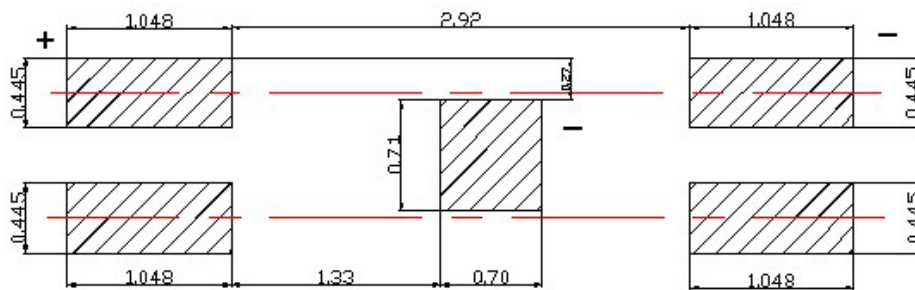
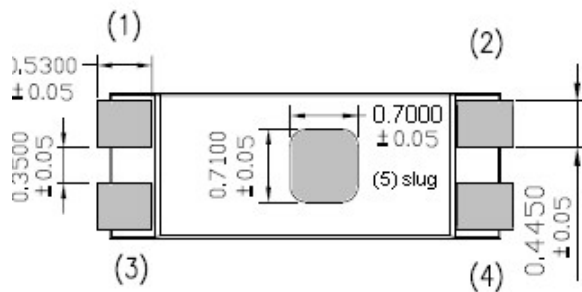
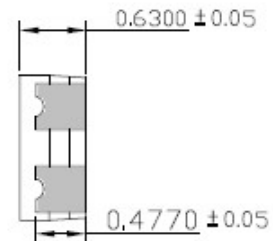
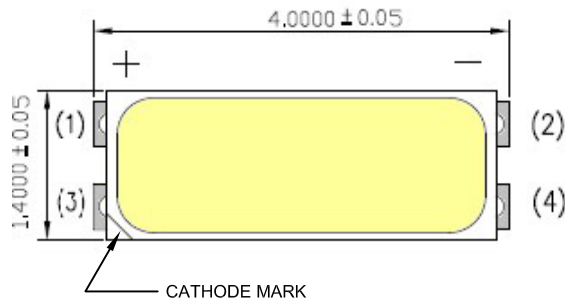


SURFACE MOUNT WHITE LED TOP VIEW 4.0 X 1.4 X 0.63mm

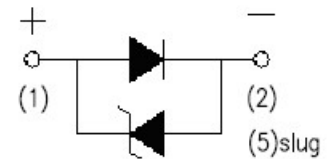
FEATURES

- TOP VIEW WHITE
- LED (4.0 x 1.4 x 0.63mm)
- WHITE SMT PACKAGE
- LEAD FRAME PACKAGE WITH INDIVIDUAL 4-PINS
- GaN-BASED LED WITH YELLOW PHOSPHOR
- WIDE VIEW ANGLE (X: 120°/Y: 120°)
- IR REFLOW SOLDERING
- ESD PROTECTION
- Pb FREE

DIMENSIONS

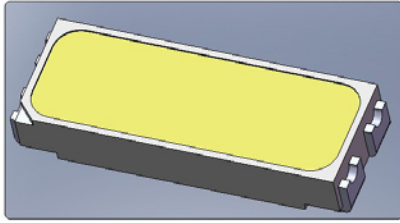


RECOMMENDED SOLDERING PAD



JKL PART NO.: ZSM-T4014-WH-01





SURFACE MOUNT WHITE LED TOP VIEW 4.0 X 1.4 X 0.63mm

SPECIFICATIONS

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

ITEM	SYMBOL	ABSOLUTE MAXIMUM RATING	UNIT
Forward Current	I_F	80	mA
Reverse Voltage	V_R	5	V
Power Dissipation	P_D	280	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	$I_Z = 5mA$	7	10	V
Forward Voltage	V_F	$I_F = 20mA$	---	1.2	V

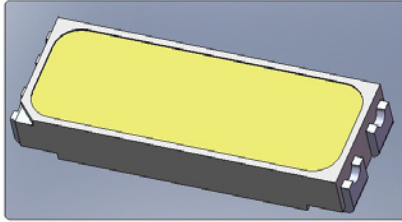
* I_{FP} Conditions: Pulse Width $\leq 10msec$, and duty $\leq 1/10$

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

ITEM	SYMBOL	CONDITION	MIN	MAX	UNIT
Forward Voltage	I_V	$I_F = 60mA$	2.9	3.5	Volts
Luminous Intensity	V_F	$I_F = 60mA$	4490	6390	mcd

TABLE OF INTENSITY RANKS

RANK	LUMINOUS INTENSITY (mcd)	LUMINOUS FLUX (lm)
Rank G21	4490-4830	13-14
Rank G22	4830-5180	14-15
Rank H11	5180-5520	15-16
Rank H12	5520-5870	16-17
Rank H21	5870-6390	17-18.5



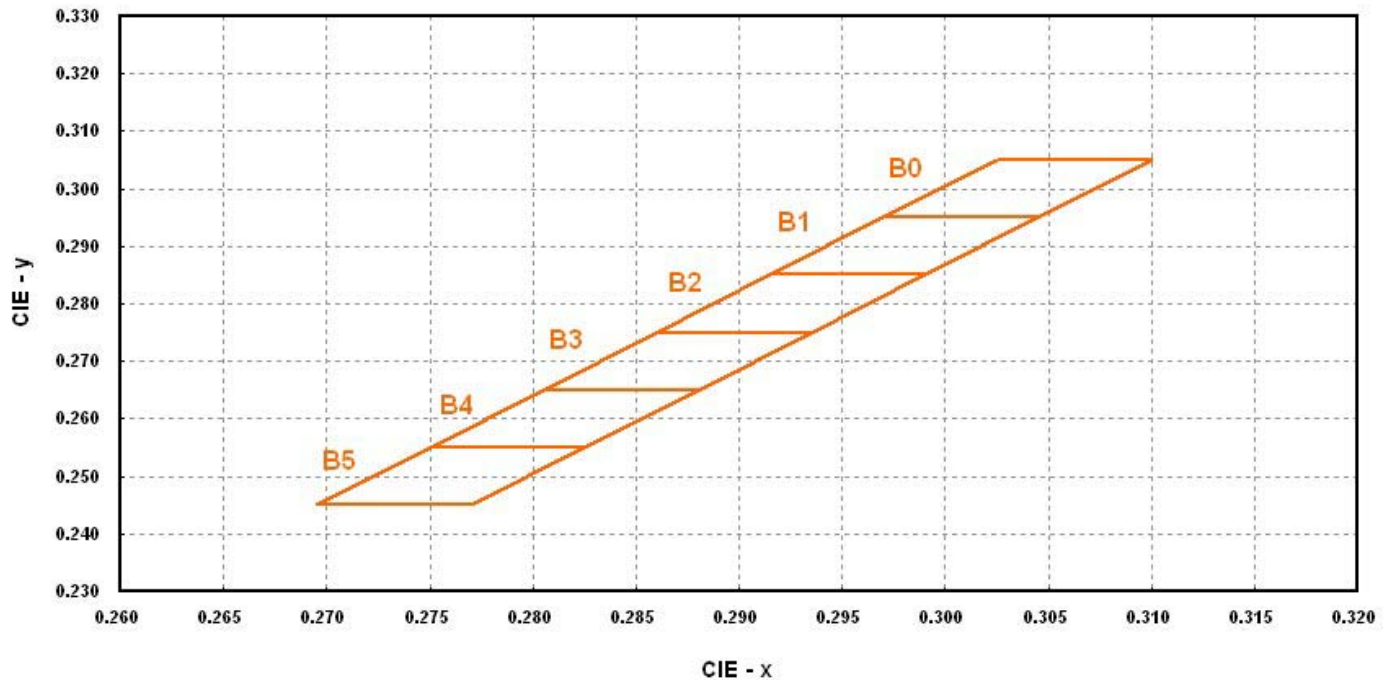
SURFACE MOUNT WHITE LED TOP VIEW 4.0 X 1.4 X 0.63mm

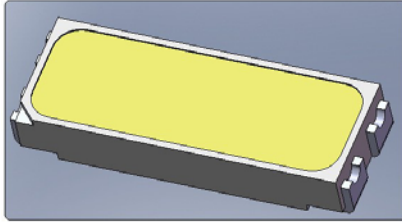
BIN RANGE OF CHROMATICITY COORDINATES

	CIE-X	CIE-Y
B0	0.3100	0.3050
	0.3045	0.2950
	0.2970	0.2950
	0.3025	0.3050
	0.3100	0.3050
B1	0.3045	0.2950
	0.2990	0.2850
	0.2915	0.2850
	0.2970	0.2950
	0.3045	0.2950
B2	0.2990	0.2850
	0.2935	0.2750
	0.2860	0.2750
	0.2915	0.2850
	0.2990	0.2850

	CIE-X	CIE-Y
B3	0.2935	0.2750
	0.2880	0.2650
	0.2805	0.2650
	0.2860	0.2750
	0.2935	0.2750
B4	0.2880	0.2650
	0.2825	0.2550
	0.2750	0.2550
	0.2805	0.2650
	0.2880	0.2650
B5	0.2825	0.2550
	0.2770	0.2450
	0.2695	0.2450
	0.2750	0.2550
	0.2825	0.2550

CHROMATICITY DIAGRAM

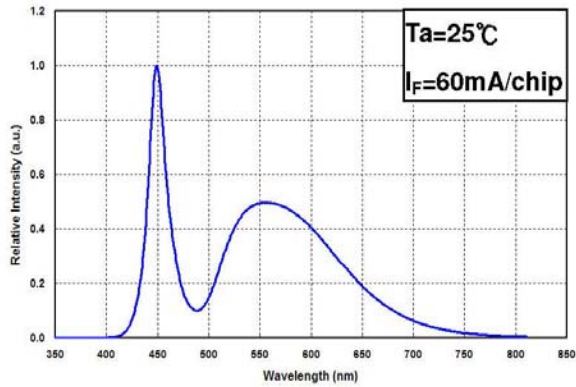




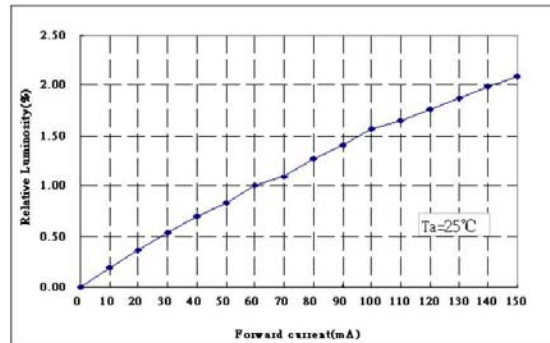
SURFACE MOUNT WHITE LED TOP VIEW 4.0 X 1.4 X 0.63mm

TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES

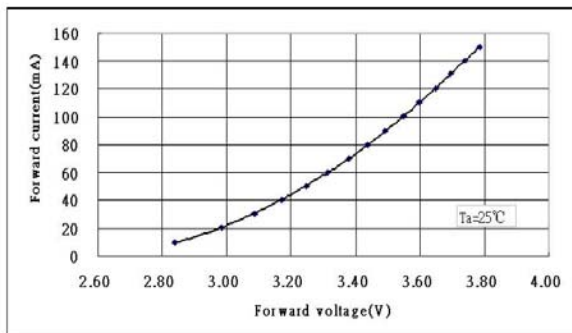
Spectrum



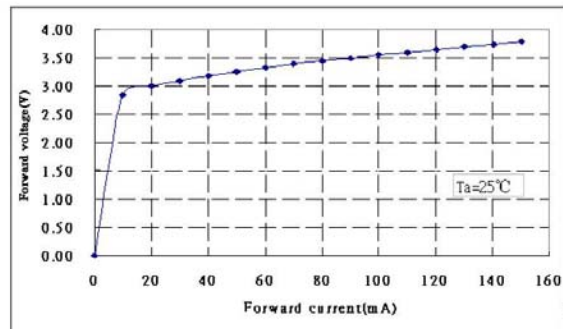
I_F vs. Relative Luminosity



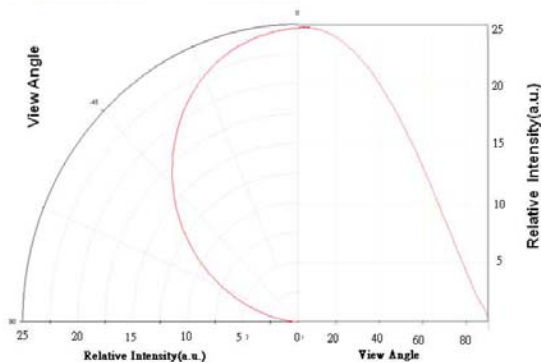
V_f - I_F

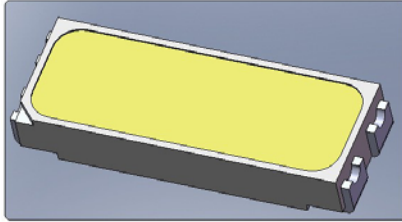


I_F - V_f



Radiation Pattern

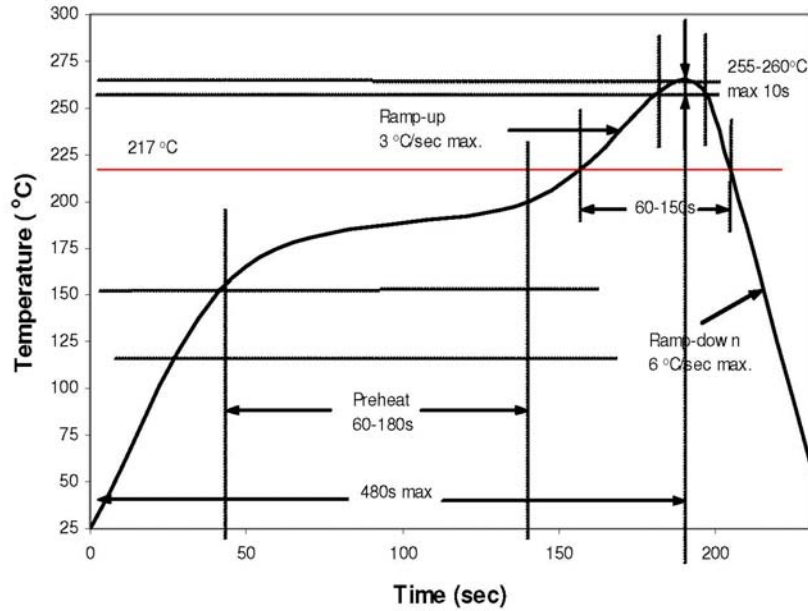




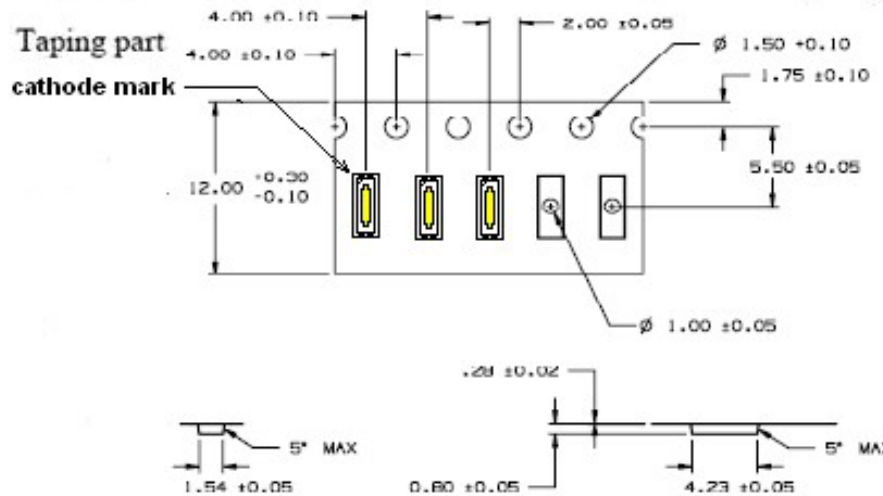
SURFACE MOUNT WHITE LED TOP VIEW 4.0 X 1.4 X 0.63mm

LEAD-FREE SOLDER

Classification Reflow Profile (JEDEC J-STD-335C)



PACKAGING: 4000 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.