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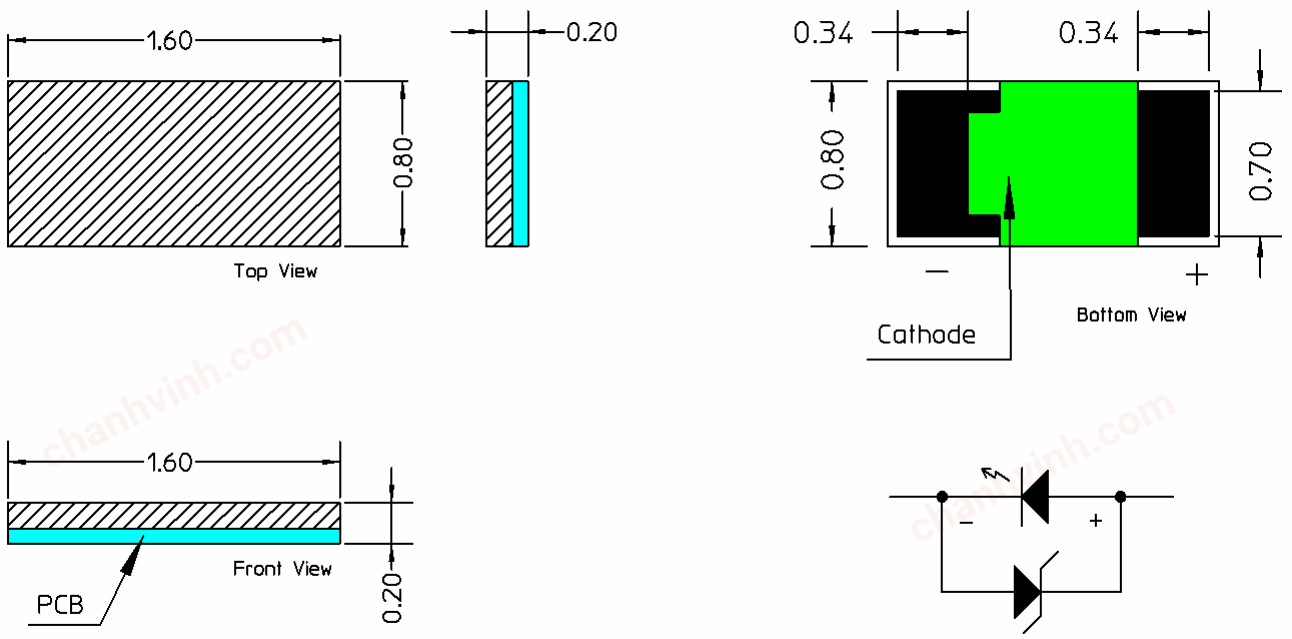
ASMT-CW20
SMT 0.2mm Top Fire ChipLED
Data Sheet

Lead (Pb) Free
RoHS 6 fully
compliant

Package Drawing



- All dimensions in millimeters.
- Tolerance is ±0.1mm unless otherwise specified.
- Electrode Ag plated

Device Selection Guide

Part Number	Color	Material
ASMT-CW20	White	InGaN

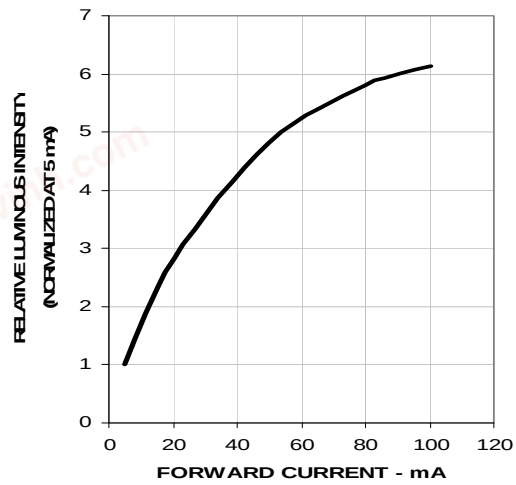
CAUTION: Class 1A static sensitive device per JESD22A114. Please observe appropriate precautions during handling and processing.

Absolute Maximum Ratings at T_A = 25°C

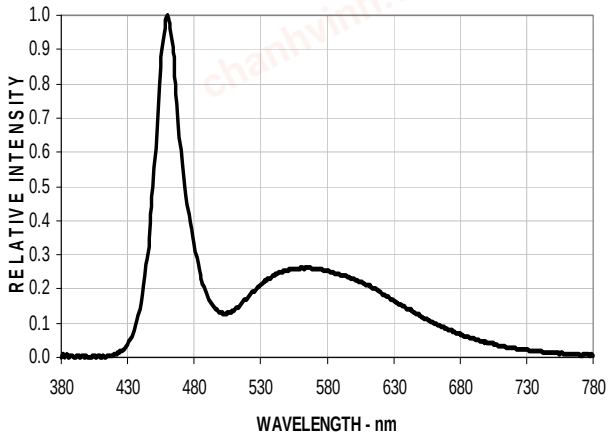
Parameter	Rating	Unit
DC Forward Current	10	mA
Power Dissipation	32	mW
Operating Temperature	-40 to +85	°C
Storage Temperature	-40 to +85	°C
Moisture Sensitivity Level (IPC/JEDEC JSTD020)	2A	-

Optical-Electrical Characteristics at T_A = 25°C

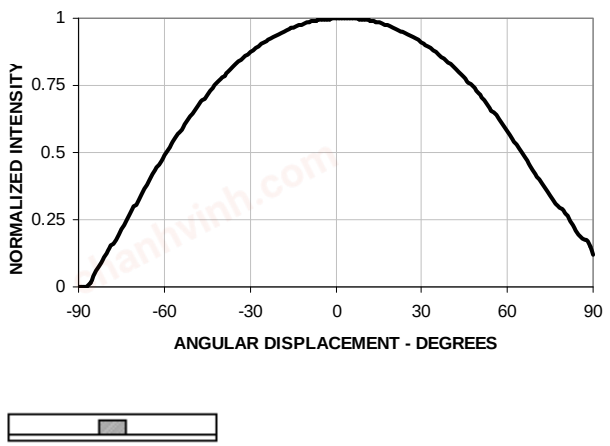
Parameter		Test condition	Rating			Unit
			Min	Typ	Max	
Luminous intensity (I_V)		I_F=5mA	112.5	180.0		mcd
Viewing angle ($2\theta_{1/2}$)		I_F=5mA		130		Deg.
Chromaticity Coordinates	x	I_F=5mA		0.28		-
	y	I_F=5mA		0.27		-
Forward voltage (V_F)		I_F=5mA	2.55	3.00	3.15	V
Reverse Voltage (V_R)		I_R=100μA		0.7		V



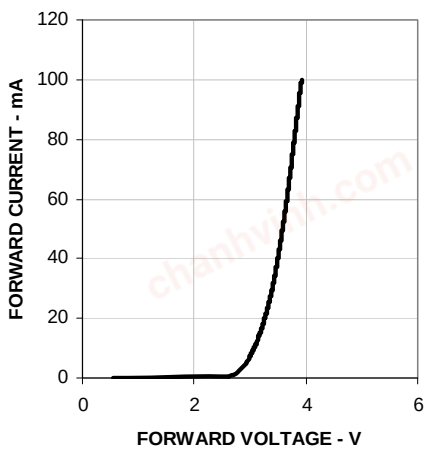
Relative Luminous Intensity vs. Forward Current



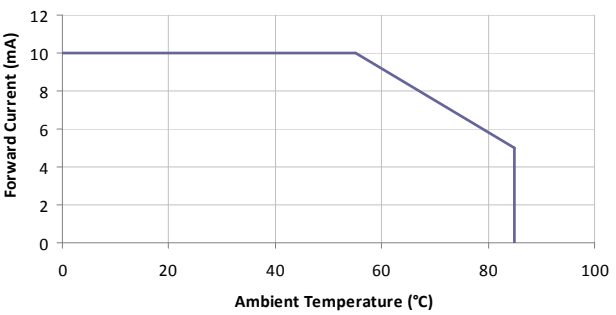
Relative Intensity vs. Wavelength



Radiation Pattern



Forward Current vs. Forward Voltage



Maximum Forward Current vs. Ambient Temperature

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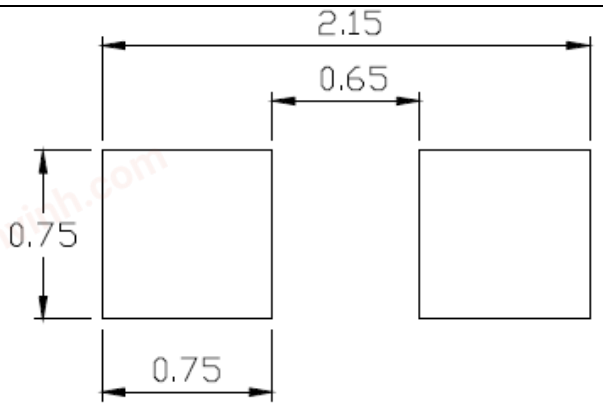
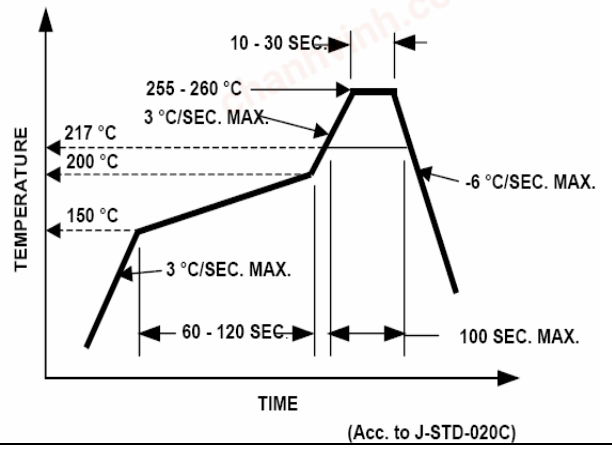
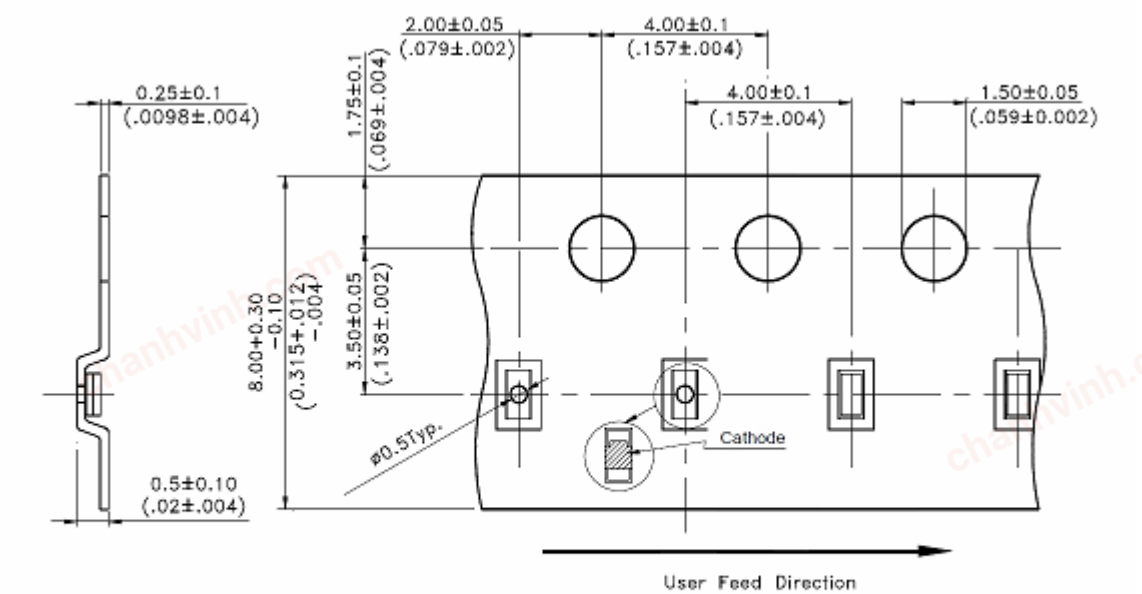


Recommended Soldering Land Pattern



Recommended Pb-Free Reflow Soldering Profile



Notes:

1. All dimensions are in millimeters (inches).

Tape Dimensions

Luminous Intensity Bin

Bin	Min (mcd)	Max (mcd)
R	112.5	180.0
S	180.0	285.0
T	285.0	450.0

Tolerance ±15%

Forward Voltage Bin

Bin	Min (V)	Max (V)
1	2.55	2.75
2	2.75	2.95
3	2.95	3.15

Tolerance ± 0.1V

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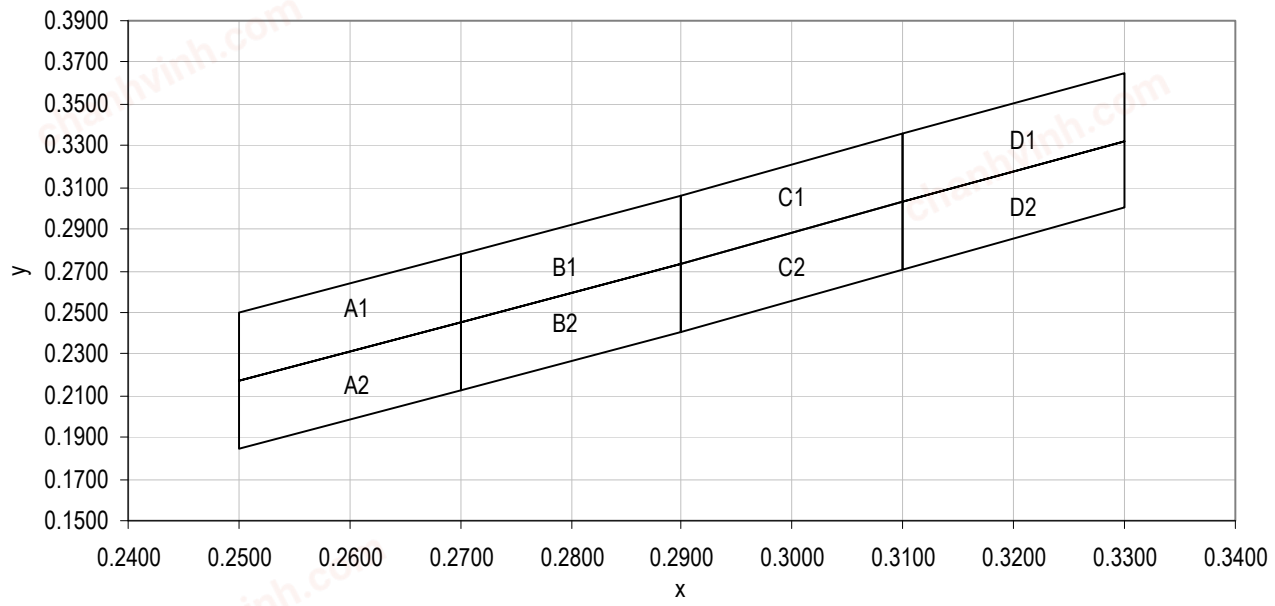
Color Bin

Bin	Chromaticity Coordinate				
A1	x	0.2700	0.2700	0.2500	0.2500
	y	0.2455	0.2780	0.2500	0.2175
A2	x	0.2700	0.2700	0.2500	0.2500
	y	0.2455	0.2130	0.1850	0.2175
B1	x	0.2700	0.2700	0.2900	0.2900
	y	0.2455	0.2780	0.3060	0.2735
B2	x	0.2700	0.2700	0.2900	0.2900
	y	0.2455	0.2130	0.2410	0.2735
C1	x	0.2900	0.3100	0.3100	0.2900
	y	0.3060	0.3355	0.3030	0.2735
C2	x	0.2900	0.3100	0.3100	0.2900
	y	0.2410	0.2705	0.3030	0.2735
D1	x	0.3100	0.3100	0.3300	0.3300
	y	0.3030	0.3355	0.3650	0.3325
D2	x	0.3100	0.3100	0.3300	0.3300
	y	0.3030	0.2705	0.3000	0.3325

Tolerance ± 0.02



Color Bin

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