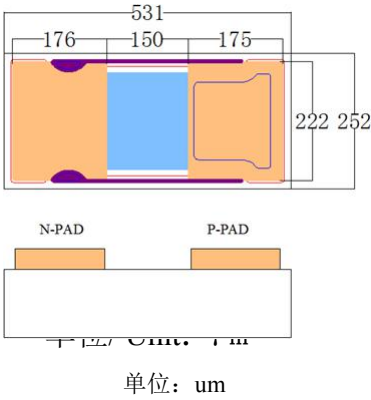


FCV21A 紫光 LED 芯片规格书说明
Specification of FCV21A, GaN-based UV LED chip

版本号：第一版
Version: The First Edition

产品特点 Features

- 长寿命 Long life
- 高亮度 High brightness
- 芯片百分百测试分选
All chips are tested and sorted
- 波长与光强良好的一致性
Good consistency of luminous intensity and peak wavelength



物理参数 Physical Characteristics

芯片尺寸 / Chip Size: 10mil*21mil (252±25μm * 531±25μm)
芯片厚度 / Chip Thickness: 150±10 μm
P 电极 / P Electrode: 176±10μm * 222±10μm
N 电极 / N Electrode: 176±10μm * 222±10μm
PN 间距/ PN GAP: 150μm±5μm

材料 Material:

P 电极 / P Electrode: 金合金/ Gold Alloy
N 电极 / N Electrode: 金合金/ Gold Alloy

光电参数 Photoelectric Parameter: (T C =25℃)

参数 / Parameter	符号 /Symbol	测试条件 /Condition	最小值 /Min.	典型值 /Typ.	最大值 /Max.	单位 /Unit
正向电压/ Forward Voltage	Vf	If=150mA	2.8	---	3.4	V
反向电流/ Reverse Current	Ir	Vr=-10V	0	---	0.5	μA
峰值波长/ Peak Wavelength	λp	If=150mA	395		425	nm
光功率/ Luminous power	LV1	If=150mA	150	---	160	mW
	LV2		160		170	
	LV3		170	---	180	
	LV4		180	---	190	
	LVA		190	---	195	
	LVB		195	---	200	
防静电/ Electro-Static Discharge	在 2000V 静电保护的人体模式测试条件下，通过数量超过 90%					

应用说明 Application Notes:

1. 芯片在运输、储存，以及使用过程中要尽量避免接触到酸、碱性环境。

During the chip transportation, storage and using process, try not to put the chips neither in the acid nor the alkaline environment.

2. 抗静电能力：氮化镓基LED的ESD敏感度属于人体模式的class 1级别，请在运输、使用过程注意静电保护。

ESD: GaN LEDs are class 1 ESD sensitivity. ESD protection during the transportation and the usage is needed.

3. 请根据实际情况调整合适的打线或焊接的功率和力度，避免因过度冲击对芯片造成损伤。

To avoid chip impact, please adjust the power of welding and wire bonding against reality.

4. 峰值波长测量误差范围为 $\pm 1\text{nm}$ 。

The testing error range of peak wavelength is $\pm 1\text{nm}$.

5. 可根据客户需要订做特殊规格的芯片。

Customer's special requirements are also welcome.

6. 适用于贴片和COB封装，其他应用需与我司确认，如客户擅自用于其他用途，我司不承担相应责任。

Suitable for SMD and COB, other applications should be confirmed with our company. Our company does not undertake the corresponding responsibility for other applications.

最大额定值 Maximum rating: ($T_a = 25^\circ\text{C}$)

参数 / Parameter	符号 / Symbol	条件 / Condition	额定值 / Rating	单位 / Unit
正向直流电流/ DC Forward Current	If	$T_a = 25^\circ\text{C}$	≤ 150	mA
反向电压/ Reverse Voltage	Vr	$T_a = 25^\circ\text{C}$	≤ 10	V
正向脉冲电流/Pulse Forward Current	Ip	$T_a = 25^\circ\text{C}$	≤ 260	mA
结温/ Junction Temperature	Tj	---	≤ 120	$^\circ\text{C}$
存储温度/ Storage Temperature	Tstg	Chip(芯片)	-40~+85	$^\circ\text{C}$
		Chip-on-tape/storage(存储)	0~40	$^\circ\text{C}$
		Chip-on-tape/transportation(运输)	-20~+65	$^\circ\text{C}$
封装温度/ Package Temperature	---	---	280(<10s)	$^\circ\text{C}$

备注 Notes:

最大额定值的定义条件为：使用2835支架封装，且置于PCB板未灌胶。若使用条件超过最大额定值，例如正向电流、结温等超过可能会毁坏LED芯片。

Maximum ratings are package-dependent. The definition of the maximum rating is in the condition of using 2835 bracket, when the chip is put on a PCB, before glues pouring. If the use conditions, such as DC forward current and the LED junction temperature, are more than Maximum ratings, the chips may be damaged.