

Pulsed 1064nm / 1030nm Narrow Bandwidth FBG High Power Laser Diode Module

LC96A1064NBFBG-20R LC96A1030NBFBG-20R

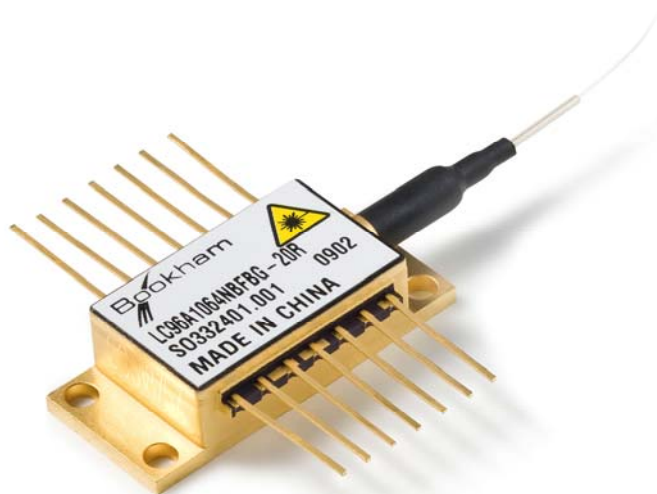
The Bookham LC96A10xxNBFBG-20R wavelength stabilized high power single mode laser module has been designed as a light source for pulsed narrow bandwidth fiber laser and direct frequency conversion applications. Processes and techniques of coupling the fiber to the laser allow high peak output powers that are very stable with both time and temperature. A narrow bandwidth grating located in the polarization maintaining fiber pigtail close to the package allows for short pulse operation.

Features:

- High pulse output power, up to 1W peak
- Wavelength stabilized at 1064nm or 1030nm
- Narrow bandwidth emission of <0.3nm
- Short pulse operation of 5ns-500ns
- Polarization maintaining single mode fiber pigtail
- Internal thermoelectric heat pump and monitor diode
- Hermetically sealed 14-pin butterfly package
- RoHS compliant 

Applications:

- Fiber lasers
- Frequency conversion
- Spectroscopy



Characteristics

Conditions unless otherwise stated: Case temperature -20 to +75°C
 Submount temperature 25°C
 Monitor diode bias -5 V
 CW operation

Parameter	Min	Typ	Max	Unit
Threshold current (I_{th})	10	30	50	mA
Operating power at 750mA	300	350		mW
Operating peak power (<500ns / 500kHz) <ul style="list-style-type: none"> LC96A1064NBFBG-20R LC96A1030NBFBG-20R 	700 500	1000 750		mW
Operating peak current (<500ns / 500kHz) <ul style="list-style-type: none"> LC96A1064NBFBG-20R LC96A1030NBFBG-20R 			2 1.5	A
Forward voltage (V_f)		1.5	2.5	V
Peak wavelength (λ_f) <ul style="list-style-type: none"> LC96A1064NBFBG-20R LC96A1030NBFBG-20R 	1063 1029	1064 1030	1065 1031	nm
Spectral width FWHM ($\Delta\lambda$)			0.3	nm
Pulse width (t_{pw})	5		500	ns
Repetition rate (t_{rr})			500	kHz
Monitor detector responsivity	0.3	1.0		$\mu A/mW$
Monitor dark current			10	nA
Thermistor resistance (at 25°C)	9.5	10	10.5	k Ω
Heat pump current ($\Delta T = 50^\circ C$, $I_f = I_f \text{ max}$)			1.5	A
Heat pump voltage ($\Delta T = 50^\circ C$, $I_f = I_f \text{ max}$)			3.0	V
Polarization extinction ratio		13		dB

Absolute Ratings

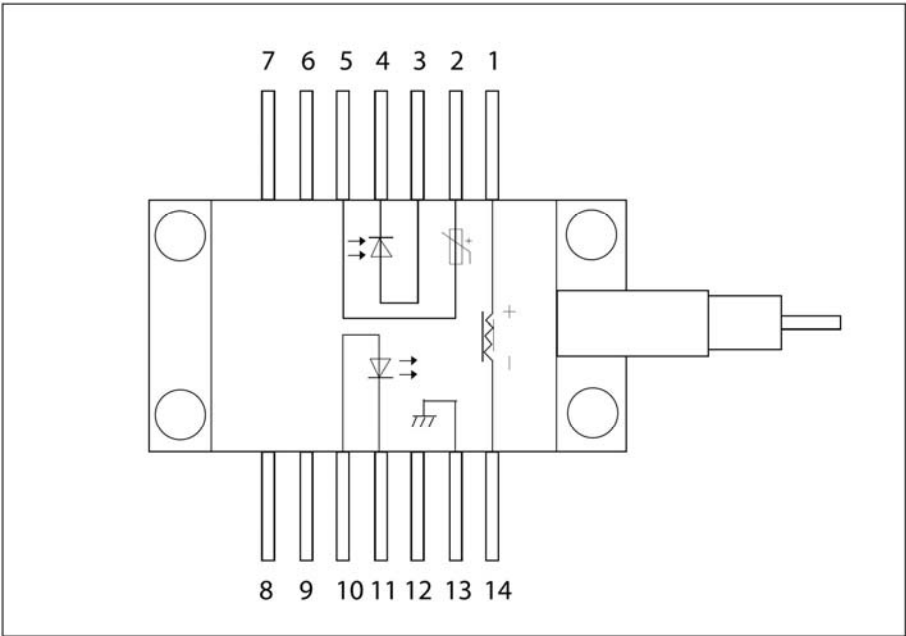
Parameter	Min	Max	Unit
Storage temperature	-40	85	°C
CW laser forward current (10s max)		1000	mA
Laser reverse voltage		2	V
Heat pump current		2.2	A
Lead soldering temperature (10s max)		260	°C
Fiber bend radius	30		mm

Fiber Characteristics

Parameter	Min	Typ	Max	Unit
Fiber type: Polarization maintaining Nufern PM980-HP or equivalent (e.g. Fujikura SM98)				
Mode field diameter	5.6	6.6	7.6	um
Buffer diameter	230	250	270	um
Pigtail length (module to fiber end)	0.7			m
Lens to FBG center	12	14	16	cm
Pristine fiber proof test level	200			psi
FBG proof test level	150			psi

Connections

Pin#	Description	Pin#	Description
1	Peltier cooler (+)	8	Not connected
2	Thermistor	9	Not connected
3	Monitor anode (-)	10	Laser anode (+)
4	Monitor cathode (+)	11	Laser cathode (-)
5	Thermistor	12	Not connected
6	Not connected	13	Case ground
7	Not connected	14	Peltier cooler (-)



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.

Ordering Information

LC96A1064NBFBG-20R	1064nm Narrowband FBG High Power Laser Diode Module
LC96A1030NBFBG-20R	1030nm Narrowband FBG High Power Laser Diode Module

Contact Information

Bookham (Switzerland) AG

Binzstrasse 17
8045 Zurich
Switzerland

• Tel: +41 44 455 8787
• Fax: +41 44 455 8586

www.bookham.com
highpower@bookham.com

EMEA Sales Contact

Gunnar Stolze

• Tel: +41 79 635 3777

North America Sales Contact

Michael Cutler

• Tel: +1 678 763 0777

Asia Sales Contact

Patrick Lee

• Tel: +852 9197 7014

Japan Sales Contact

Japan Laser Corporation

• Tel: +813 5285 0861

Important Notice

Performance figures, data and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing by Bookham before they become applicable to any particular order or contract. In accordance with the Bookham policy of continuous improvement specifications may change without notice. The publication of information in this data sheet does not imply freedom from patent or other protective rights of Bookham or others. Further details are available from any Bookham sales representative.

