

MODEL NO: **A214B/UWC/1B**Device Number: DAE-021-454 REV: 1.0Page: 1/5 ECN: _____**■ Features**

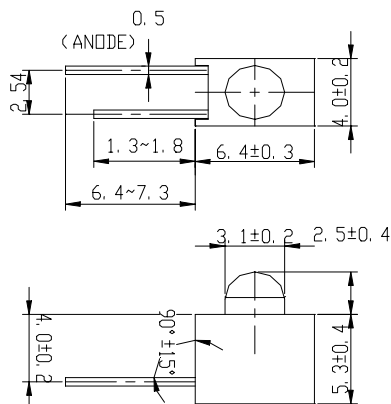
- Fluorescence Type
- High Luminous Intensity
- High Efficiency
- Emission Color: $x=0.29, y=0.30$

■ Descriptions

The white LED which was fabricated using a blue LED and a phosphor, and the phosphor is excited by blue light and emits yellow fluorescence. The mixture of blue light and yellow light results in a white emission.

■ Applications

- OA Equipment
- Backlighting of LCD
- Automotive Equipment
- Replacement of Conventional Light Bulbs and Fluorescent Lamps

■ Package Dimensions**■ Notes:** All dimensions are in millimeters.

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■Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Units
Forward Current	I _F	30	mA
Pulse Forward Current* ¹	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Power Dissipation	P _D	120	mW
Operating Temperature	T _{opr}	-30 ~ +80	°C
Storage Temperature	T _{stg}	-40 ~ +100	°C
Soldering Temperature* ²	T _{sol}	260	°C

*1:I_{FP} Conditions--Pulse Width ≤ 10msec and Duty ≤ 1/10.

*2:Soldering time ≤ 5 seconds.

■Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Units
Forward Voltage	V _F	I _F =20mA	--	3.6	4.0	V
Reverse Current	I _R	V _R =5V	--	--	10	μA
Luminous Intensity	I _v	I _F =20mA	450	800	--	mcd
Viewing Angle	2θ 1/2	I _F =20mA	--	27	--	deg
Chromaticity* ¹	x	I _F =20mA	--	0.29	--	
	y		--	0.30	--	

*The C.I.E. 1931 chromaticity diagram.

*The products are sensitive to static electricity and care must be fully taken when handling products.



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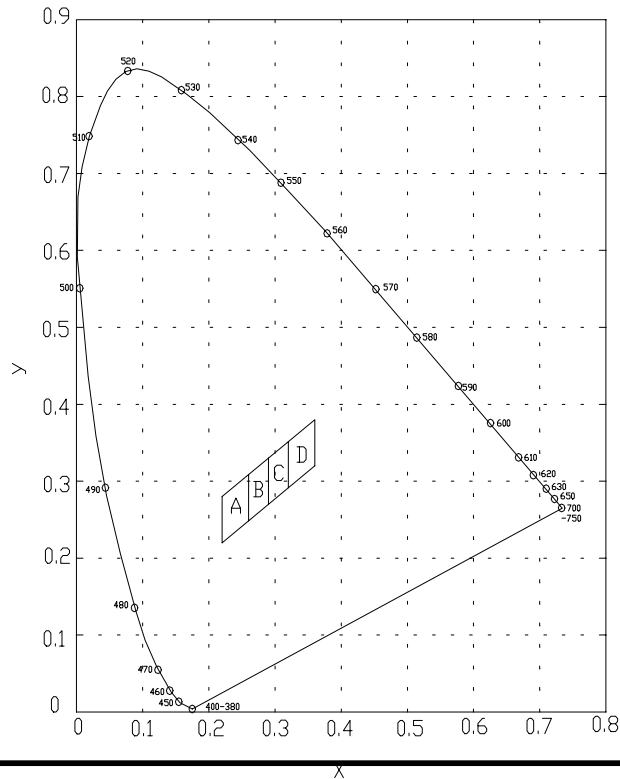
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■ Chromaticity Coordinates Specifications for Bin Grading

Rank	Chromaticity Coordinates				
	A	x	0.220	0.220	0.260
	y	0.220	0.280	0.310	0.250
B	x	0.260	0.260	0.290	0.290
	y	0.250	0.310	0.330	0.270
C	x	0.290	0.290	0.320	0.320
	y	0.270	0.330	0.350	0.290
D	x	0.320	0.320	0.360	0.360
	y	0.290	0.350	0.380	0.320
* Tolerance		$x \pm 0.02$			$y \pm 0.02$

■ CIE Chromaticity Diagram





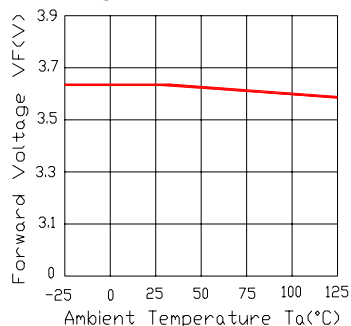
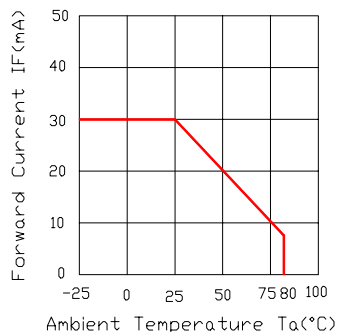
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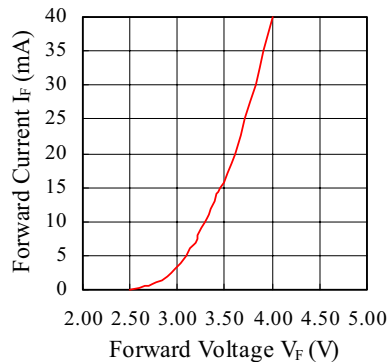
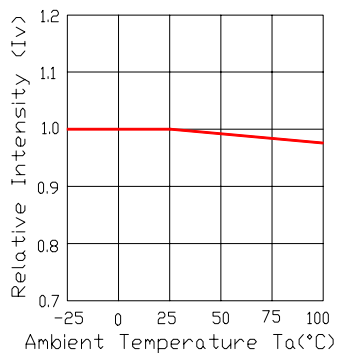
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Typical Electro-Optical Characteristic Curves

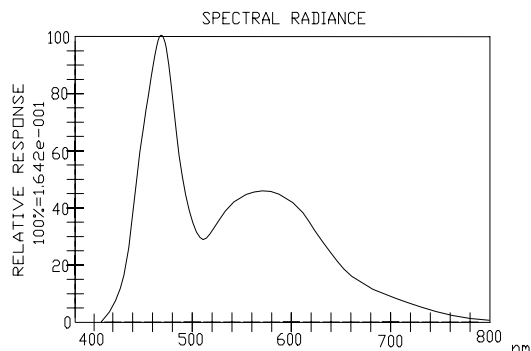
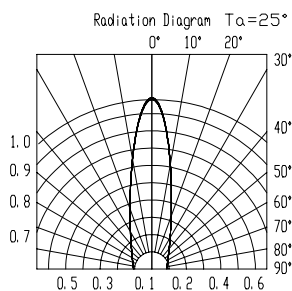
● Forward Current vs. Ambient Temperature ● Forward Voltage vs. Ambient Temperature



● Relative Intensity vs. Ambient Temperature ● Forward Current vs. Forward Voltage



● Directivity Radiation Angle: 27 degree (Typ.) ● Luminous Spectrum (Ta=25°C)





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■ Reliability test items and conditions:

NO.	Item	Test Condition	Test Hours/ Cycle	Sample Size	Ac/ Re
1	Room Temperature DC Operating Life	Ta=25°C, I _F =20mA	1000hrs	76	0/1
2	Thermal Shock	-10°C (5min)→ (10sec) →+100°C (5min)	100cycles	76	0/1
3	Temperature Cycle	-40°C (30min)→ (5min) →+85°C (30min)	100cycles	76	0/1
4	High Temp./ High Humi. Test	85°C/85%RH	1000hrs	76	0/1
5	High Temperature Storage	Ta=100°C	1000hrs	76	0/1
6	Low Temperature Storage	Ta=-40°C	1000hrs	76	0/1
7	Solder Heat	260°C± 5°C	5seconds	76	0/1