





2015 4 5,500 3

1.8 1000  $\text{NF}_3$

2000  $\text{SF}_6$  2016

3 5 232

27 29

2 20



NF<sub>3</sub>

2019 7

NF<sub>3</sub> SF<sub>6</sub>

NF<sub>3</sub> SF<sub>6</sub>

NF<sub>3</sub> SF<sub>6</sub>

2018

4175.7

10.8%

---

3120.58

19.8%

90%

3

2

7 20

1.

2018

6532

20.7%

2020

9,300

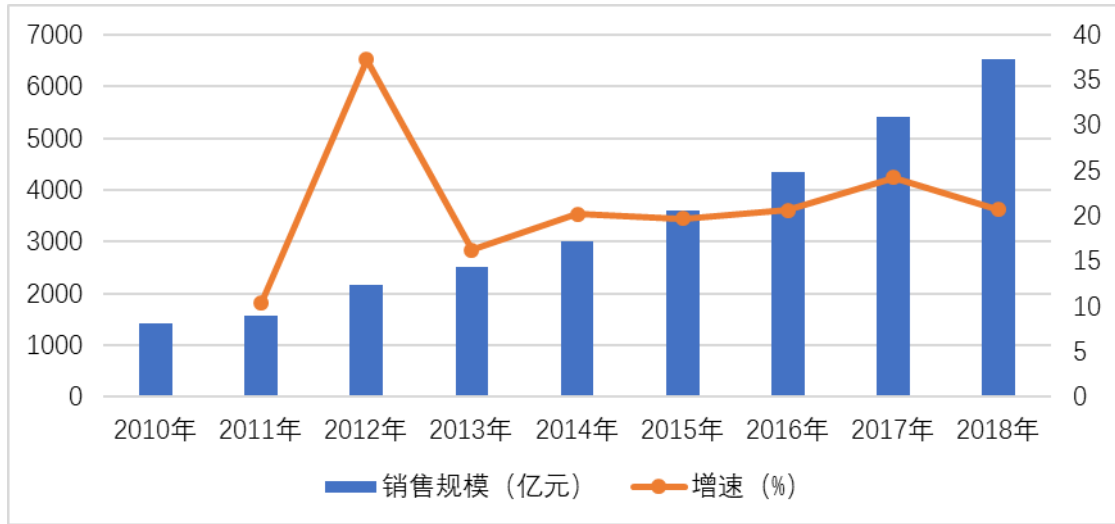
IC

NF<sub>3</sub>

IC

2019 -2022

20%



2.

TFT LCD

FDP 91 TFT-LCD

4.5 5 6 8.5 10.5

LG OLED

2%(2005 )

35%(2017 )

2017

40

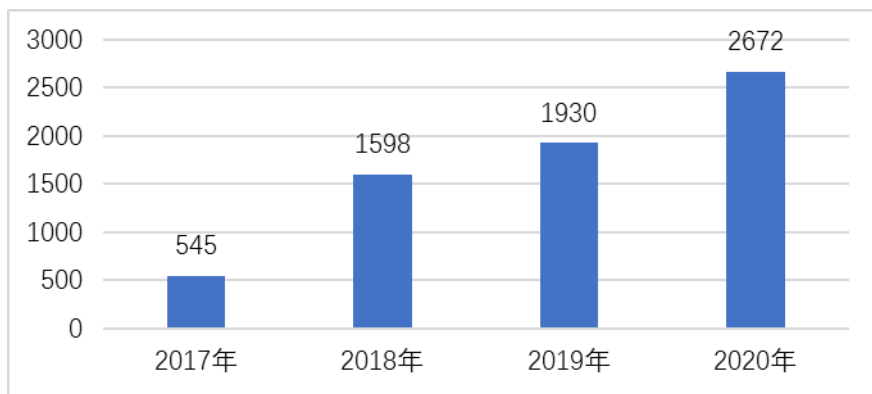
8.5

11 10.5 1 8.5/10.5/11 4 BOE

LGD HKC CEC 10.5

NF<sub>3</sub>

OLED



3.

NF<sub>3</sub>

NF<sub>3</sub>

200-600

NF<sub>3</sub>

NF<sub>3</sub>

NF<sub>3</sub>

95%-99%

>95%

PFCs

NF<sub>3</sub>

CVD

CVD

NF<sub>3</sub>

OLED

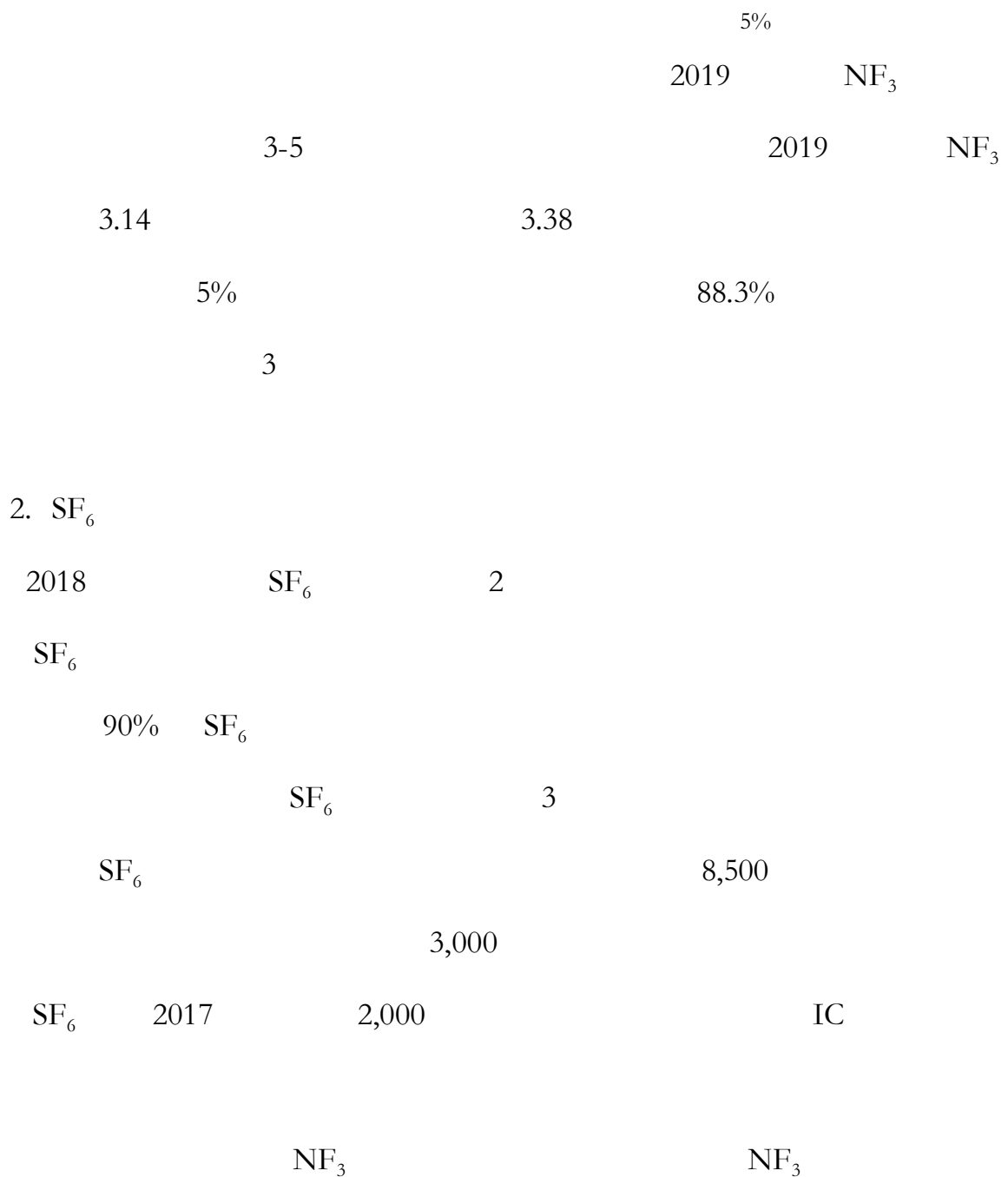
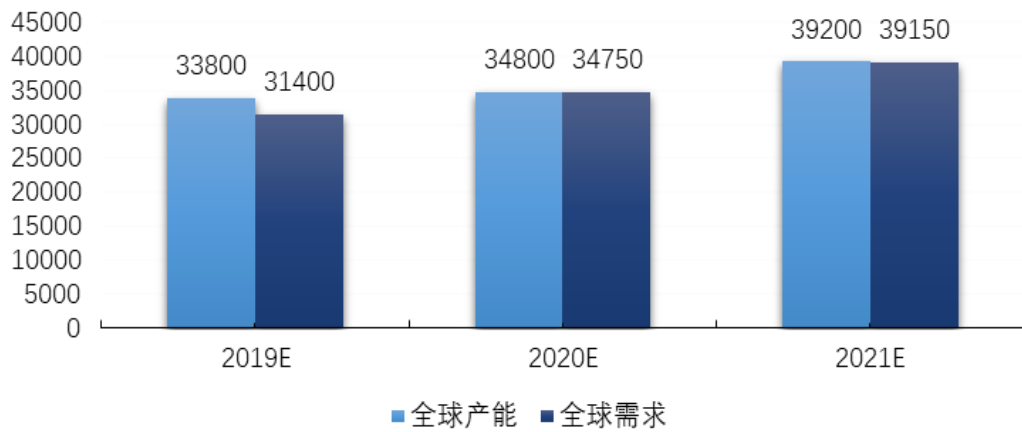
1. NF<sub>3</sub>

NF<sub>3</sub>

---

1%

		NF <sub>3</sub> 2018		2.8
	10,000	35%	7,000	25%
	5,000	18%	3,200	12%
		10%		
NF <sub>3</sub>			1,5000	50%
	8,500	30%	6,000	20%
NF <sub>3</sub>				NF <sub>3</sub>
	NF <sub>3</sub>		SK	
LG				
		KDK		
			NF <sub>3</sub>	
			718	
NF <sub>3</sub>			1,000	1,000
		2	NF <sub>3</sub>	





---

20

1.

NF<sub>3</sub>

NF<sub>3</sub>

MO

LED

LED

LCD

---

LED

2.

863

NF<sub>3</sub>

LCD IC

3.

---

A

4.

2012

2018

17.5%

0

$\text{NF}_3$   $\text{SF}_6$

1.  $\text{NF}_3$

---

NF<sub>3</sub>

1 IC

NF<sub>3</sub>

2 LCD

NF<sub>3</sub>

CVD

LCD

2. SF<sub>6</sub>

SF<sub>6</sub>

2.5

2.5

100

SF<sub>6</sub>

SF<sub>6</sub>

Etch

GIS

1,000kV SF<sub>6</sub>

80%

SF<sub>6</sub>

NF<sub>3</sub>

---

1.

3

1

2017

NF<sub>3</sub>

2

2018

3

2018

4

SDP

NF<sub>3</sub>

SDP

SF<sub>6</sub>

SF<sub>6</sub>

4

NF<sub>3</sub>

5

2018

SF<sub>6</sub>

SF<sub>6</sub>

2.

20

20

---

4 / NF<sub>3</sub> 2.7 /  
3.1 NF<sub>3</sub>

3

3.

2017

5

7

4

---

1974

1996 -2000 45

2004 -2007 2007

-2014

2007 5,000 200

2013 10 2

2012-2014

2014 20%

1,000 56% 560 2015

2019 7

2016  
2019  
2018 30 48

5 1 7 11

	2019 5.1~7.11	2019 1.1~7.11	2018	2017
	3,465	8,193	10,769	4,138
	2,633	6,603	10,019	5,696
	24%	19%	7%	-38%
	-46	-980	-1,969	-2,951
	-1%	-12%	-18%	-71%
	48	43	30	22

578.18 5 1 7 11 105.11

	2019.1.1-2019.7.11		2019.5.1-2019.7.11	
	-148.68	-148.68	-148.68	-148.68
	1,209.35	525.00	227.22	25.00
	1,202.38	525.00	225.94	0
	83.56	83.56	15.08	15.08
	40.64	40.64	40.40	40.40
	0.76	0.76	-1.23	-1.23
	-1,128.43	-550.25	-11.87	-116.97
	-148.92	-82.59	33.70	-17.55



	-979.51	-467.65	-45.57	-99.43
		-511.85		53.86
		-578.18		105.11

5 1 7 11

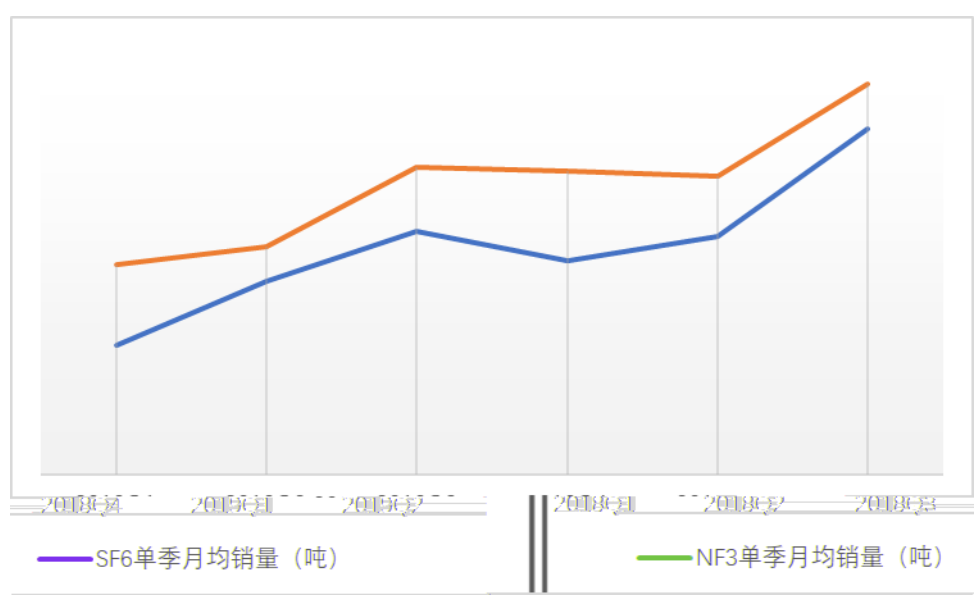
53.86

2

2018

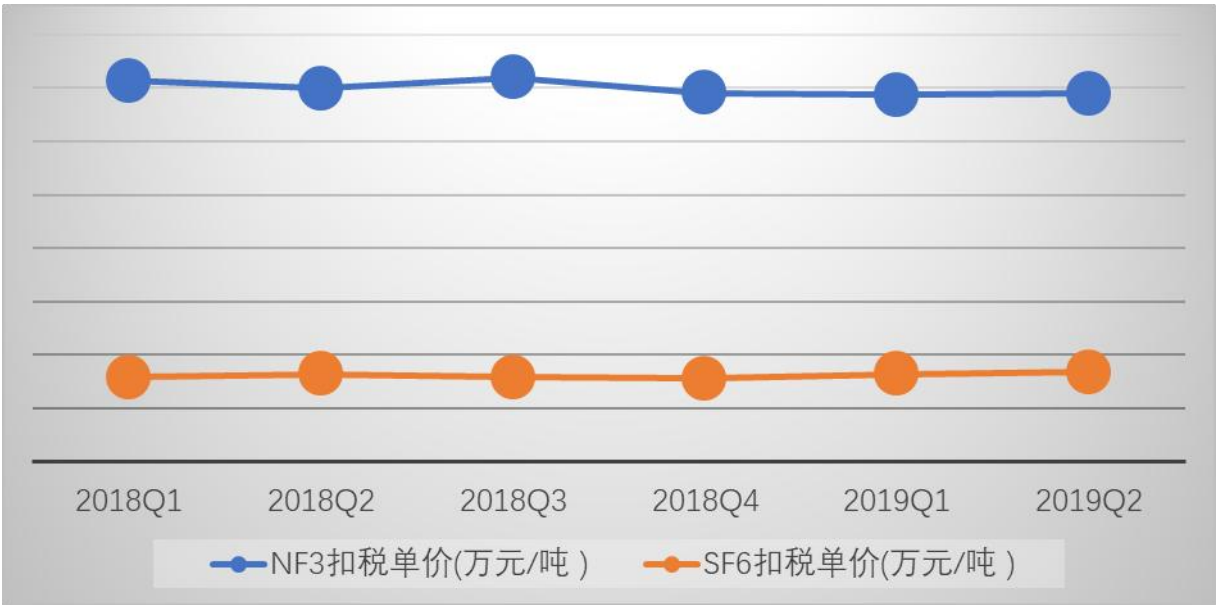
1,000 NF<sub>3</sub>

2,000 SF<sub>6</sub>



NF<sub>3</sub>

2



1                       $\text{NF}_3$

2     $\text{NF}_3$

2



NF <sub>3</sub>	9,635	1,863	7,772
NF <sub>3</sub>	6,864	0	6,864
	826	175	651
	1,324	414	910
NF <sub>3</sub>	2,850	0	2,850
NF <sub>3</sub>	2,850	0	2,850
	2,420	0	2,420
	26,769	2,452	24,318

24,318

2020 12

NF<sub>3</sub>

2020

2,000

NF<sub>3</sub>

2020

3,000

NF<sub>3</sub>

NF<sub>3</sub>

2

2019 2020 2021

1,138 2021 6,551  
 42,582 2021 6.5 2020  
 4,000 10.5  
 NF<sub>3</sub> SF<sub>6</sub> 2

	27,387	
	14,938	
	14,938	
	7,201	
SF <sub>6</sub>	6,000	

---

	70,463	
	40,847	57.97%

40,847

24,685

NF<sub>3</sub>

---

1.

1)

2)

---

3)

4)                    5                    3                    1                    1

5)                    3                    1                    1                    1

6)

2.

3.

			2019	2020	2021
	11,380	2021		6,551	

4.



---

5.

1.

2.

LED

IC

---

3.

LED

4.

70%

5.

NATA

