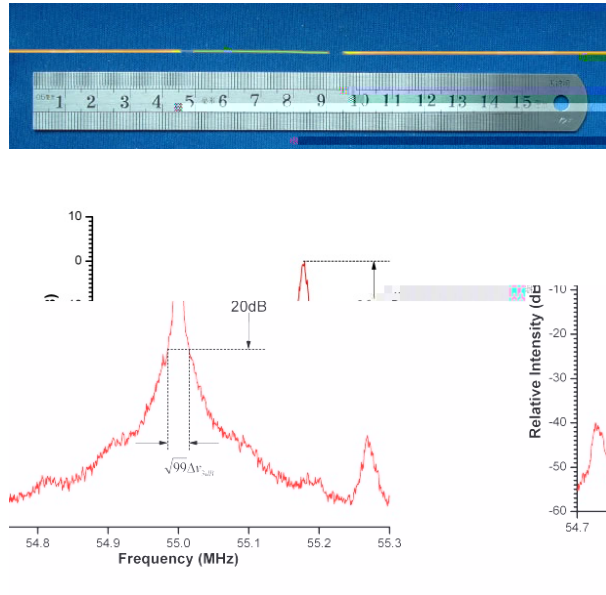


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2



1530.33nm 1532.68nm 1535.04nm 1537.40nm 1539.77nm

1542.14nm 1544.53nm 1546.92nm

0.3nm

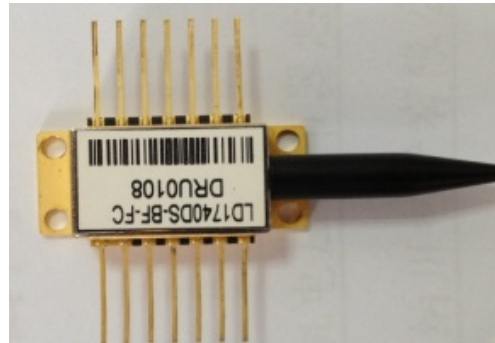
>-20 dBm@100mW

>50 dB

1

3

DFB



1310nm

1550nm

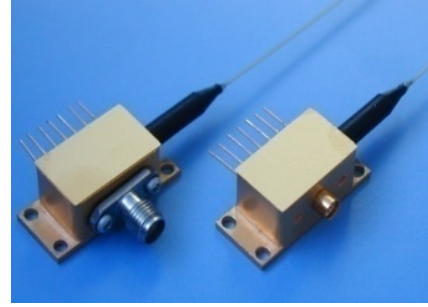
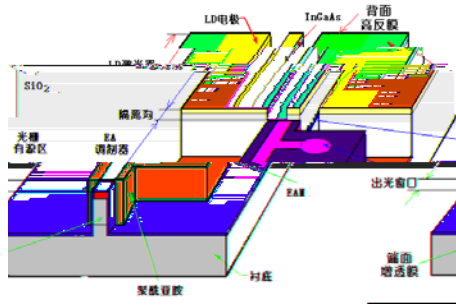
10mW@60mA

5mW@60mA

10-20GHz

4

EML



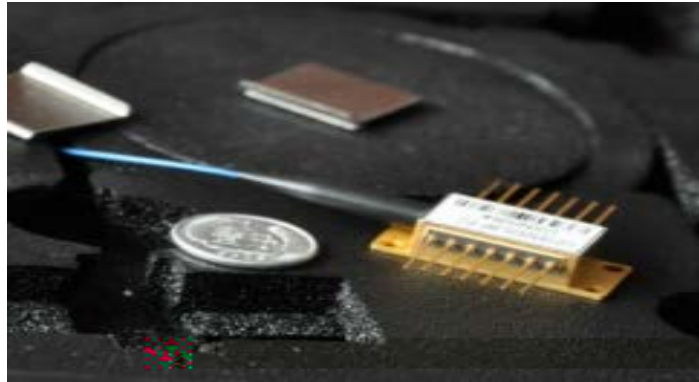
1.5 -

10mW@100mA

10-40Gb/s

5

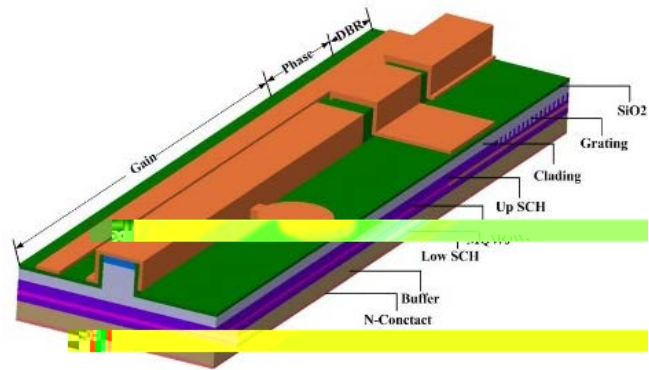
DFB



1.39 H2O) 1.62))
H2O)
10mW@60mA 5mW@60mA

6

DBR



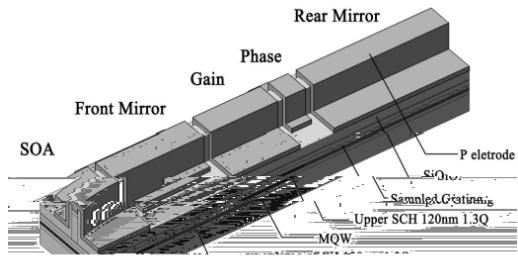
1.5 -

8-12nm

10mW@100mA

10Gb/s

7

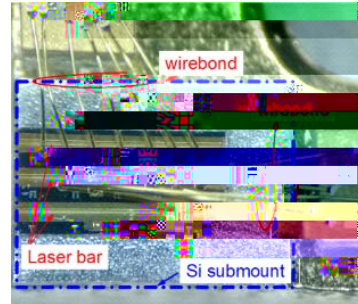
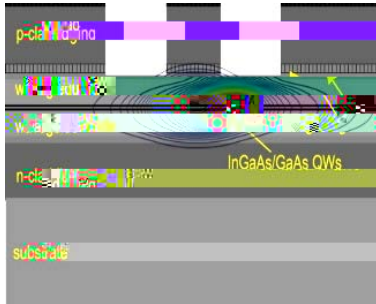


1.5 -
30-40nm

10mW@100mA

8

1060nm



1060nm

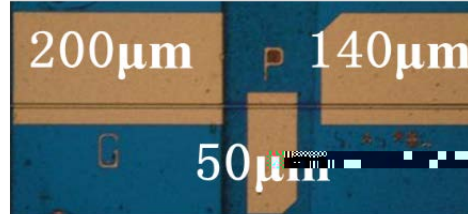
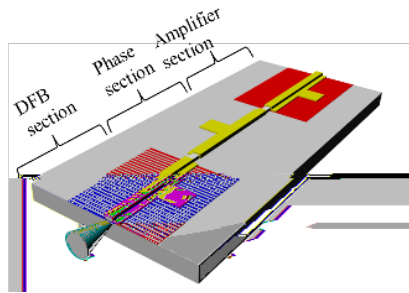
FP

500mW

DFB

250mW

9

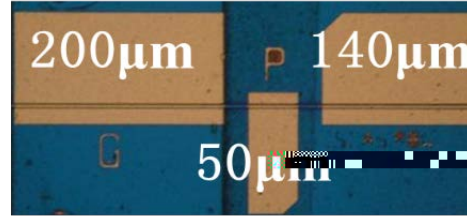
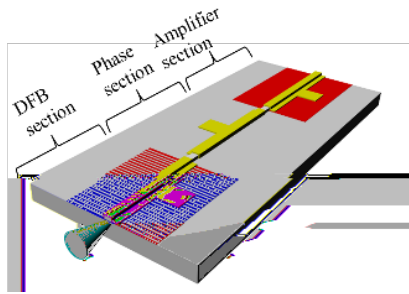


10mW

40GHz 60GHz 100GHz THz,

10-20GHz

10



3mW
30GHz

11 TZ1501

						/		
ADC	0.5	1	2	3	4 ¹	V _{DD} = 3.3 V (±10%) V _{DD} =5 V (±5%)		
		2				T _A = 0°C 70°C		
t _R	0.03125	1.5	1.5	1	2	T _A = +85°C		
		1.2				T _A = +125°C		
2	2	2	sec	ms	sec	T _A = +150°C		
	2.7	5.25	V					
		1.6	2.2	mA	V _{DD} =3.3V			
		190	300	A	V _{DD} =3.3V			
		1.6	2.2	mA	V _{DD} =5V			
		280	400	A	V _{DD} =5V			
		0.2	1	A	V _{DD} =3.3V T _A =0 70			
		0.4	2	A	V _{DD} =5V T _A =0 70			
1SPS 10SPS 100SPS	3	631	W	V _{DD} =3.3V t _R				
		1.41	mW	V _{DD} =5V t _R				
		4.88	W	V _{DD} =3.3V				
		7.4	W	V _{DD} =5V				
		42.9	W	V _{DD} =3.3V				
		65	W	V _{DD} =5V				
		423	W	V _{DD} =3.3V				
		641	W	V _{DD} =5V				

¹ 125

TZ1501

²

63.2%

TZ1501 0 -100

63.2 2s

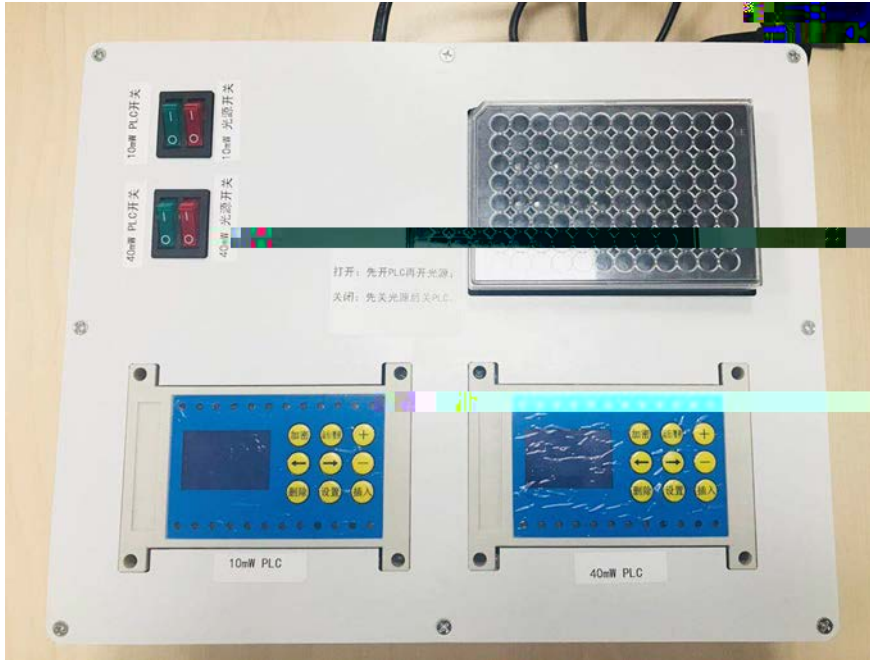
³ TZ1501

TZ1501

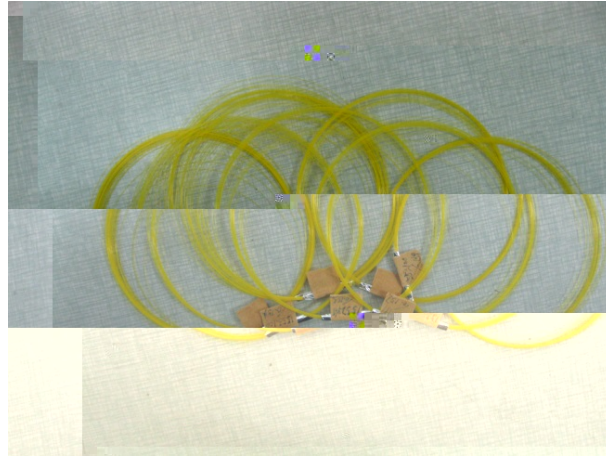
⁴

MSOP8

SOP8



14



1525~1565 nm

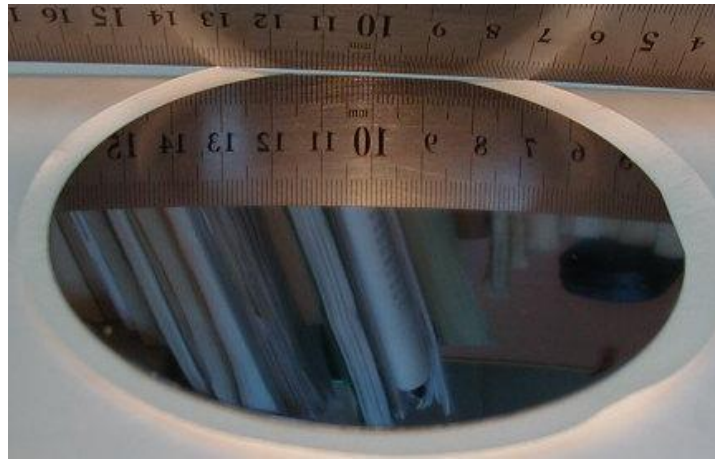
1% 99.99%

3dB

0.1 ~ 0.7 nm

SMF-28

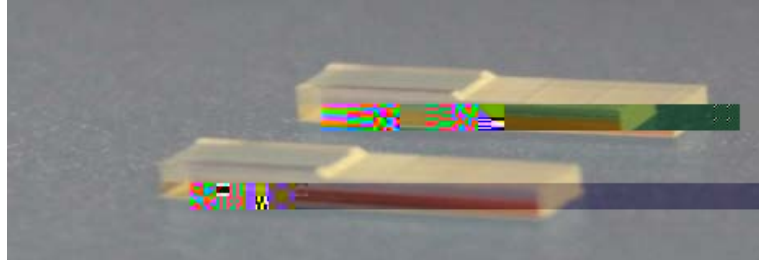
15



4 6

1 15

16 V

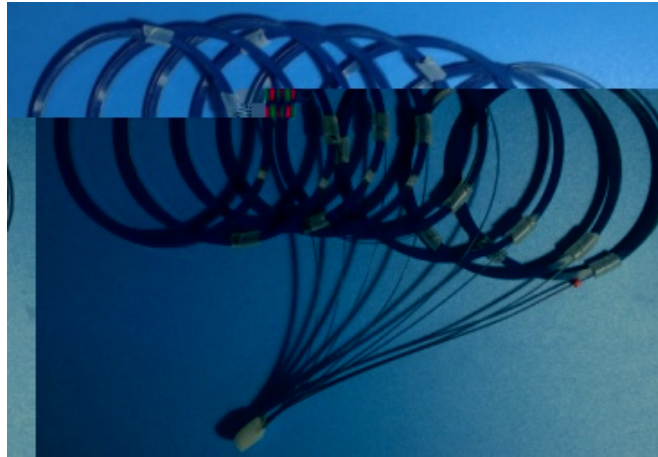


2-64

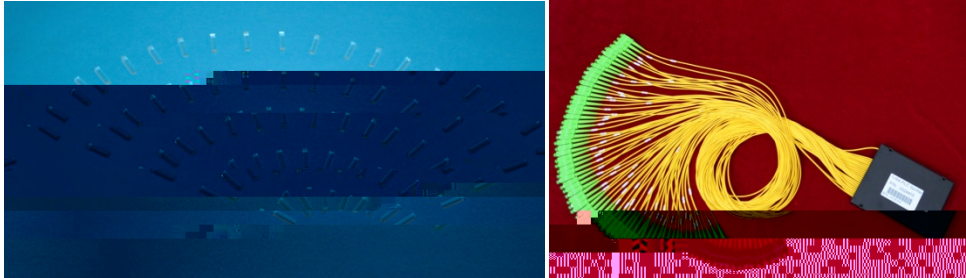
127

250

17



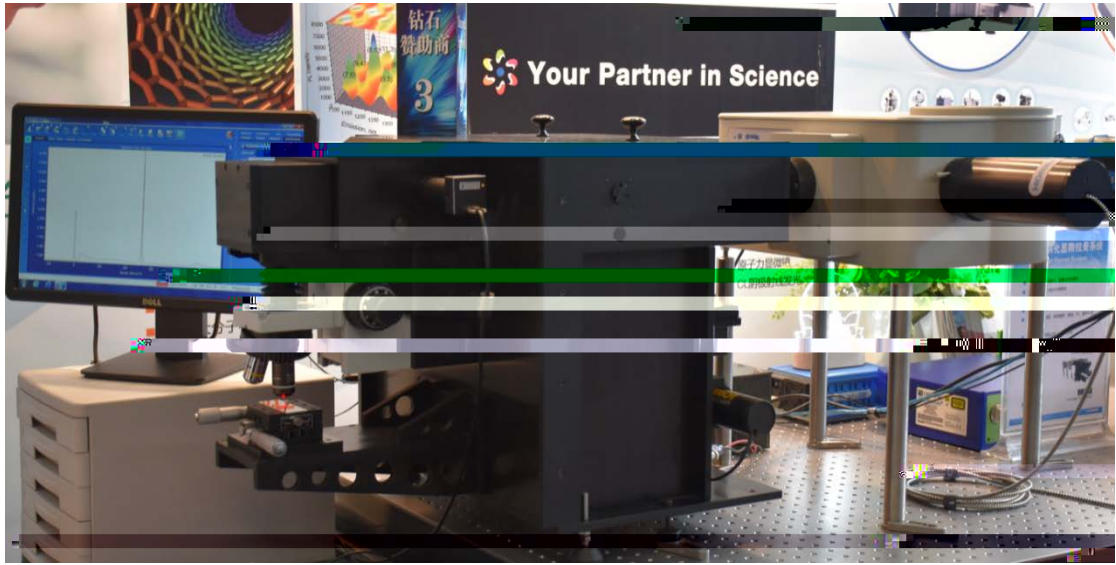
18 PLC

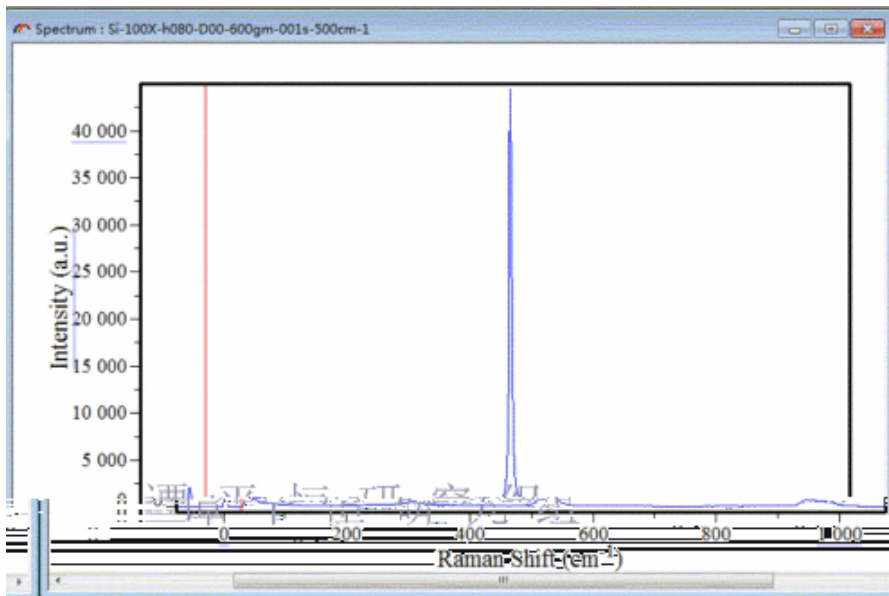


19

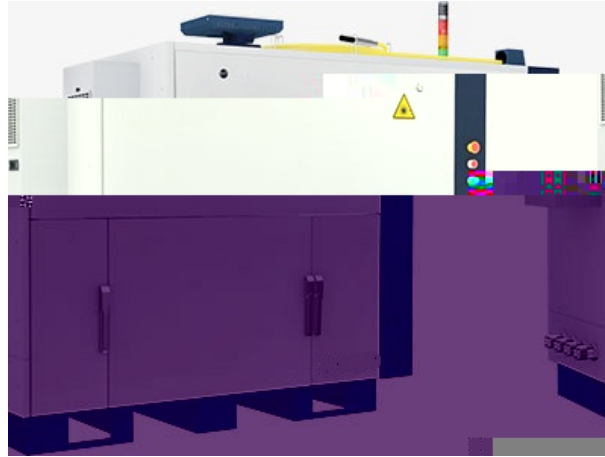
AWG







21



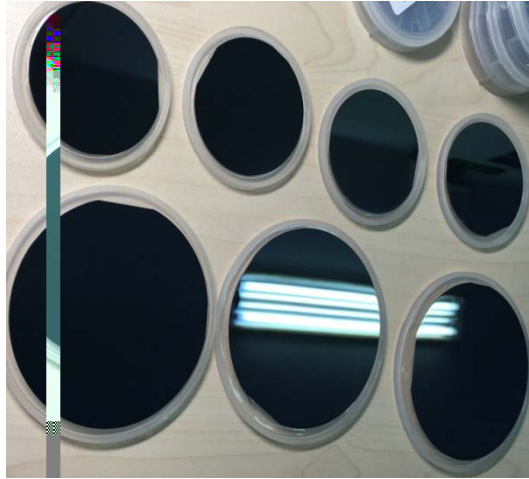
3kW

mm	0.05~0.15	1~3	0.2~2
mm		4~6	1~15
mm	0.2~0.5	2~4	0.4~2

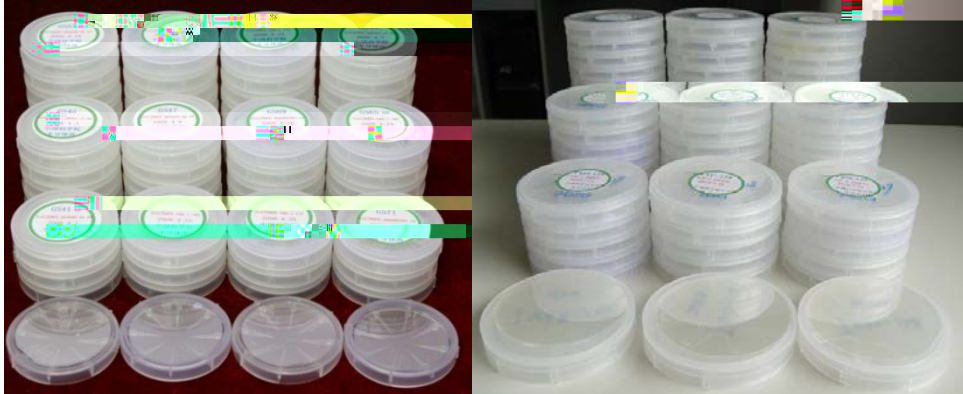
1							
2							
3		P_{nom}			3000		W
4				10		100	%
5			: 3000W		9××		nm
6	FWHM		: 3000W		80		nm
7	/		: 3000W		0.02		ms
8			: 3000W : 24 ±0.5		±2		%

9

22 GaAs InP



23 GaN



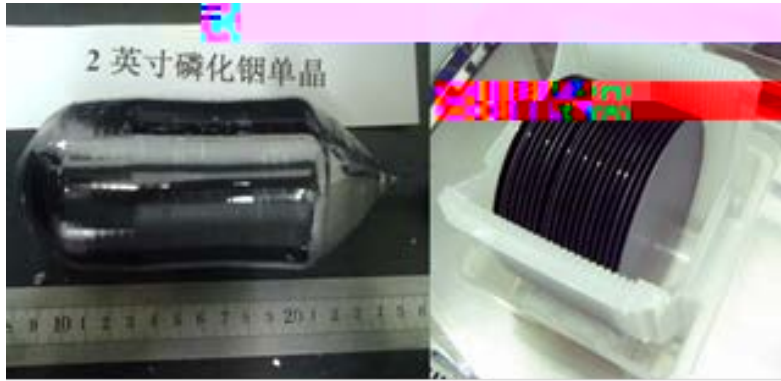
2				
		Si		SiC
(mm)		50.8±0.4	50.8±0.4	50.8±0.4
(nm)		<0.5	<0.5	<0.5
2DEG	(cm ² /Vs)	>1600	>1700	>1700
2DEG	(cm ⁻²)	>0.7×10 ¹³	>0.7×10 ¹³	>0.7×10 ¹³
		300-450	300-450	300-450
	(%)	<3	<3	<3

2 GaN			
	50.8±0.4	50.8±0.4	50.8±0.4
	Si	SiC	SiC
	0-	0-	0-
GaN		AlGaN	

3		
		SiC
(mm)	76.2±0.4	76.2±0.4
(nm)	<0.5	<0.5
2DEG (cm ² /Vs)	>1700	>1700
2DEG (cm ⁻²)	>0.7×10 ¹³	>0.7×10 ¹³
	300-450	300-450
(%)	<4	<4

4		
		SiC
(mm)	100±0.4	100±0.4
(nm)	<0.5	<0.5
2DEG (cm ² /Vs)	>1700	>1700
2DEG (cm ⁻²)	>0.7×10 ¹³	>0.7×10 ¹³
	300-450	300-450
(%)	<4	<4

24 InP



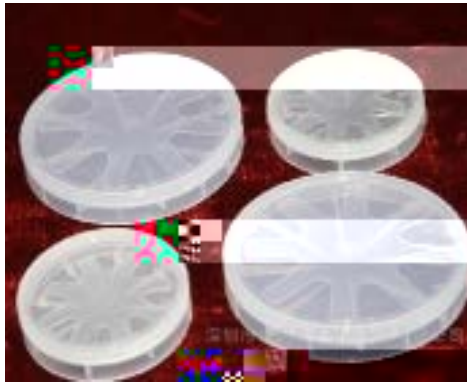
			cm^{-3}	$(\text{cm}^2/\text{V.s})$	$(\Omega.\text{cm})$	(cm^{-2})
InP	2	N	3×10^{16}	$(3.5-4) \times 10^3$		$< 1 \times 10^3$
S-InP	2	N	$(0.8-6) \times 10^{18}$	$(1.5-3.5) \times 10^3$		< 500
	3		$(0.8-6) \times 10^{18}$	$(1.5-3.5) \times 10^3$		$< 2 \times 10^3$
	4		$(0.8-6) \times 10^{18}$	$(1.5-3.5) \times 10^3$		$< 5 \times 10^3$
Zn-InP	2/3/4	P	$(0.6-6) \times 10^{18}$	50-70		$< 5 \times 10^3$
Fe-InP	2	SI				
	3			> 1000	$> 0.5 \times 10^7$	$< 5 \times 10^3$
	4					
3	4		$600 \pm 25 \mu\text{m}$	100 , 2		$350 \pm 25 \mu\text{m}$

25 GaSb

cm^{-3}

$(\text{cm}^2/\text{V.s})$

26 InAs



			cm^{-3}	$(\text{cm}^2/\text{V.s})$	(cm^{-2})
InAs	2/3	N	5×10^{16}	$\geq 2 \times 10^4$	$< 5 \times 10^4$
Sn-InAs	2/3	N	$(5-20) \times 10^{17}$	7000-20000	$< 5 \times 10^4$
S-InAs	2/3	N	$(1-10) \times 10^{17}$	6000-20000	$< 5 \times 10^4$
Zn-InAs	2/3	P	$(1-10) \times 10^{17}$	100-400	$< 5 \times 10^4$
$600 \pm 25 \mu\text{m}$			100 , 2	500 $\pm 25 \mu\text{m}$	3

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