

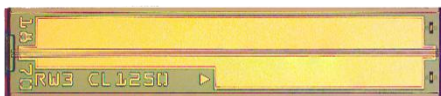


# High Power DFB Laser Diodes

High-power CW O-band DFB laser diodes deliver the narrow linewidth and optical stability required for next-generation AI data center interconnects. Designed for co-packaged optics (CPO) and external laser small form factor pluggable (ELSFP) architectures, SemiNex DFB lasers provide reliable light sources that enable scalable silicon photonics platforms and optical networks that scale across high-density compute fabrics.

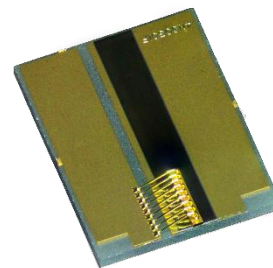
## Key Benefits

- High optical power
- Available in O-band
- Enables CPO and ELSFP for optical interconnects
- Multi-channel and multi-wavelength array per request
- DFB chip, array & CoC



## Applications

- Co-Packaged Optics (CPO)
- External Laser Small Form Factor Pluggable (ELSFP)
- AI Data Centers
- Optical Networks



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## DFB Laser Specification

Optical	Symbol	Model 1 (typ.)	Model 2 (typ.)	Units
Center Wavelength	$\lambda_c$	1270 – 1350 *	1270 – 1350 *	nm
Output Power @ I <sub>op</sub> & 50C	P	>150	>200	mW
Output Power @ I <sub>op</sub> & 25C	P	200	250	mW
Linewidth	$\delta f$	2	2	MHz
Side Mode Suppression Ratio	SMSR	>50	>50	dB
Relative Intensity Noise	RIN	-145	-145	dB/Hz
Electrical	Symbol			Units
Power Conversion Eff.	$\eta$	30	25	%
Operating Voltage	V <sub>op</sub>	1.6	1.6	V
Operating Current	I <sub>op</sub>	400	600	mA
Threshold Current	I <sub>TH</sub>	30	30	mA
Mechanical	Symbol			Units
Operating Temp.	°C	-20 to 75	-20 to 75	°C
Storage Temp.	°C	-40 to 85	-40 to 85	°C

\*Specified values are rated at a constant heat sink temperature of 20°C.  
Unless otherwise indicated all values are nominal.

### Model 2 test data

