

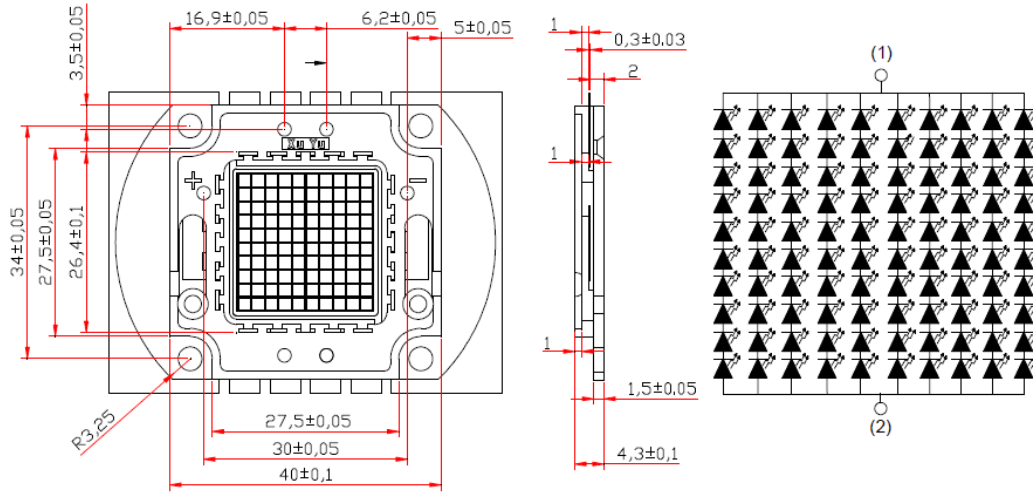


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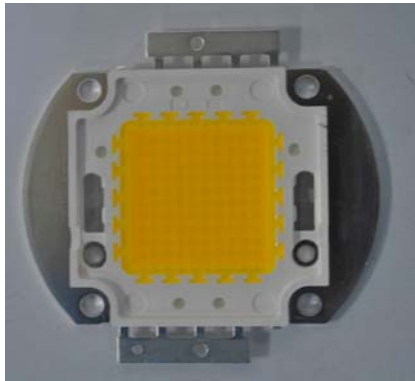
SPECIFICATION FOR APPROVAL

Part No. : SLE-4040NY40-100W-MU(WARM WHITE)

Package Dimensions



LED 10串 10並



Notes:

1. All dimensions are in mm,
2. Tolerance is ±0.3mm unless otherwise noted.

Features and Applications

Features	Applications	
<ul style="list-style-type: none"> * 100W High Power LED * High Luminous Flux * Wide Viewing Angle:120° * Colloid Color Water Clear 	<ul style="list-style-type: none"> * Portable(flashlight bicycle) * Reading Lights(car,bus,aircraft) * Fiber optic alternative * Edge-lit signs(Exit,point of sale) * Appliance * Automotive exterior(Stop-Tail-turn,HMSL,Mirror side repeat) 	<ul style="list-style-type: none"> * Sign and channel letter * Architectural letail * Cove lighting * Orientative

Part NO.	Chip Material	Color Temperature	Emission Color	Lens Color
SLE-4040NY40-100W-MU	InGaN	2600~3800K	Warm white	Water Clear



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Absolute Maximum Ratings at TA=25°C

Parameter	Maximum Rating	Unit
Power Dissipation	100	W
Forward Current (DC)	3500	mA
DC Pulse Current(Pulse width $\leq 0.1\text{msec}$ Duty Ratio $\leq 1/10$)	5000	mA
ESD withstand voltage(HBM)	2000	V
junction temperature	120	°C
Reverse Voltage	5	V
Thermal Resistance	0.83	°C/W
Operating Temperature Range	-30°C to +60°C	
Storage Temperature Range	-30°C to +80°C	
Soldering Condition	Max. 350±20°C for 3ses once	

Electrical/Optical Characteristics (Ta= 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Luminous Flux	Φ_V	10000		12000	lm	IF=3500mA
Viewing Angle	$2\theta_{1/2}$		120		deg	IF=3500mA
Color Temperature	CCT	2600		3800	K	IF=3500mA
Forward Voltage	V_F	30		35	V	IF=3500mA
Reverse Current	IR			5	μA	IF=3500mA
Color-rendering index	Ra	70				IF=3500mA

Notes:

1. Tolerance of Luminous Flux is $\pm 10\%$.
2. Tolerance of Forward Voltage is $\pm 0.1V$.
3. Tolerance of CCT is $\pm 5\%$

Criteria For Judging Damage

Item	Symbol	Test Conditions	Criteria for Judgment
Forward Voltage	V_F	IF=3500mA	Max. Initial Data*1.1
Reverse Current	I_r	$V_r=5V$	$I_r \leq 5\mu A$
Luminous Flux	Φ_v	IF=3500mA	Min. Initial Data*0.9

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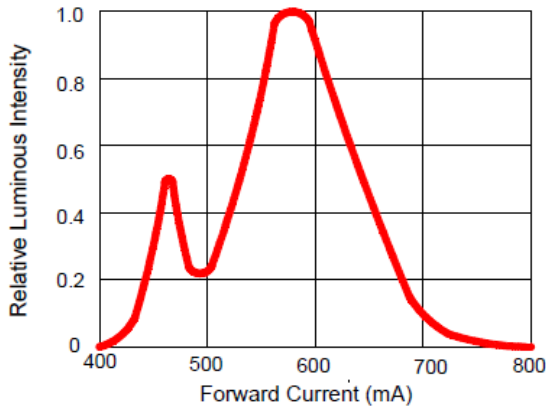
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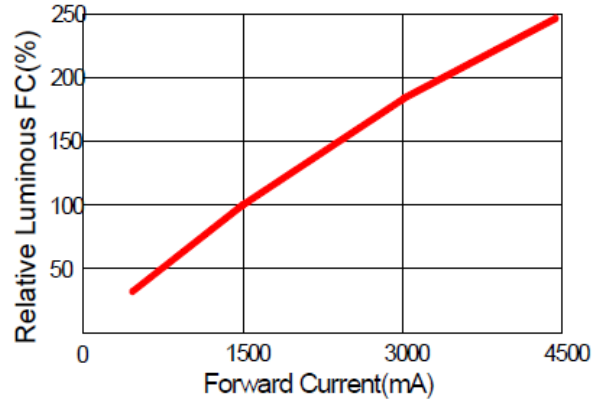
Part No. : SLE-4040NY40-100W-MU(WARM WHITE)

◆ Typical Electrical/Optical Characteristic Curves (If=3500mA; TA=25°C)

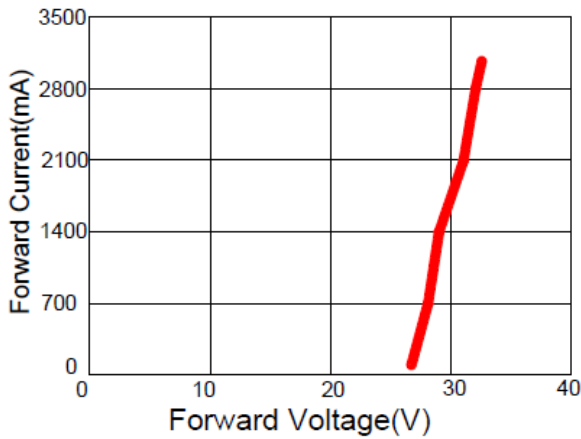
Relative Luminous Intensity vs. Forward Current



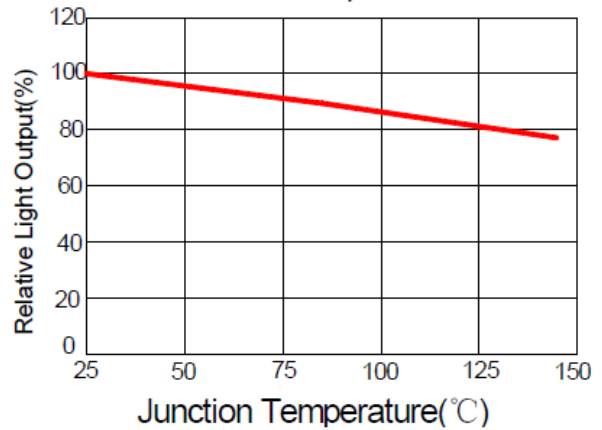
Relative Luminous FC(1m) VS Forward Current



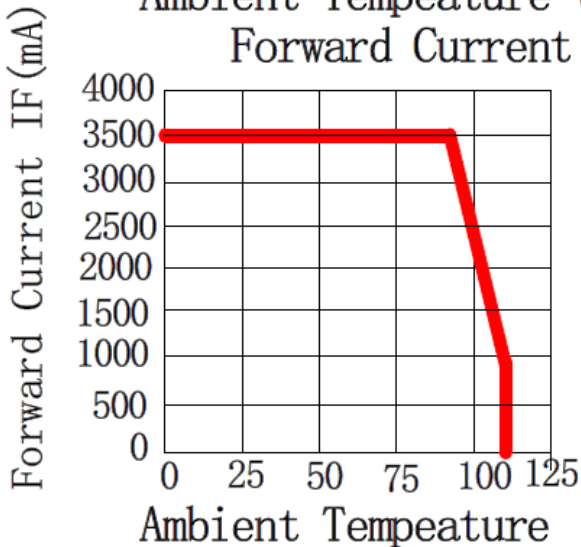
Forward Current VS Forward Voltage



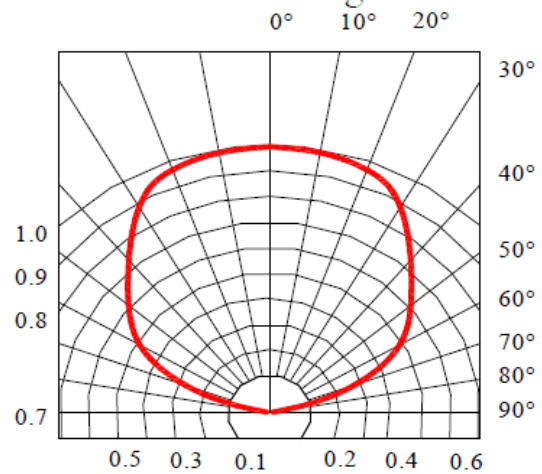
Relative Light Output VS Junction Temperature



Ambient Temperature VS Forward Current



Radiation Diagram



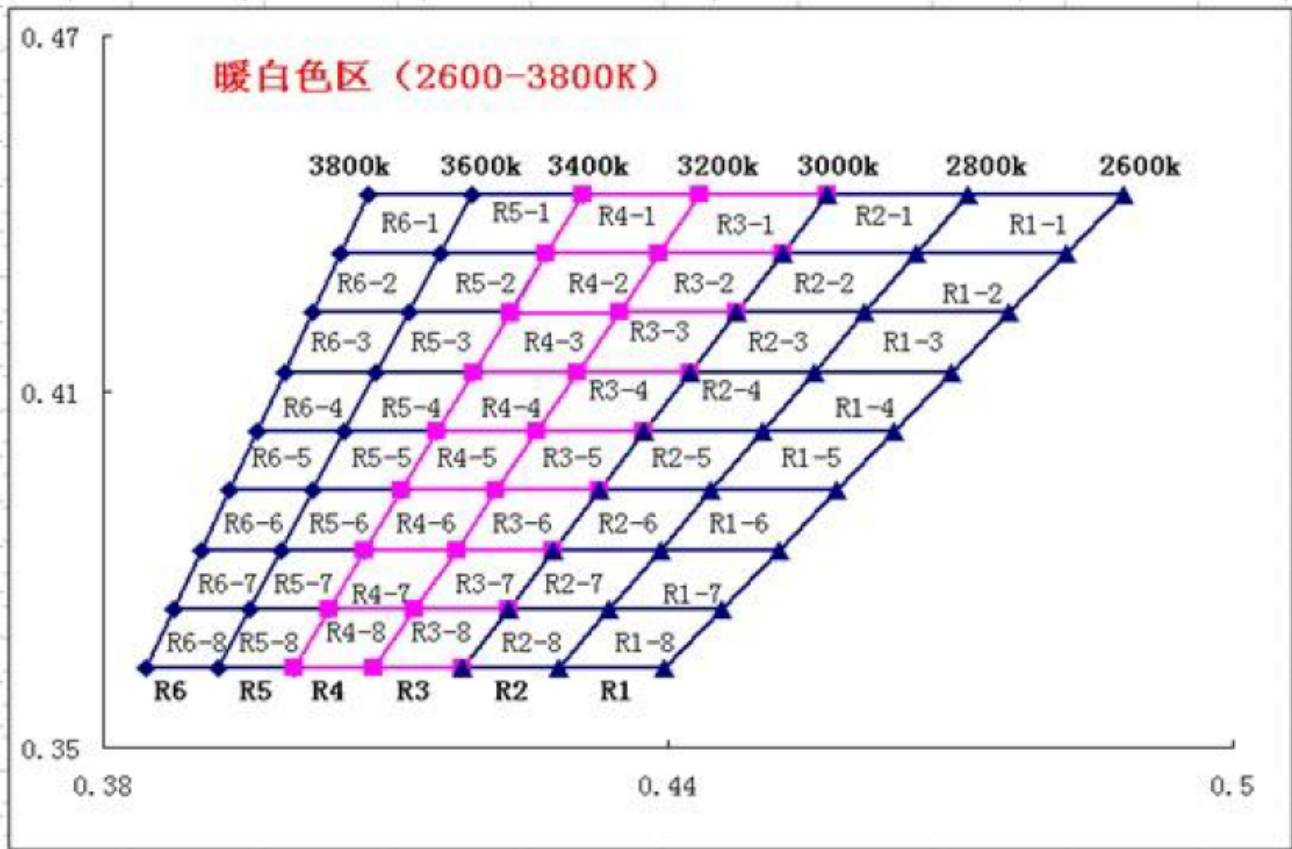


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◆CIE Chromaticity Diagram:(If=3500mA;TA=25°C)



Color RANK:(If=3500mA;TA=25°C)

Rank	Chromaticity Coordinate Rank					Rank	Chromaticity Coordinate Rank				
R1	X	0.4284	0.4397	0.4883	0.4718	R4	X	0.4002	0.4088	0.4434	0.4309
	Y	0.3633	0.3633	0.4433	0.4433		Y	0.3633	0.3633	0.4433	0.4433
R2	X	0.4181	0.4284	0.4718	0.4570	R5	X	0.3921	0.4002	0.4309	0.4192
	Y	0.3633	0.3633	0.4433	0.4433		Y	0.3633	0.3633	0.4433	0.4433
R3	X	0.4088	0.4181	0.4570	0.4434	R6	X	0.3845	0.3921	0.4192	0.4082
	Y	0.3633	0.3633	0.4433	0.4433		Y	0.3633	0.3633	0.4433	0.4433



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Part No. : SLE-4040NY40-100W-MU(WARM WHITE)

◆ Reliability

1. Test Items And Results

Item	Standard Test Method	Test conditions	Note	Number of Damaged
Resistance to Soldering Heat	JEITA ED-4701 300 302	$T_{SLD}: 260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ 10sec	1 time	0/30
Solder ability	JEITA ED-4701 300 303	$TSLD=235 \pm 5^{\circ}\text{C}$, 5Sec	1time	0/30
Thermal Shock	JEITA ED-4701 300 307	$-40-100^{\circ}\text{C}$ 10min, 10min	100cycles	0/30
Temperature Cycle	JEITA ED-4701 100 105	$-40^{\circ}\text{C} \sim 25^{\circ}\text{C} \sim 100^{\circ}\text{C} \sim 25^{\circ}\text{C}$ 30min. 5min. 30min. 5min	160cycles	0/30
Terminal Strength (Pull test)	JEITA ED-4701 400 401	Load 10N(1kgf) $10 \pm 1\text{sec}$	None Damage	0/30
Terminal Strength (bending test)	JEITA ED-4701 400 401	Load 5N(0.5kgf) $0^{\circ} \sim 90^{\circ} \sim 0^{\circ}$ bend 2 times	None Damage	0/30
Temperature Humidity Storage	JEITA ED-4701 100 103	$T_a=60^{\circ}\text{C}$, RH=90%	1000hrs	0/30
Steady State Operating life	--	$T_a=25^{\circ}\text{C}$, IF=3500mA	1000hrs	0/30
Steady State Operating life of High Humidity Heat	--	$T_a=60^{\circ}\text{C}$ RH=90%, IF=3500mA	1000hrs	0/30
High Temperature Storage	JEITA ED-4701 200 201	$T_a=100^{\circ}\text{C}$	1000HRS	0/30
Low Temperature Storage	JEITA ED-4701 200 202	$T_a=-40^{\circ}\text{C}$	1000HRS	0/30

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