

PRELIMINARY SPEC



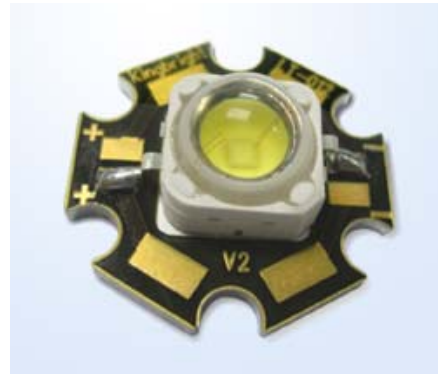
ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

Part Number: KAD1-9090QW10ZS-STAR

White

Features

- Super high flux output and high luminance.
- Designed for high current operation.
- Low thermal resistance.
- Low voltage DC operated.
- Superior ESD protection.
- Not reflow compatible.
- The component is internally protected with silicone gel.
- RoHS compliant.



Application Note

Static electricity and surge damage the LEDs.

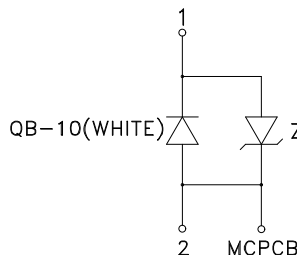
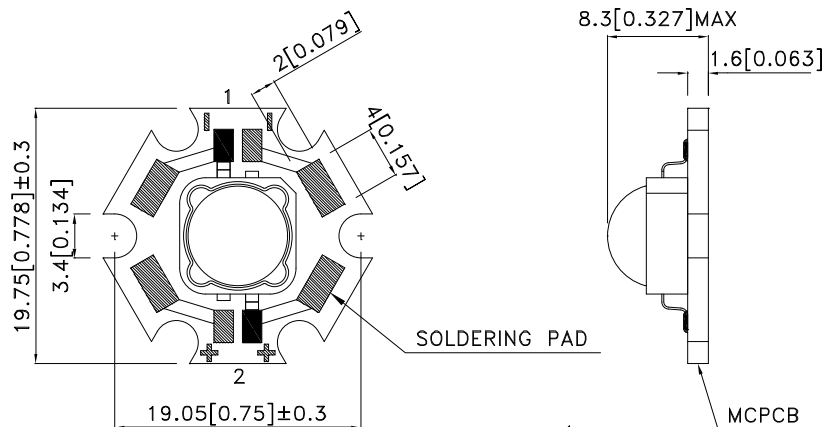
It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Applications

- traffic signaling.
- backlighting (illuminated advertising , general lighting).
- interior and exterior automotive lighting.
- substitution of micro incandescent lamps.
- portable light source (e.g. bicycle flashlight).
- signal and symbol luminaire for orientation.
- marker lights (e.g. steps, exit ways, etc).
- decorative and entertainment lighting.
- indoor and outdoor commercial and residential architectural lighting.

Package Dimensions



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ±0.25(0.01") unless otherwise noted.
3. Specifications are subject to change without notice.



Selection Guide

Part No.	Dice	Lens Type	luminous Intensity [2] Iv(cd)@ 350mA		Φv (lm) [2] @ 350mA		Viewing Angle [1]
			Min.	Typ.	Min.	Typ.	2θ1/2
KAD1-9090QW10ZS-STAR	WHITE (InGaAlN)	WATER CLEAR	16	22	65	75	100°

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity / luminous flux: +/-15%.

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit
Power dissipation	Pt	1.25	W
Junction temperature	TJ	110	°C
Operating Temperature	Top	-40 To +100	°C
Storage Temperature	Tstg	-40 To +100	°C
DC Forward Current [1]	IF	350	mA
Peak Forward Current [2]	IFM	500	mA
Thermal resistance [1]	Rth j-slug	9	°C/W
Electrostatic Discharge Threshold (HBM)		8000	V

Notes:

1. Results from mounting on MCPCB.
2. 1/10 Duty Cycle, 0.1ms Pulse Width.

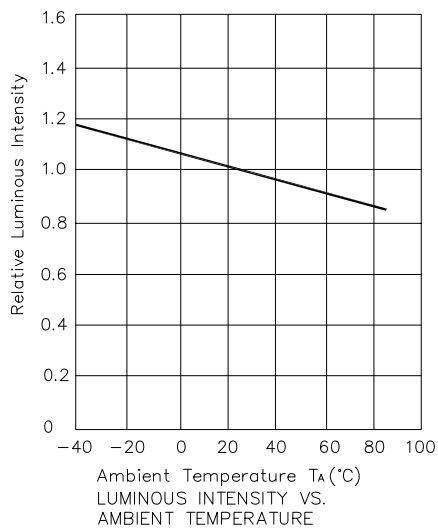
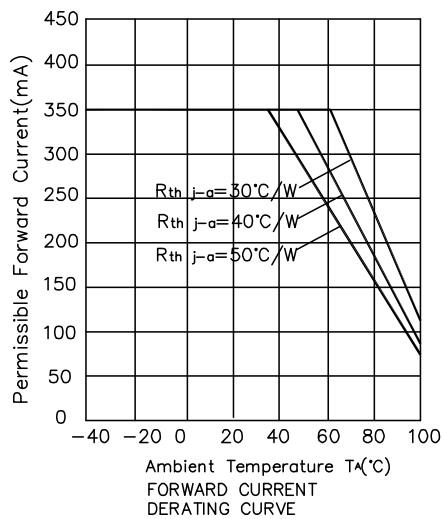
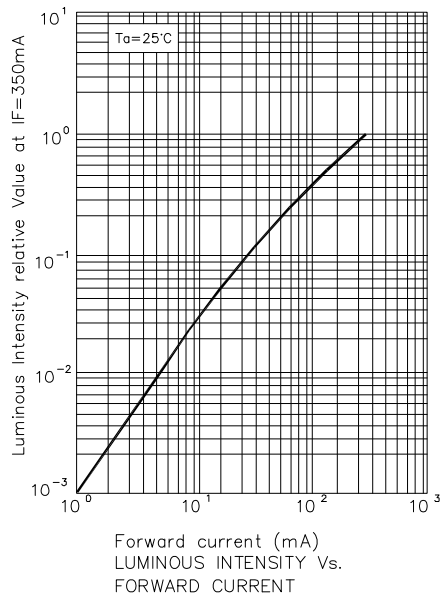
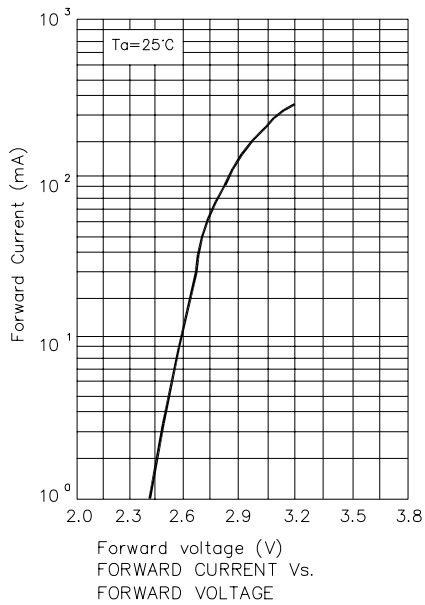
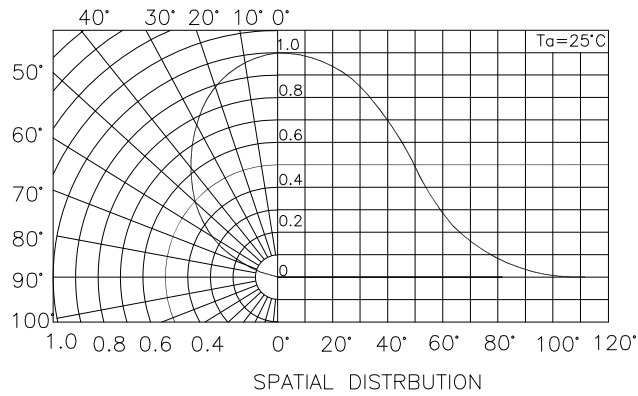
Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Value	Unit
Chromaticity coordinate x acc.to CIE1931 IF=350mA [Typ.]	X [1]	0.31	-
Chromaticity coordinate y acc.to CIE1931 IF=350mA [Typ.]	Y [1]	0.31	-
Forward Voltage IF=350mA [Min.]	VF [2]	2.8	V
Forward Voltage IF=350mA [Typ.]		3.2	
Forward Voltage IF=350mA [Max.]		3.6	
Temperature coefficient of x IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TCx	0.15	10 ⁻³ /°C
Temperature coefficient of y IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TCy	0.13	10 ⁻³ /°C
Temperature coefficient of VF IF=350mA, -10°C ≤ T ≤ 100°C [Typ.]	TCv	-3.2	mV/°C

Notes:

1. Measurement tolerance of the chromaticity coordinates is ±0.02.
2. Forward Voltage: +/-0.1V.

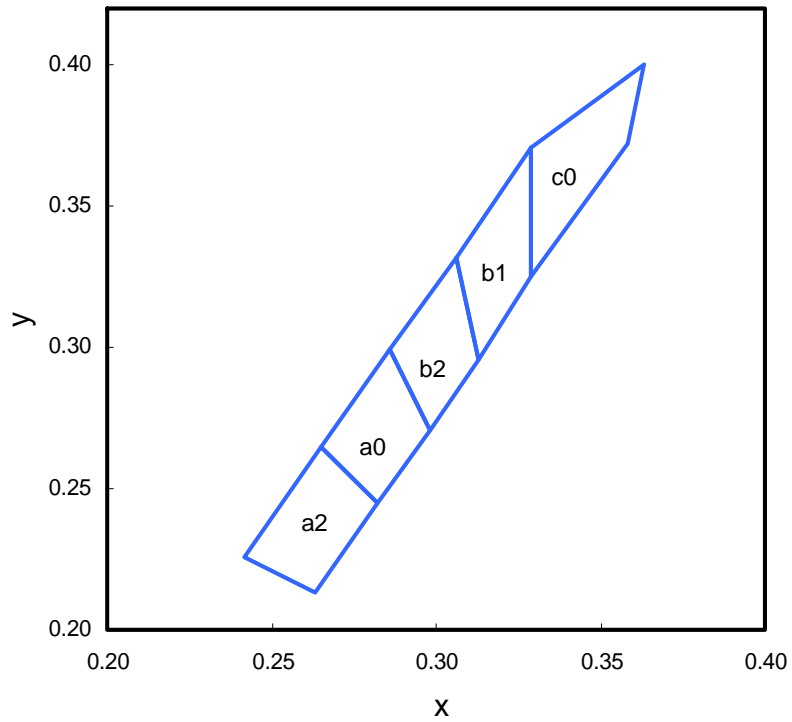
KAD1-9090QW10ZS-STAR



Color Codes

KAD1-9090QW10ZS-STAR

White CIE



Rank a2				
X	0.263	0.282	0.265	0.242
Y	0.213	0.245	0.265	0.226

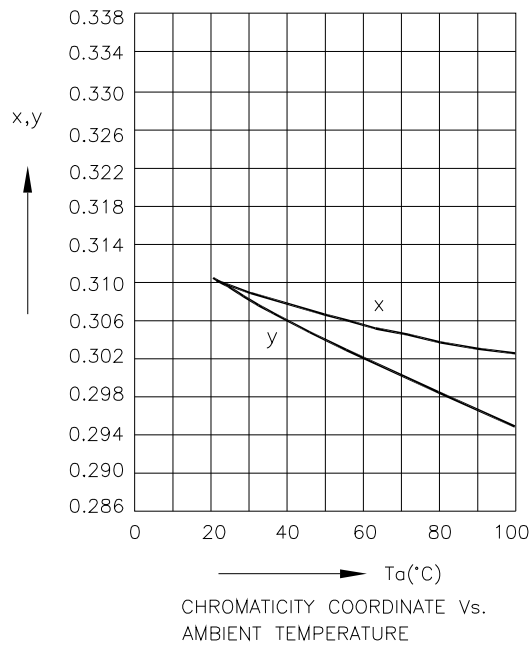
Rank a0				
X	0.282	0.298	0.286	0.265
Y	0.245	0.271	0.299	0.265

Rank b2				
X	0.298	0.313	0.306	0.286
Y	0.271	0.296	0.332	0.299

Rank b1				
X	0.313	0.329	0.329	0.306
Y	0.296	0.325	0.371	0.332

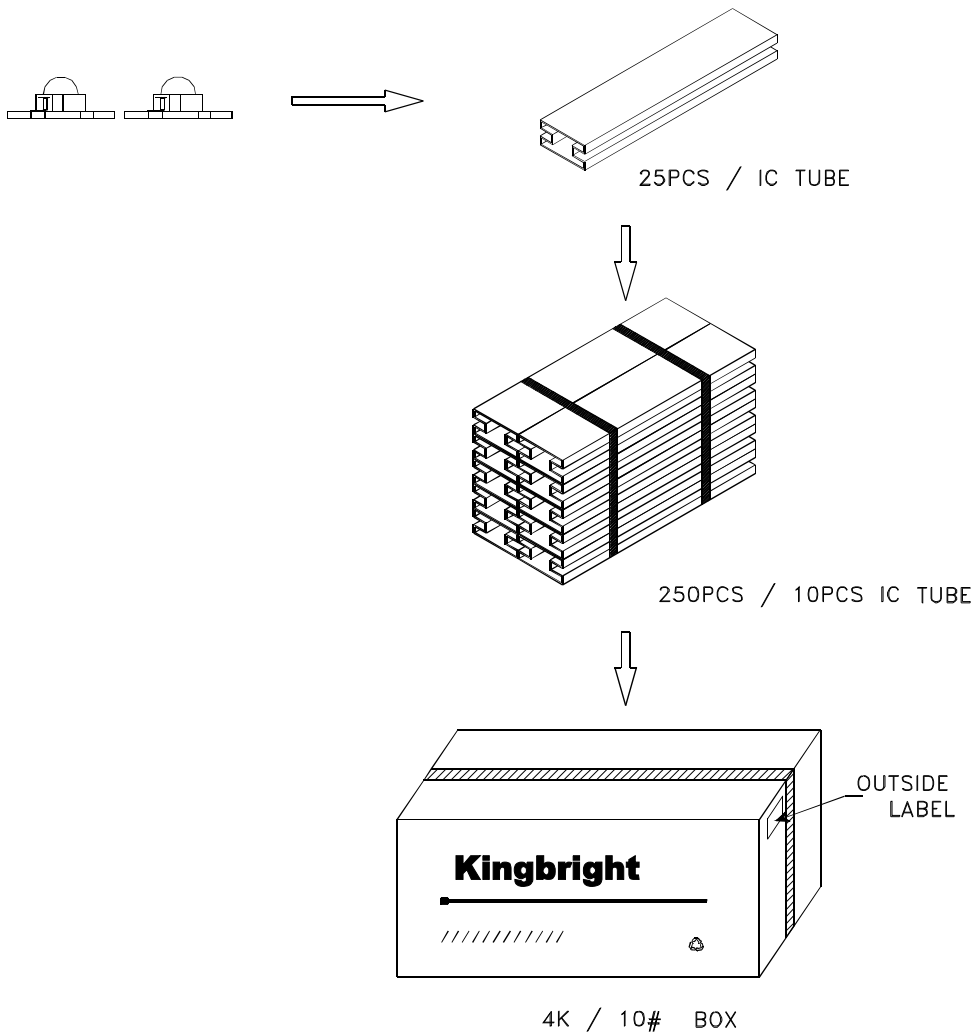
Rank c0				
X	0.329	0.358	0.363	0.329
Y	0.325	0.372	0.400	0.371


KAD1-9090QW10ZS-STAR



PACKING & LABEL SPECIFICATIONS

KAD1-9090QW10ZS-STAR



<h1>Kingbright</h1>	
P/NO: KAD1-9090xxx-STAR	
QTY: 250 pcs	Q.C. Q C XX XX. XXXX PASSED
S/N: XXXX	
CODE: XX	
LOT NO:  XXXXXXXXXXXXXXXXXXXXXXXXXX	
RoHS Compliant	