

2017 294 3

# “战略性先进电子材料”重点专项 2018年度项目申报指南

2006-2020

2025

“ ”

2018

“

2025” “ +”

“ ”

	35		5	2016-2020
	2016		4	15
27		2017	4	15
37		2018	4	5
12-24				1.77

1 1

1.1

1-2

4

5

5

1

1

“

1-2 ”

2

2

2

**1.**

1.1

				2
X		50 arcsec		1
nm	p	$1 \times 10^{18} \text{ cm}^{-3}$	n	1
$\times 10^{16} \text{ cm}^{-3}$				3000
$\text{cm}^2/\text{V} \cdot \text{s}$	2500 $\text{cm}^2/\text{V} \cdot \text{s}$			
		3		$10^4 \text{ cm}^{-2}$
	—			MOSFET
	1000 V		$2 \text{ m} \cdot \text{cm}^2$	
		230 nm		
	$5 \times 10^3$		15	20
1.2				

0.3 GaN



		10	/		90%	100
					160% NTSC	5
2.2				$10^5$ lm		
				LD		
					LD	
				LD		
					LD	
					LD	
	450 nm		520 nm		640 nm	
			5000	/		
LD	50%	LD	30%	LD	70%	

LD 25 LD 120  
LD 28

**3.**

3.1

±10 cm 80% 0.1° -45 65  
99% 100 m 50  
mm×50 mm 3% =0 5

3.2

				SiC
			3 $\mu$ m	500
mm/s		< $\pm 0.5$ $\mu$ m	$\pm 0.5$ $\mu$ m	
	2			
		5		
	3.3			

				Q
			400 nm	630 nm
	100 mm		$\pm 5\%$	
90			60	
		510 nm	10 W	100 mm
		$\pm 5\%$	98	
		300 kW	150 ns	50 Hz

40  $\mu\text{m}$

10

4.

4.1

3 m

0.3 mm

100

mm      5    8 MW

3 mm      5%

0.5 mm

1

mm/100 mm      10

4.2

>20 m,

5  $\text{m}^2/\text{h}$



	100 $\mu\text{m}$ ,	$\pm 20\mu\text{m}$	
5%		80	10
<b>5.</b>			
5.1			

CMOS

CMOS

$6.4 \times 10^{-3} \mu\text{m}^2$	50 ns	25 ns	100
@150 °C	8;	1.5 Gb/cm <sup>2</sup>	
10	20		
5.2			

12 CMOS  
12  
CMOS  
2 3  
1 Gb/cm<sup>2</sup>  
150% 30 ns 1 V  
10<sup>15</sup> 10 15  
30