

## 980nm Terrestrial and Submarine Pump Laser Diode Series

### G07

**The Bookham Technology G07 980nm Terrestrial and Submarine Pump Laser Diode Series have been designed and optimized for use as high-power, highly reliable pump sources for the latest erbium-doped fiber and waveguide amplifiers. The G07 is ideally suited for very low noise wavelength-locked operation with an FBG.**

#### Features

- Kink-free operations from 480 to 700mW
- High slope efficiency of 0.93W/A
- Rollover power in excess of 1.3W
- Small vertical farfield of 21 deg
- Failure rate below 500 FIT for an operating power up to 600mW
- Shippable as chip or burnt-in chip on a submount

#### Applications

- Pump modules for EDFAs, EDWAs, and other single mode high power laser diode applications



## Characteristics

Parameter	Conditions	Min	Typ	Max	Unit
Kinkfree Output Power		480	600		mW
Threshold Current			37	48	mA
Operating Current	@250mW		320	340	mA
Operating Voltage	@250mW		1.45	1.7	V
Centre Wavelength 1)	@250mW	970		990	nm
Spectral Width 2)	@250mW	0.2	5	7	nm
Lateral FWHM	@250mW	5.8	7	8.5	deg
Vertical FWHM	@250mW	19	21	23.5	deg
Slope Efficiency			0.93		mW/mA
Spectral Shift with Temperature	measured on submount		0.3		nm/K
Spectral Shift with Current	measured on submount		0.013		nm/mA

1) Wavelength selectable, extended range on request (920 - 1060nm)

2) 95% of the total spectral power

## Absolute Maximum Ratings

Parameter	Comments	Min	Max	Unit
Storage Temperature	in Gelpack	-40	85	°C
		-40	50	°C
Operating Temperature 1)		-40	80	°C
Forward Current	max. 10 sec @ 25°C max. 10 sec @ 70°C		1200	mA
			1300	mA
Reverse Voltage			2	V
Processing Temperature:	chip: max. 30 sec chip-on-submount: max. 10 sec		320	°C
			250	°C
ESD	Human Body Model, Class 5		4	kV

1) Device reliability is a function of operating temperature & current.

## Module performance of G07 chip with FBG stabilization

The G07 laser shows an excellent Bragg grating stabilization performance. Low frequency power variations of less than 0.05dB (>40mW) and a -20dB optical bandwidth below 1.5nm are possible with properly stabilized devices. An application note for FBG stabilization is available.

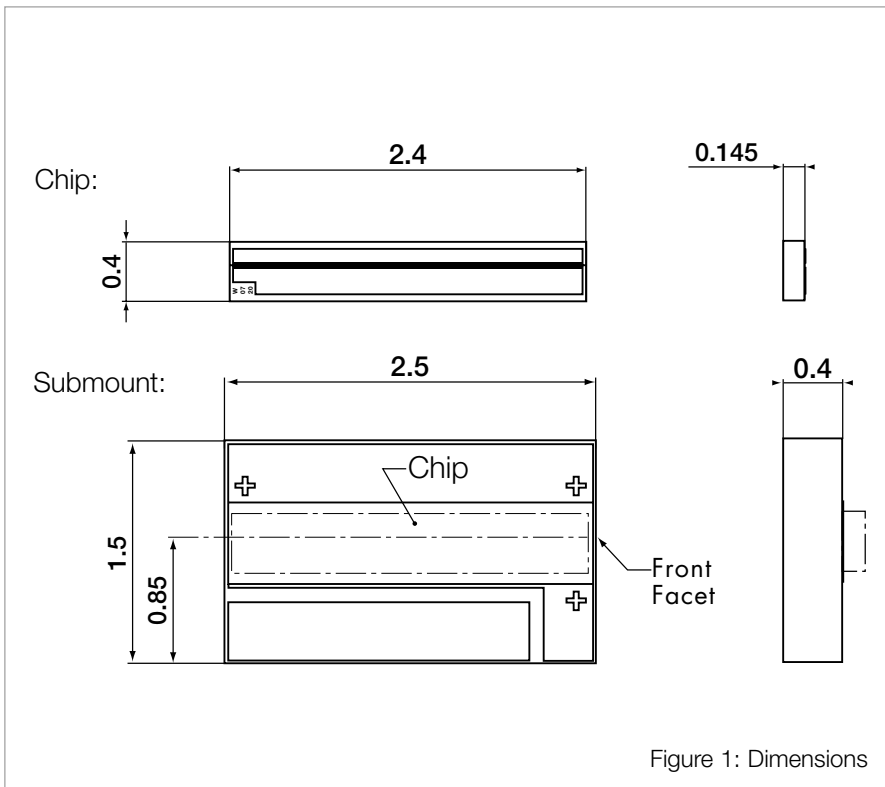


Figure 1: Dimensions

**Ordering Information**

Please contact your Bookham Technology plc representative quoting the relevant ordering information below:

Product Code	Product Name
G07	980nm Terrestrial and Submarine Pump Laser Diode Series
G07 CoS	980nm Terrestrial and Submarine Pump Laser Diode Series on Submount

**North America**

Bookham Technology Inc.  
49 Buford Highway  
Suwanee  
GA 30024  
USA

- Tel: +1 678 482 4021
- Fax: +1 678 482 4022

**Europe**

Bookham Technology plc  
Brixham Road  
Paignton  
Devon  
TQ4 7BE  
UK

- Tel: +44 (0) 1803 66 2875
- Fax: +44 (0) 1803 66 2801

**Asia**

Bookham Technology plc  
Hong Kong Representative Office  
Rm 2207-9  
Tower 2  
Lippo Centre  
Admiralty, Central  
Hong Kong

- Tel: +852 2530 8822
- Fax: +852 2530 8102

[sales@bookham.com](mailto:sales@bookham.com)

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THIS PRODUCT COMPLIES WITH 21 CFR 1040.10



**Site Approvals:**



ISO9001:2000  
FM68159