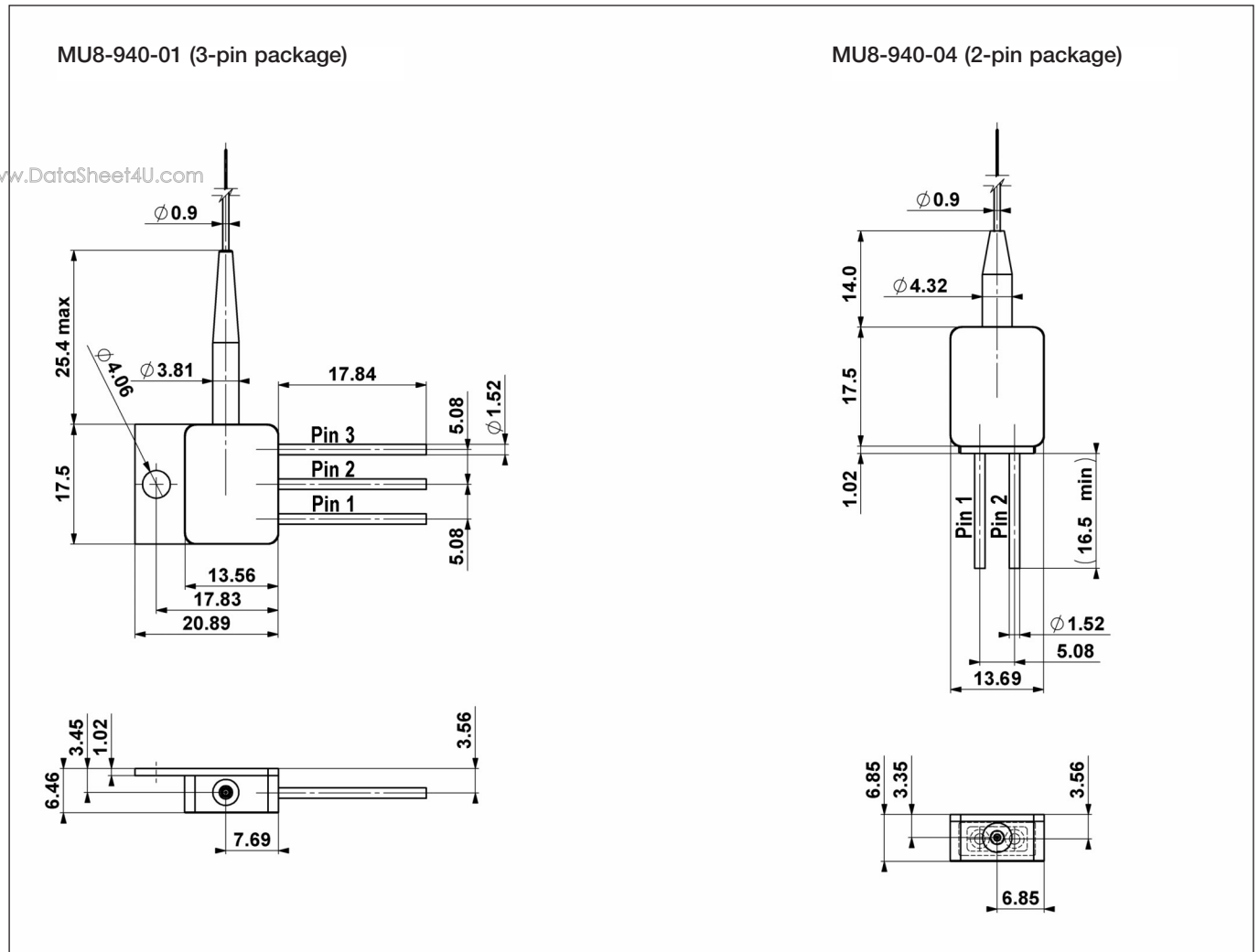
## Absolute Ratings

Parameter	Min	Max	Unit
ESD	-	500	V
Storage Temperature	-40	85	°C
Lead Soldering Temperature	-	250	°C
Lead Soldering Time	-	10	Sec
Operating Case Temperature	0	45	°C
Relative Humidity	5	85	%

## Fiber Specification

Parameter	Min	Typ	Max	Unit
Buffer Diameter	230	250	270	µm
Cladding Diameter	123	125	128	µm
Core Diameter	102	104	106	µm
Numeric Aperture	-	0.22 (0.15)	-	-
Fiber Length	-	1.5	-	m

## Package Dimensions (mm)



## Connection

Pin #	MU8-940-01	MU8-940-04
1	Laser Diode Anode (+)	Laser Diode Anode (+)
2	Laser Diode Cathode (-)	Laser Diode Cathode (-)
3	Not Used (can be removed)	-

## RoHS Compliance



Bookham is fully committed to environment protection and sustainable development and has set in place a comprehensive program for removing polluting and hazardous substances from all of its products. The relevant evidence of RoHS compliance is held as part of our controlled documentation for each of our compliant products. RoHS compliance parts are available to order, please refer to the ordering information section for further details.

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### Ordering Information:

(3-pin housing)

MU8-940-01  
MU8-940-01 with 0.15NA

8W 940nm Multimode Laser Diode Module with 0.22NA fiber  
8W 940nm Multimode Laser Diode Module with 0.15NA fiber

(2-pin housing)

MU8-940-04  
MU8-940-04 with 0.15NA

8W 940nm Multimode Laser Diode Module with 0.22NA fiber  
8W 940nm Multimode Laser Diode Module with 0.15NA fiber

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This product complies with  
21CFR 1040.10



FM 68159

