

**RoHS**

# Specification

## 规格书

Customer Name : \_\_\_\_\_

客户名称 :

Customer P/N : \_\_\_\_\_


客户品号 :

Factory P/N : HL-A-4014H465W-S1-DM

公司品号 :

Sending Date : \_\_\_\_\_

送样日期 :

Client approval 客户审核			Hongli approval 鸿利光电审核		
Approval 核准	Audit 确认	Confirmation 制作	Approval 核准	Audit 确认	Confirmation 制作
			林德顺		黄雪梅
<input type="checkbox"/> Qualified 接受		<input type="checkbox"/> Disqualified 不接受	DATE: 日期:		

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注:1. 此规格书以中英文方式书写, 若有冲突以中文版本为准文本.

2. 此规格书的最终解释权归广州鸿利光电股份有限公司

3. 此规格书的有效期限为两年, 自盖章或签字之日起计算, 期满时双方可以续签协议, 但应采用书面形式





## HL-A-4014H465W-S1-DM

### Selection Guide (选择指南)

Part No. 型号	Dice	Lens Type 胶体类型	Luminous flux(lm) 光通量@ 60mA		Viewing Angle 视角
			Min	Typ	201/2
HL-A-4014H465W-S1-DM	WHITE (InGaN)	Yellow Diffused	22	24	120°

Note:(备注)

- 201/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.  
201/2 是半值角, 指光强是光学中心线光强的1/2处到光学中心线的角度
- The above luminous intensity measurement allowance tolerance is  $\pm 10\%$ .  
上述发光强度的测试允许公差为 $\pm 10\%$

### Electrical / Optical Characteristics at Ta=25°C 电性与光学特性

Parameter (参数)	Symbol (符号)	Min. (最小)	Typ. (平均)	Max. (最大)	Units (单位)	Test Conditions 测试条件
Forward Voltage 正向电压	V <sub>F</sub>	2.8	--	3.6	V	I <sub>F</sub> =60mA
Reverse Current 反向电流	I <sub>R</sub>	--	--	5	Ma	V <sub>R</sub> = 5V
Color Coordinates 色度坐标	X	--	0.274	--	--	I <sub>F</sub> =60mA
	Y	--	0.254	--	--	I <sub>F</sub> =60mA

### Absolute Maximum Ratings at Ta=25°C 绝对最大额定值

Parameter (参数)	Symbol (符号)	Rating (值)	Units (单位)
Power Dissipation (功耗)	P <sub>d</sub>	200	mW
Forward Current (正向电流)	I <sub>F</sub>	60	mA
Peak Forward Current [1] (峰值正向电流)	I <sub>FP</sub>	100	mA
Reverse Voltage (反向电压)	V <sub>R</sub>	5	V
Electrostatic Discharge (HBM) (静电)	ESD	2000	V
Operating Temperature (操作温度)	T <sub>opr</sub>	-40 ~ +85	°C
Storage Temperature (保存温度)	T <sub>stg</sub>	-40 ~ +100	°C
Thermal Resistance (Junction / Soldering point) (结壳热阻)	R <sub>th J-S</sub>	25	°W
Junction Temperature 结温	T <sub>j</sub>	115	°C

Note: (备注)

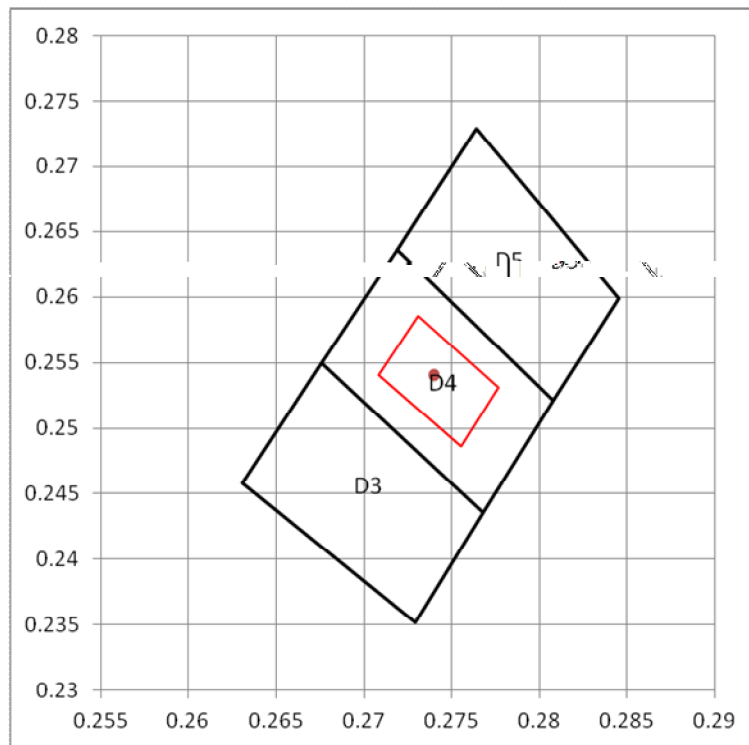
- 1/10 Duty cycle, 0.1ms pulse width. (脉宽0.1ms, 周期1/10)
- The above forward voltage measurement allowance tolerance is  $\pm 0.1V$ . (以上所示电压测量误差 $\pm 0.1V$ )
- The above color coordinates measurement allowance tolerance is  $\pm 0.003$ . (以上所示坐标测量误差 $\pm 0.003$ )

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BIN	IV (lm)
4a	22-23
4b	23-24
5a	24-25
5b	25-26
6a	26-27
6b	27-28

BIN	VF (V)
B	2.8-2.9
C	2.9-3.0
D	3.0-3.1
E	3.1-3.2
F	3.2-3.3
G	3.3-3.4

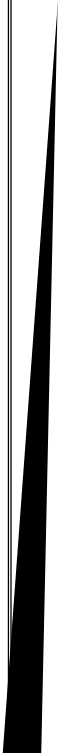
BIN	WL
D5	D5
D4	D4
D3	D3



色区 GROUP	Left down		Left up		Right up		Right down	
	X1	Y1	X2	Y2	X3	Y3	X4	Y4
D5	0.2719	0.2636	0.2764	0.2729	0.2845	0.2599	0.2808	0.2521
D4	0.2676	0.2550	0.2719	0.2636	0.2808	0.2521	0.2768	0.2436
D3	0.2631	0.2458	0.2676	0.2550	0.2768	0.2436	0.2729	0.2352



HI



NO : B-15





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### Reliability Test Items And Conditions 信赖性测试项目及条件

Test Items 项目	Ref. Standard 参考标准	Test Condition 测试条件	Time 时间	Quantity 数量	Ac/Re 接收/拒收
Reflow 回流焊	JESD22-B106	Temp:260°Cmax T=10 sec	3 times.	22Pcs.	0/1
Temperature Cycle 温度循环	JESD22-A104	100°C±5°C 30 min. ↑↓5 min -40°C±5°C 30 min.	100 Cycles	22Pcs.	0/1
High Temperature Storage 高温保存	JESD22-A103	Temp:100°C±5°C	1000Hrs.	22Pcs.	0/1
Low Temperature Storage 低温保存	JESD22-A119	Temp:-40°C±5°C	1000Hrs.	22Pcs.	0/1
Life Test 常温通电	JESD22-A108	Ta=25°C±5°C IF=60mA	1000Hrs.	22Pcs.	0/1
High Temperature High Humidity Life Test 高温高湿通电	JESD22-A101	85°C±5°C/ 85%RH IF=40mA	1000Hrs.	22Pcs.	0/1

### Failure Criteria 失效判定标准

Test Items 项目	Symbol 符号	Test Condition 测试条件	Failure Criteria 判定标准	
			Min. 最小	Max. 最大
Forward Voltage 正向电压	VF	IF=60mA	--	U.S.L*)x1.1
Reverse Current 反向电流	IR	VR = 5V	--	U.S.L*)x2.0
Luminous Flux 光通量	Lm	IF=60mA	L.S.L*)x0.7	--

U.S.L: Upper Specification Limit 规格上限

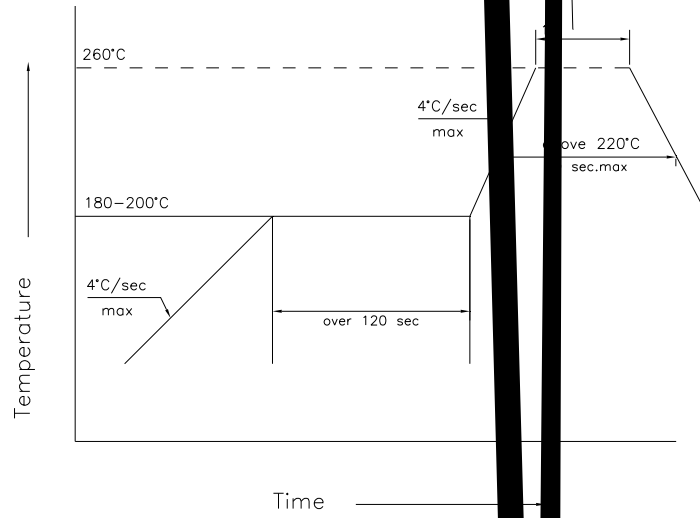
L.S.L: Lower Specification Limit 规格下限

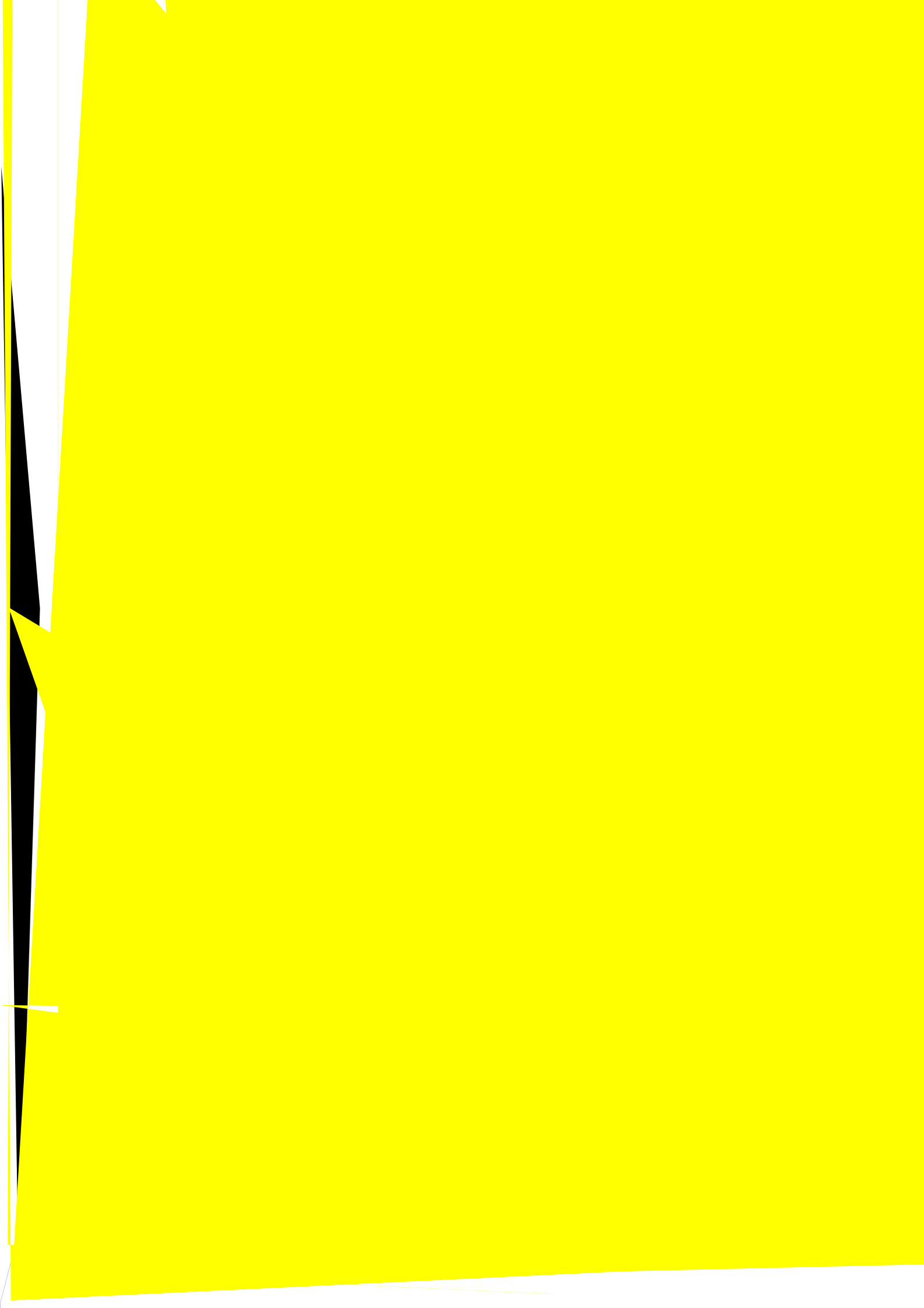
\*The technical information shown in the data sheets are limited to the typical characteristics and circuit examples of the referenced products. It does not constitute the warranting of industrial property nor the granting of any license.

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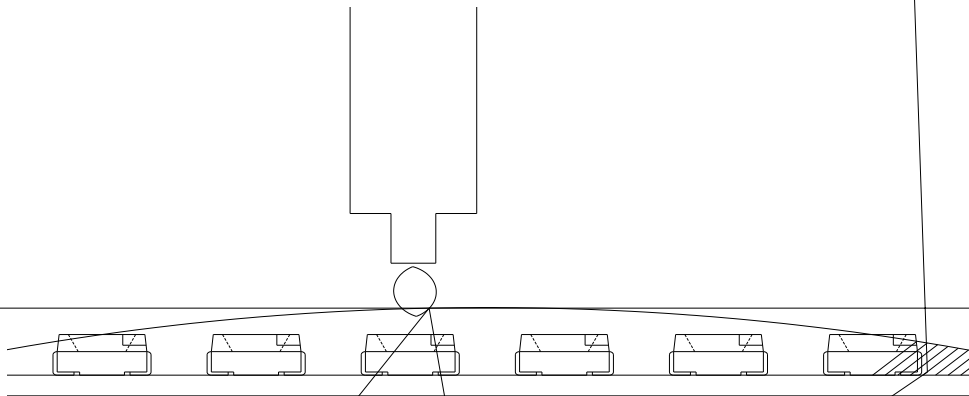


5.LED operating environment and sulfur element composition cannot be over 100PPM in the LED mating usage material.

LED工作环境及与LED适配的材料中硫元素及化合物成份不可超过100PPM

6.When we need to use external glue for LED application products, please make sure that the external glue matches the LED packaging glue. Additionally ,as most of LED packaging glue is silica gel, and it has strong Oxygen permeability as well as strong moisture permeability; in order to prevent external material from getting into the inside of LED, which may cause the malfunction of LED, the single content of Bromine element is required to be less than 900PPM,the single content of Chlorine element is required to be less than 900PPM,the total content of Bromine element and Chlorine element in the external glue of the application products is required to be less than 1500PPM

当我们需要使用外封胶涂抹LED产品时，应确保外封胶与LED封装胶水相匹配，因为大多数LED的封装胶水为硅胶，它有较强的氧化性和较强的吸湿性，必须防止外封材质进入LED内部以造成LED的损伤，单一的溴元素含量要求小于900PPM，单一氯元素含量要求小于900PPM，在涂抹LED产品时要求外封胶溴元素与氯元素总含量必须小于1500PPM



7.Other points for attention, please refer to our LED user manual.

其它注意事项请参照我们的LED使用手册

