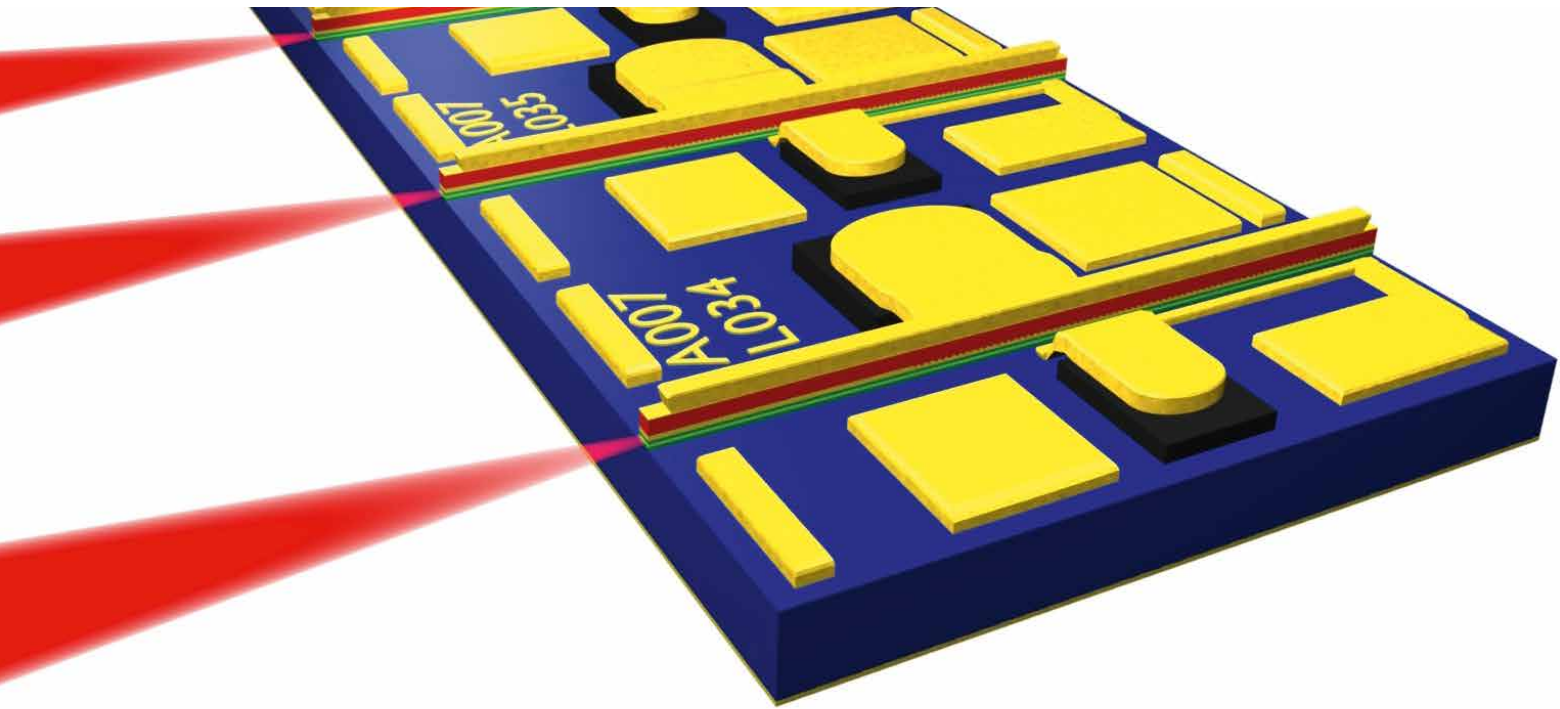


ITU-GRID COMPATIBLE BH-DFB-ARRAYS



AT A GLANCE

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

Features

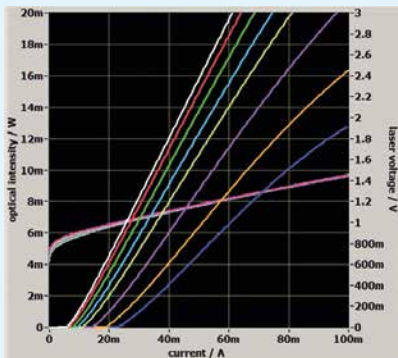
- 10-DFB array
- Preset 100 GHz channel spacing
- Operation up to 10 Gb/s
- Wavelength range: C, L*- Band
- Integrated front-side optical taper
- Integrated electrical heater for wavelength fine-tuning
- Backside and/or surface n-contact
- Wire-bondable from rear side

Applications

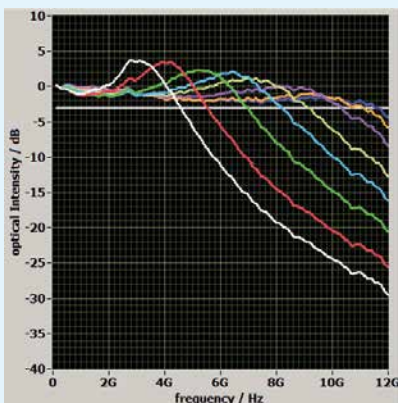
- Optical fiber networks: WDM-PON
- Hybrid integration

Technical background

- InGaAsP MQW device
- n-InP substrate



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



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

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Preliminary C-band specifications*

Parameter	Symbol	Min	Typ	Max	Unit	Note
Threshold current	I _{th}	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 suppression 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		mW	$\Delta \lambda = +0,8$ nm (100 GHz)
			240			$\Delta \lambda = +1.6$ nm (200 GHz)
Chip dimensions	LxW		400x350		μ m	

*L-band devices under development.

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

