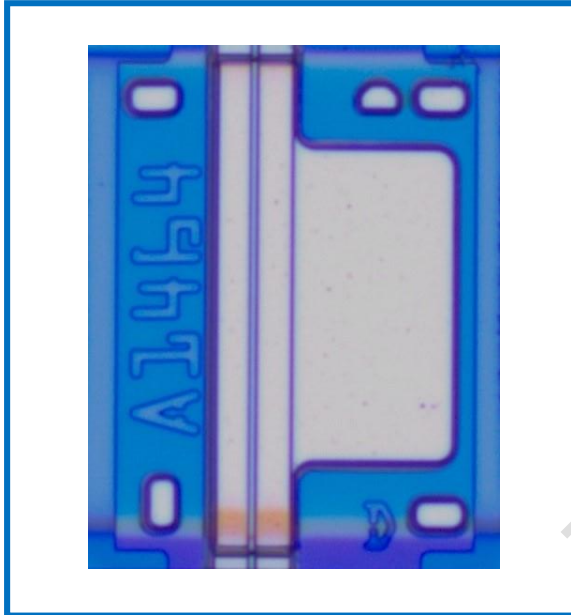


## 2.5 Gbps 1310nm DFB laser chip

### S-DL02S31-001

[Draft Version]



#### Applications:

- ✧ Passive Optical Networks
- ✧ 2.5 Gb/s Transmission

#### Key Features:

- ✧ Advanced Digital Chip Design
- ✧ Uncooled Operation
- ✧ Low Threshold Current
- ✧ High Output Power
- ✧ Small Divergence Angle
- ✧ RoHS Compliant

#### Electro-optical Characteristics (T=25°C unless otherwise specified)

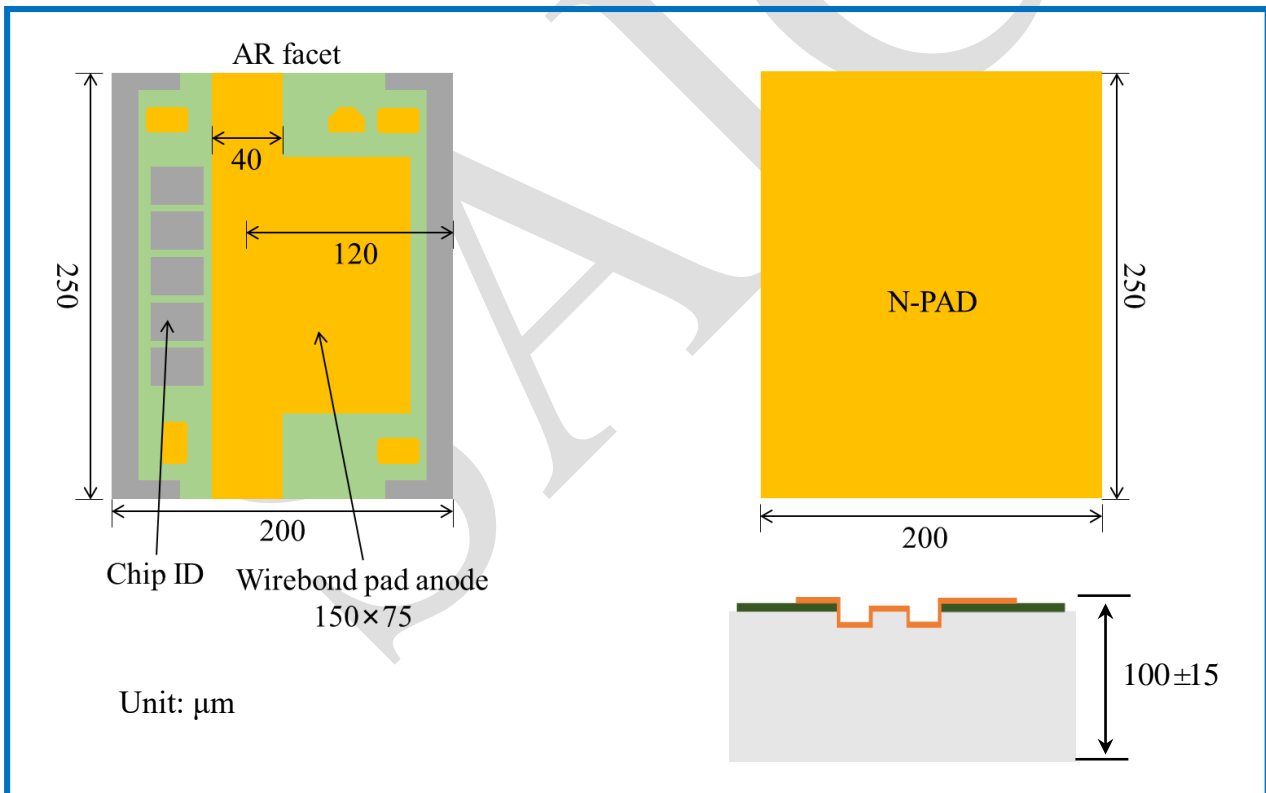
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Center Wavelength	$\lambda_c$	I <sub>th</sub> +20mA	1300	1310	1320	nm
Operating Temperature	T <sub>op</sub>	-	-10	25	85	°C
Optical Output Power	P <sub>o</sub>	25°C, I <sub>th</sub> +20mA	7	8.5	-	mW
		85°C, I <sub>th</sub> +20mA	5	6.5	-	
Threshold Current	I <sub>th</sub>	25°C, 1-5mW	6	9.5	13	mA
		85°C, 1-2mW	10	20	35	
Slope Efficiency	$\eta$	25°C, I <sub>th</sub> +20mA	0.32	0.4	-	W/A
		85°C, I <sub>th</sub> +20mA	0.22	0.3	-	
Side Mode Suppression Ratio	SMSR	I <sub>th</sub> +20mA	40	45	-	dB
Resistance	R	I <sub>th</sub> +20mA	4	7	10	$\Omega$
Farfield (Vertical)	$\theta_{\perp}$	30mA, FWHM	20	25	30	deg
Farfield (Horizontal)	$\theta_{//}$	30mA, FWHM	15	20	25	deg
Reverse Current	I <sub>rev</sub>	V <sub>f</sub> =-2V	-	< 0.1	1	$\mu$ A
Kink Deviation	kink	I <sub>th</sub> +5mA~80mA	-	-	20	%

**Absolute Maximum Ratings:**

Parameter	Symbol	Min.	Max.	unit
Operating Temperature	Top	-10	85	°C
Storage Temperature	Tst	-40	100	°C
Optical Output Power	Po	0	30	mW
Laser Reverse Voltage	Vr	0	2	V
Continuous Operating Current	Iop	0	110	mA

**DFB Chip Dimensions:**

Parameter	Symbol	Min.	Typ.	Max.	Unit
Die Length	L	240	250	260	um
Die Width	W	190	200	210	um
Die Thickness	T	85	100	115	um
Bonding pad radius	Lpad	70	75	80	um



### Suggested bonding conditions:

Process	Recommended Conditions	
Die Bonding	Solder	AuSn
	Temperature	350°C
	Dwell time	20s
	Pressure	15g
	Atmosphere	N <sub>2</sub>
Wire Bonding	Au Wire	
	Ball bond	
	Diameter of Wire	0.8mil
	Temperature	160°C

### RoHS Compliance

Xiamen Sanan Integrated Circuit 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

Product Code	Bandwidth	Description
S-DL02S31-001	2.5Gbps	1310 nm 2.5Gbps DFB Chip

### Customer Contact Information

Website: <http://www.sanan-ic.com/>

Email: Sales-od@sanan-ic.com

TEL: 86-592-6300505

### Important Notice

Performance data, figures, tables, charts, and any illustrative material provided in this data sheet are typical and must be specifically confirmed in writing with Sanan before they become applicable to any particular order or contract. In accordance with the Sanan policy of continuous improvement specifications may change without notice. Further details are available from Sanan customer contact.

## Quality Certifications

- 50051180 QM15/3502(ISO9001:2019)
- CNGZ302503-UK(ISO14001:2015)

## Safety Labels

