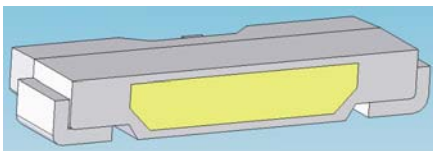
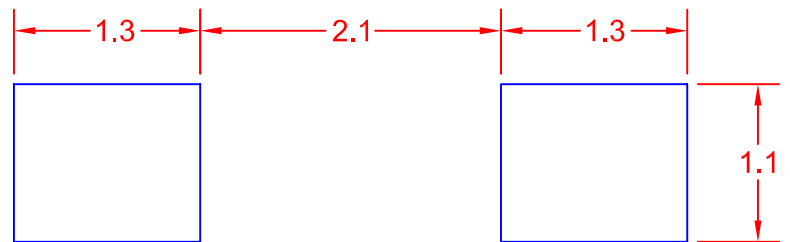
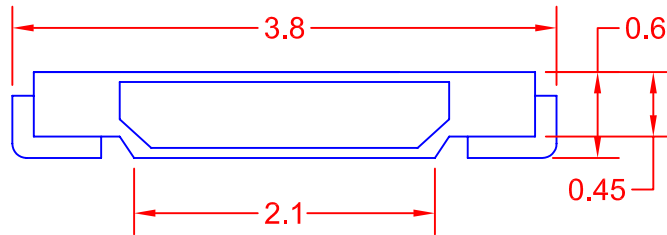
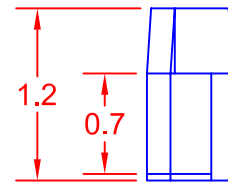
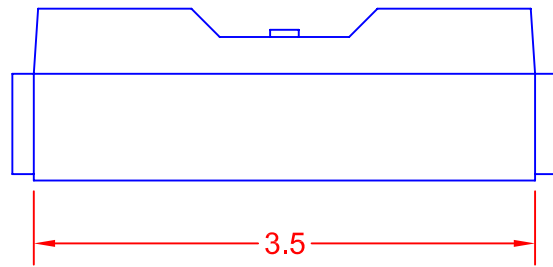




# SURFACE MOUNT WHITE LED SIDE VIEW 3.8 X 1.2 X 0.6mm

## FEATURES

- SIDE VIEW WHITE
- LED (3.8 x 1.2 x 0.6mm)
- WHITE SMT PACKAGE
- LEAD FRAME PACKAGE WITH INDIVIDUAL 2-PINS
- InGaN WITH YELLOW PHOSPHOR
- WIDE VIEW ANGLE (X: 120°/Y: 120°)
- IR REFLOW SOLDERING
- ESD PROTECTION



JKL PART NO.: ZSM-S3806-W

RECOMMENDED SOLDERING PAD LAYOUT





## SURFACE MOUNT WHITE LED SIDE VIEW 3.8 X 1.2 X 0.6mm

### SPECIFICATIONS

ABSOLUTE MAXIMUM RATINGS (TA = 25°C)  
(LED die)

ITEM	SYMBOL	ABSOLUTE MAXIMUM RATING	UNIT
Forward Current	$I_F$	30	mA
Pulse Forward Current*	$I_{FP}$	100	mA
Reverse Voltage	$V_R$	5	V
Power Dissipation	$P_D$	120	mW
Operating Temperature	$T_{opr}$	-30 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +100	°C
Soldering Temperature	$T_{sld}$	Reflow Soldering: 260° C for 10 secs Hand Soldering: 350° C for 3 secs	

(Zener diode)

ITEM	SYMBOL	CONDITION	MIN	MAX	UNIT
Reverse Leakage Current	$I_R$	$V_R = 5V$	---	0.5	uA
Zener Voltage	$V_Z$	$I_Z = 5mA$	5.8	6.8	V
Forward Voltage	$V_F$	$I_F = 20mA$	---	1.2	V

\* $I_{FP}$  Conditions: Pulse Width  $\leq 10msec$ , and duty  $\leq 1/10$

ELECTRICAL & OPTICAL OPERATING CHARACTERISTICS (TA = 25°C)

ITEM	SYMBOL	CONDITION	MIN	MAX	UNIT
Forward Voltage	$V_F$	$I_F = 20mA$	2.8	3.6	Volt
Luminous Intensity	$L_V$	$I_F = 20mA$	1000	1400	mcd
Color Coordinates	x, y	$I_F = 20mA$	.267	.304	x
			.260	.290	y
Viewing Angle	---	$I_F = 20mA$	120° x	120° y	Degrees



## SURFACE MOUNT WHITE LED SIDE VIEW 3.8 X 1.2 X 0.6mm

		K1			
x		0.2890	0.2835	0.2788	0.2843
y		0.2900	0.2800	0.2800	0.2900
		K3			
x		0.2780	0.2725	0.2673	0.2730
y		0.2700	0.2600	0.2600	0.2700
		W2			
x		0.2886	0.2831	0.2780	0.2835
y		0.2800	0.2700	0.2700	0.2800
		X1			
x		0.2993	0.2938	0.2886	0.2941
y		0.2900	0.2800	0.2800	0.2900
		X3			
x		0.2883	0.2829	0.2778	0.2831
y		0.2700	0.2600	0.2600	0.2700
		Y2			
x		0.2987	0.2932	0.2883	0.2938
y		0.2800	0.2700	0.2700	0.2800

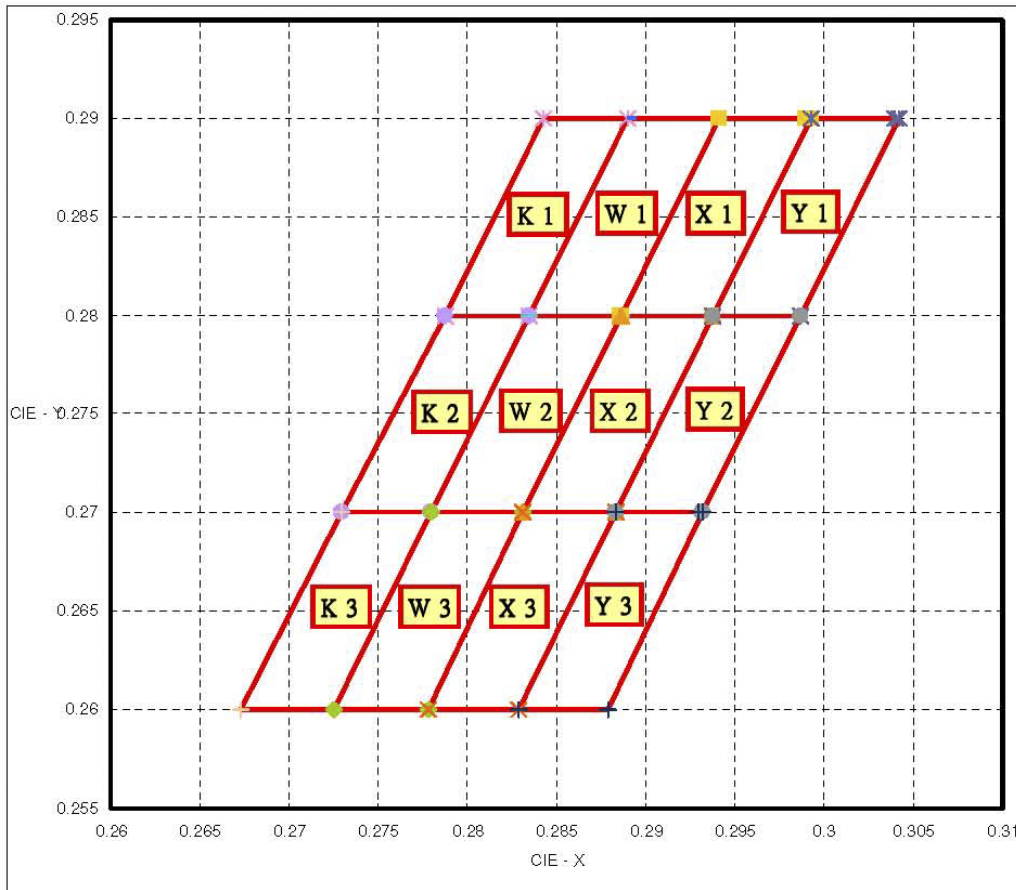
		K2			
x		0.2835	0.2780	0.2730	0.2788
y		0.2800	0.2700	0.2700	0.2800
		W1			
x		0.2941	0.2886	0.2835	0.2890
y		0.2900	0.2800	0.2800	0.2900
		W3			
x		0.2831	0.2778	0.2725	0.2780
y		0.2700	0.2600	0.2600	0.2700
		X2			
x		0.2938	0.2883	0.2831	0.2886
y		0.2800	0.2700	0.2700	0.2800
		Y1			
x		0.3042	0.2987	0.2938	0.2993
y		0.2900	0.2800	0.2800	0.2900
		Y3			
x		0.2932	0.2879	0.2829	0.2883
y		0.2700	0.2600	0.2600	0.2700

### BIN RANGE OF CHROMATICITY COORDINATES

\*If color binning is required, only one color group is allowed for each chip within a reel.

Chromaticity coordinate groups are measured with an accuracy of  $\pm 0.01$ .

\*Color coordinate is derived from the CIE 1931 chromaticity.

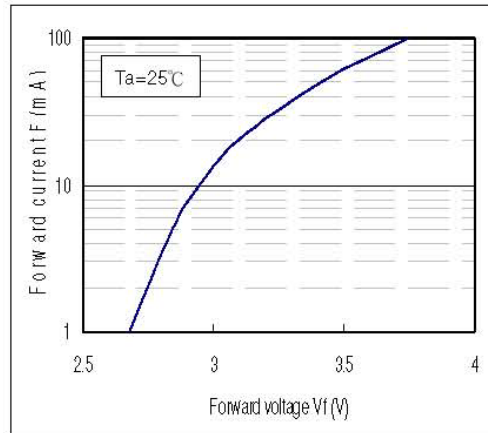




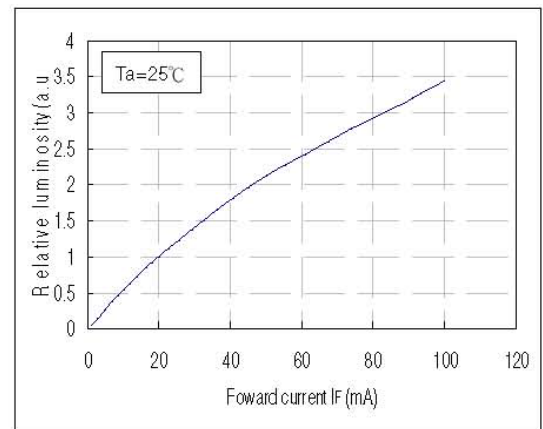
# SURFACE MOUNT WHITE LED SIDE VIEW 3.8 X 1.2 X 0.6mm

## TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES

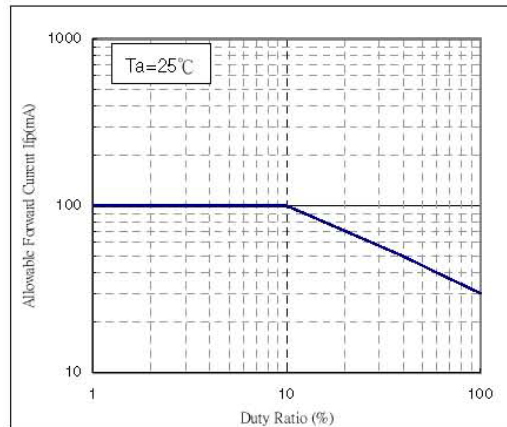
Forward voltage vs. Forward current



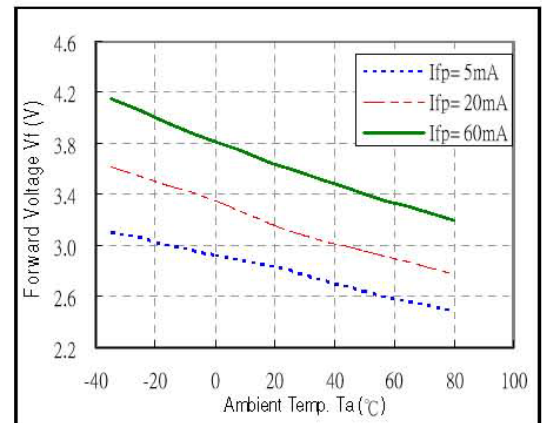
Forward current vs. Relative luminosity



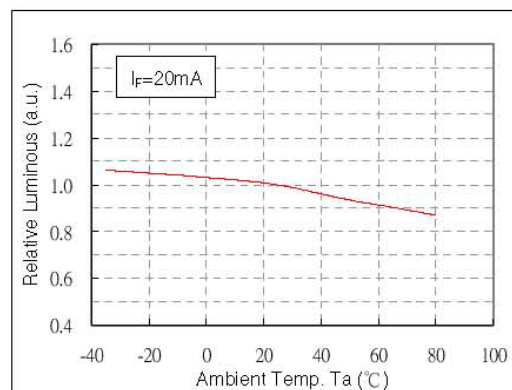
Duty ratio vs. Allowable forward current



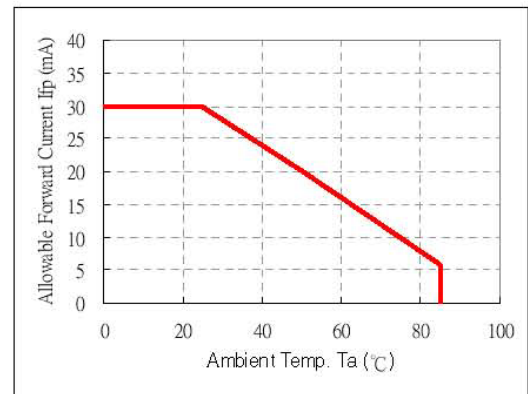
Ambient temperature vs. Forward voltage



Ambient temperature vs. Relative luminosity



Ambient temperature vs. Allowable forward current

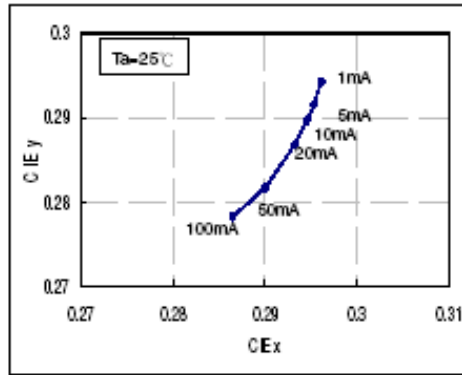




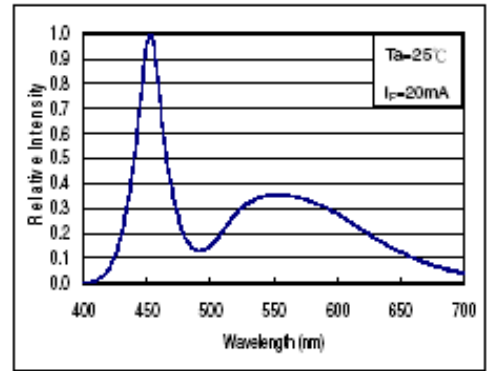
# SURFACE MOUNT WHITE LED SIDE VIEW 3.8 X 1.2 X 0.6mm

## TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES (Continued)

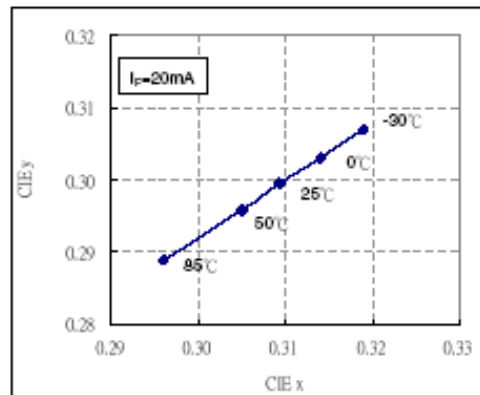
Forward current vs. Chromaticity diagram



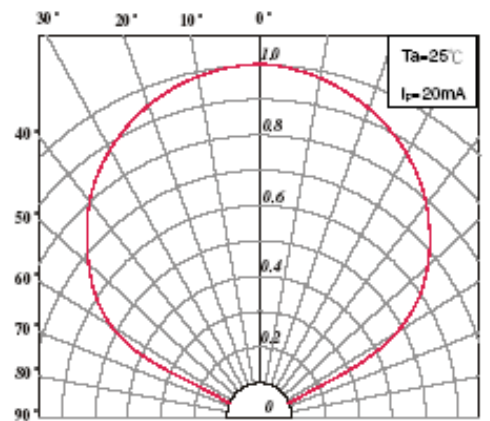
Spectrum



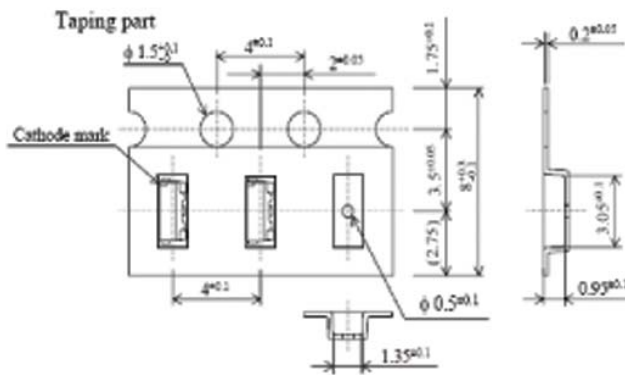
Ambient temperature vs. Chromaticity diagram



Radiation pattern



### PACKAGING: 3000 pcs/REEL



### NOTES:

1. STORE IN ORIGINAL MOISTURE PROOF PACKAGING.
2. PACKAGING SHOULD BE STORED AT 30°C OR LESS AND AT 60% RH OR LESS.
3. LED SHOULD BE SOLDERED WITHIN 168 HOURS AFTER OPENING.
4. LED'S ARE STATIC SENSITIVE DEVICES. DO NOT HANDLE WITHOUT APPROPRIATE STATIC PROTECTION.
5. CLEAN ONLY WITH ISOPROPYL ALCOHOL. DO NOT USE ULTRASONIC CLEANING.
6. **CAUTION:** DO NOT LOOK DIRECTLY INTO LIT LED. INJURY TO EYES CAN OCCUR.