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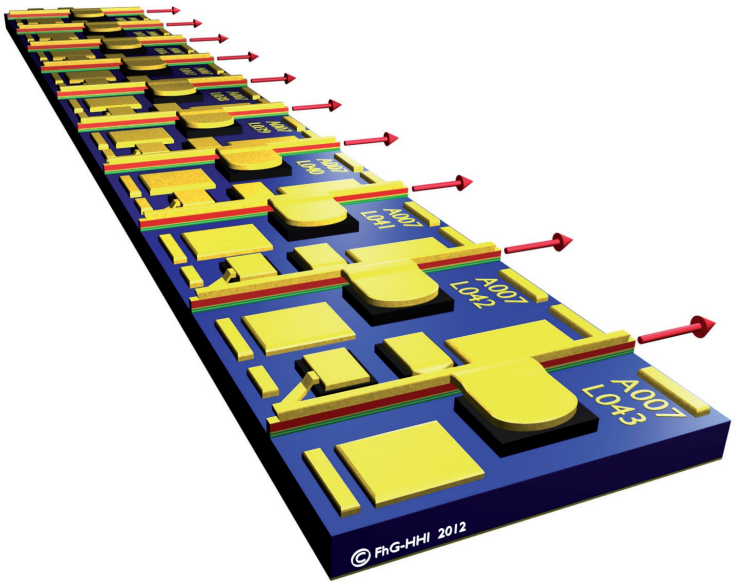
ITU-GRID COMPATIBLE BH-DFB-ARRAYS

AT A GLANCE

- DFB-Laser-Arrays with integrated spot-size converter and heater for wavelength fine-tuning



Features

- 10-DFB array
- Preset 100 GHz channel spacing
- Operation up to 10 Gb/s
- Wavelength range: C, L*- Band
- Integrated front-side optical taper
- Integrated electrical heater for wavelength fine-tuning
- Backside and/or surface n-contact
- Wire-bondable from rear side

Applications

- Optical fiber networks: WDM-PON
- Hybrid integration

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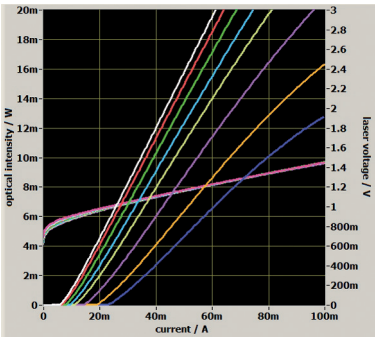
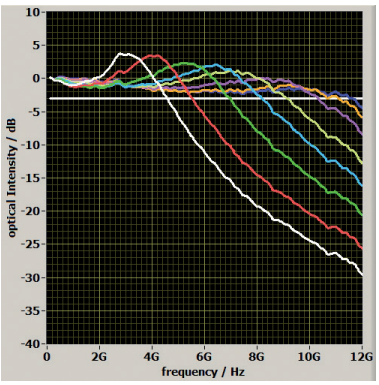
Output characteristics
at 20°C,30°C ... 90°C



Frequency response at 50°C
for 14/16/20/25/30/40/50/60mA
operation current

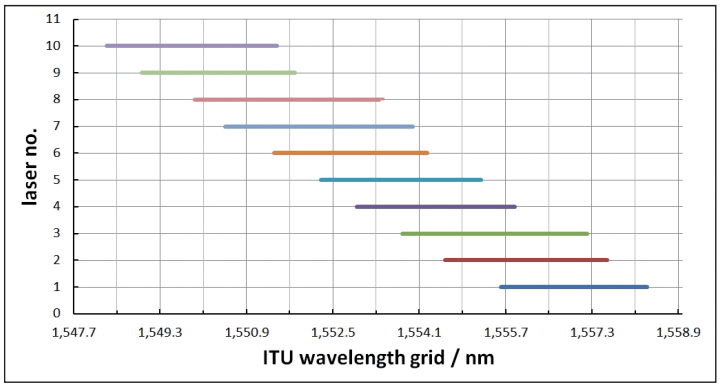


Preliminary C-band specifications*

Parameter	Symbol	Min	Typ	Max	Unit	Note
Threshold current	Ith	8	10	12	mA	20°C
		20	25	30		90°C
Ex-facet optical power	P	15	20	22		at 60 mA, 20°C
		4	6	8		at 60 mA, 90°C
Bandwidth	BW		10		GHz	I= 40 mA, 50°C
Side-mode sup-pression ratio	SMSR	35	40		dB	
Channel spacing	Δf_{ch}		100		GHz	typ. fabrication accuracy: +-50 GHz
Wavelength tuning range	$\Delta\lambda_{tun}$		+3		nm	
Electrical heater power	P_{heater}		120 240		mW	$\Delta\lambda$ = +0,8 nm (100GHz) $\Delta\lambda$ = +1.6 nm (200GHz)
Chip dimensions	LxW		400x350		µm	

L-band devices under development.

Tuning range of individual laser elements of a 10-array:



The Fraunhofer HHI

One of the prime research and development foci of the Fraunhofer Heinrich Hertz Institute lies in photonic networks, components and systems and their application in fields such as digital media.

Contact

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