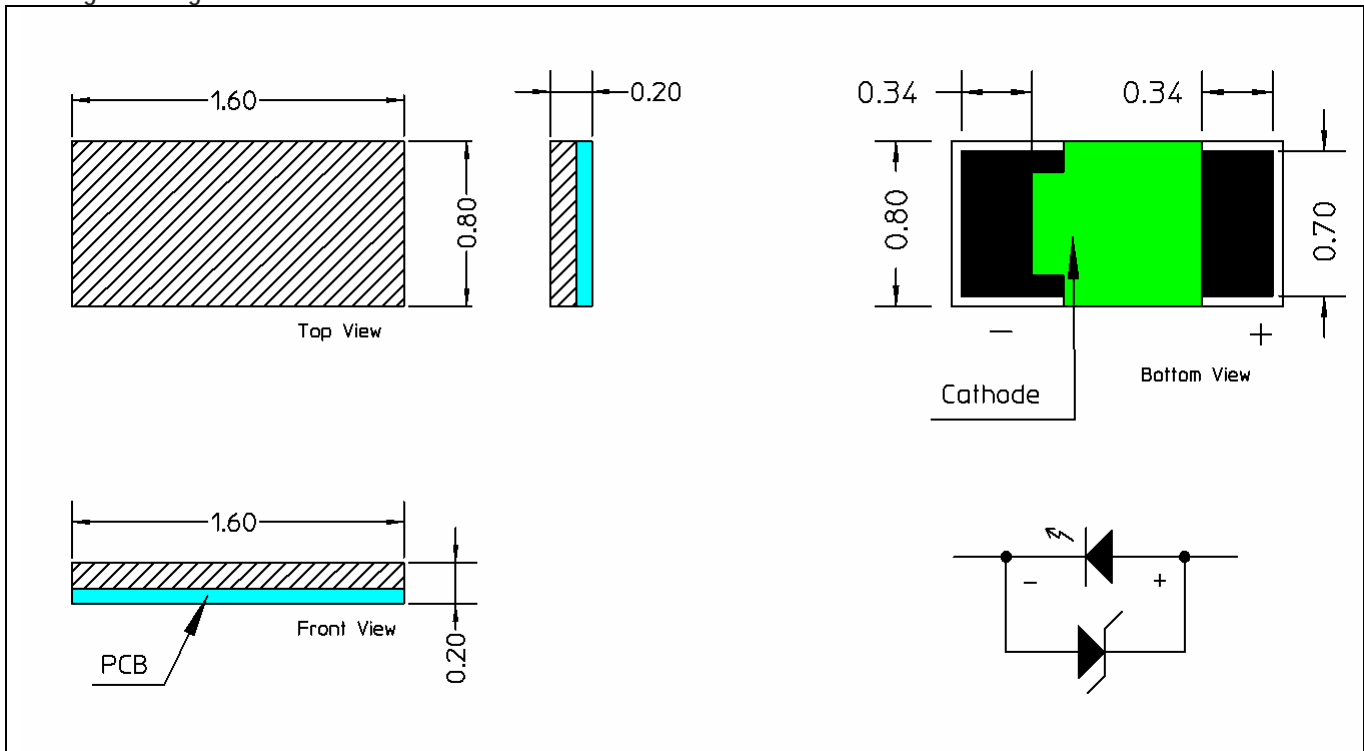


**ASMT-CW20**  
**SMT 0.2mm Top Fire ChipLED**  
**Data Sheet**



**Package Drawing**



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

**Device Selection Guide**

Part Number	Color	Material
ASMT-CW20	White	InGaN

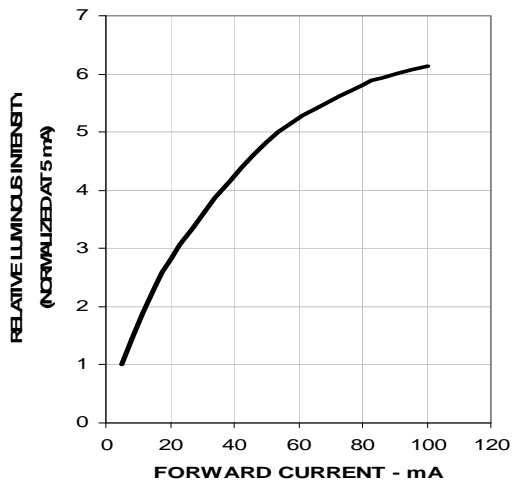
**CAUTION:** Class 1A static sensitive device per JESD22A114. Please observe appropriate precautions during handling and processing.

Absolute Maximum Ratings at  $T_A = 25^\circ\text{C}$

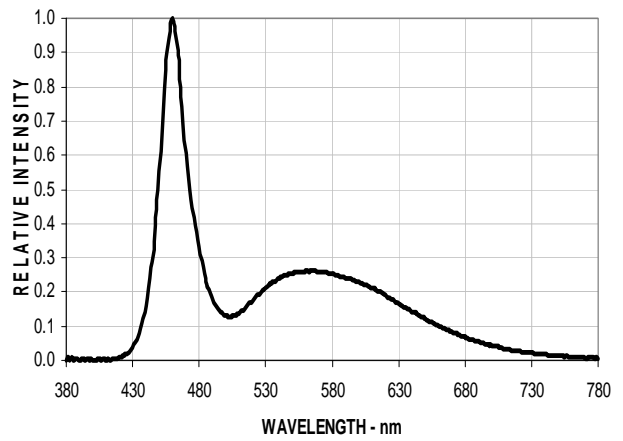
Parameter	Rating	Unit
DC Forward Current	10	mA
Power Dissipation	32	mW
Operating Temperature	-40 to +85	$^\circ\text{C}$
Storage Temperature	-40 to +85	$^\circ\text{C}$
Moisture Sensitivity Level (IPC/JEDEC JSTD020)	2A	-

Optical-Electrical Characteristics at  $T_A = 25^\circ\text{C}$

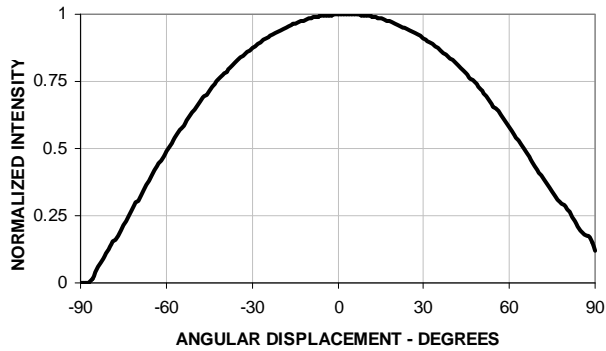
Parameter		Test condition	Rating			Unit
			Min	Typ	Max	
Luminous intensity (Iv)		$I_F=5\text{mA}$	112.5	180.0		mcd
Viewing angle ( $2\theta_{1/2}$ )		$I_F=5\text{mA}$		130		Deg.
Chromaticity Coordinates	x	$I_F=5\text{mA}$		0.28		-
	y	$I_F=5\text{mA}$		0.27		-
Forward voltage ( $V_F$ )		$I_F=5\text{mA}$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



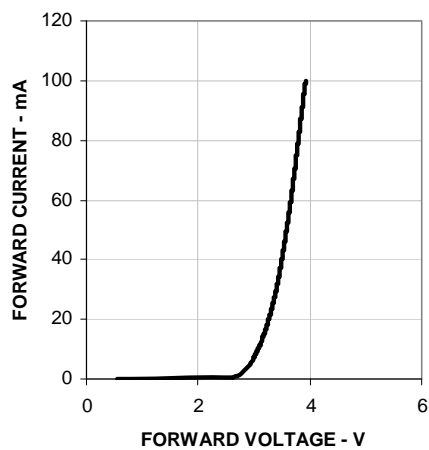
Relative Luminous Intensity vs. Forward Current



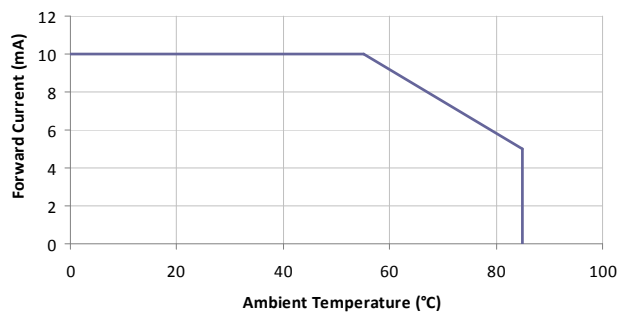
Relative Intensity vs. Wavelength



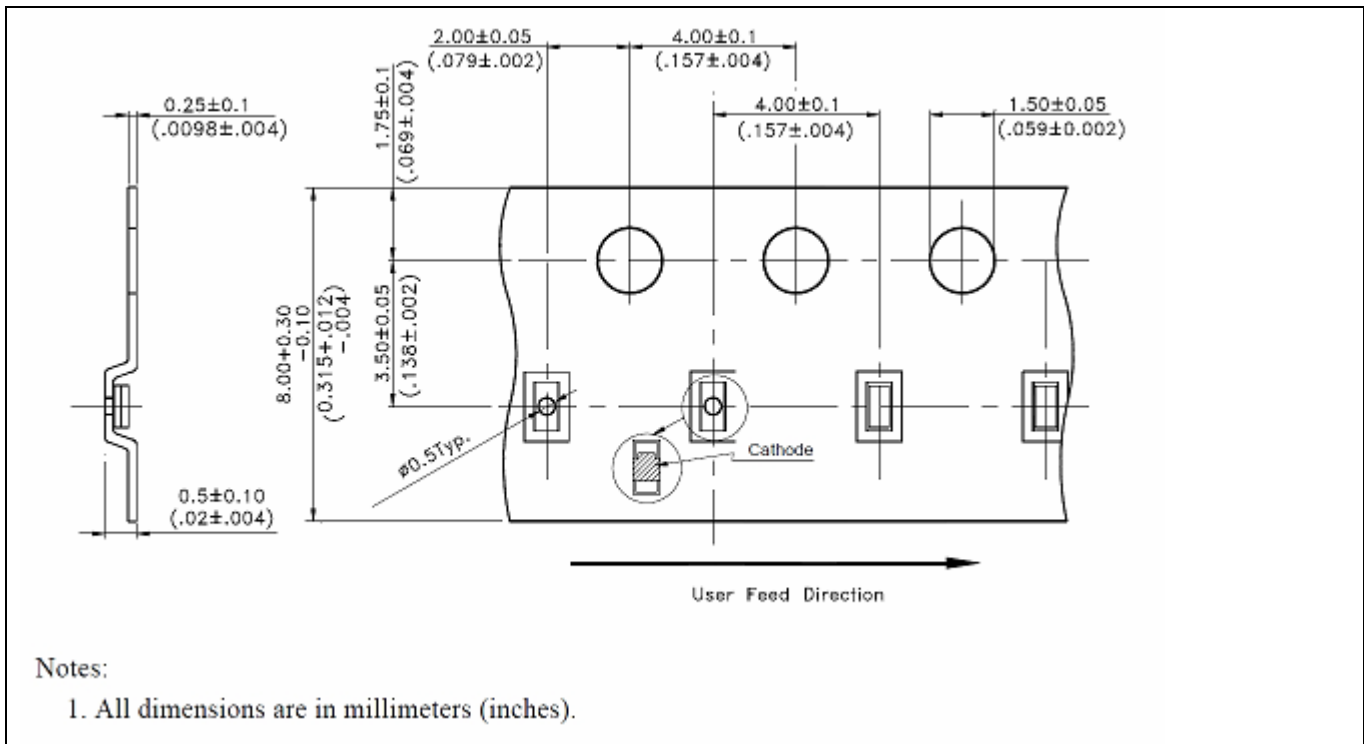
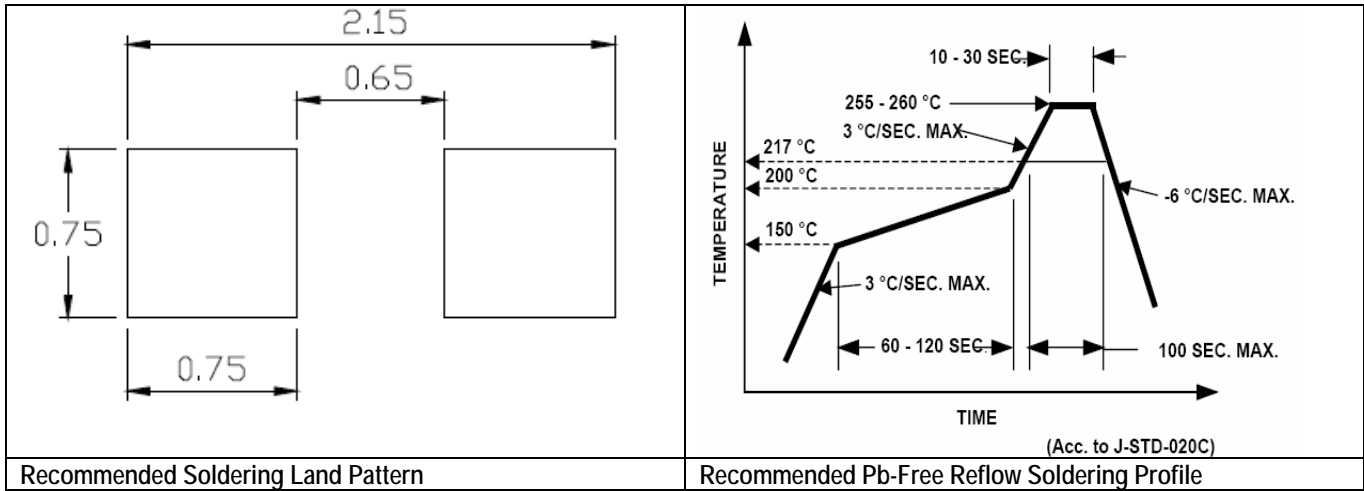
Radiation Pattern



Forward Current vs. Forward Voltage



Maximum Forward Current vs. Ambient Temperature



**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**

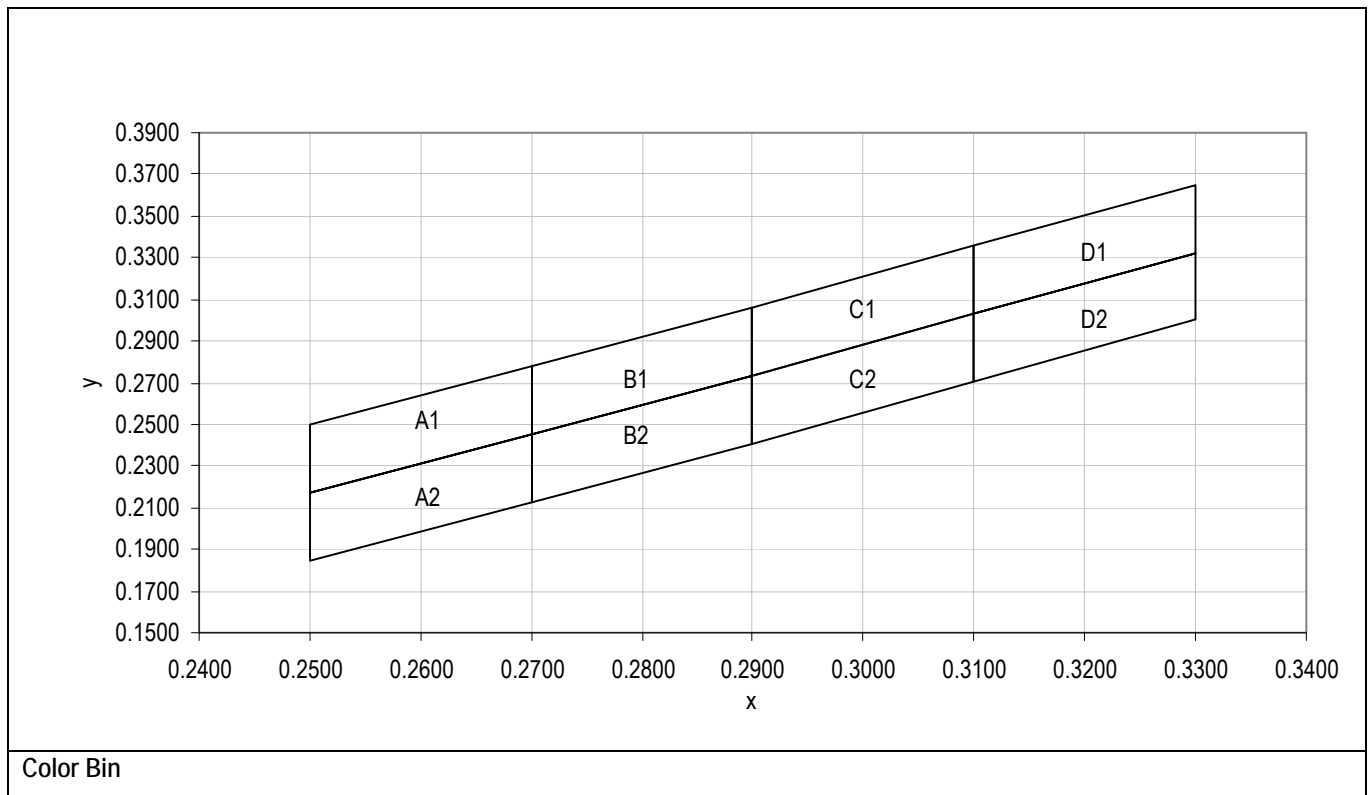
Bin	Min (V)	Max (V)
1	2.55	2.75
2	2.75	2.95
3	2.95	3.15

Tolerance ± 0.1V

Color Bin

Bin	Chromaticity Coordinate				
		x	y	z	w
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  $\pm 0.02$



Color Bin