

ASMT-CW20

SMT 0.2mm Top Fire ChipLED

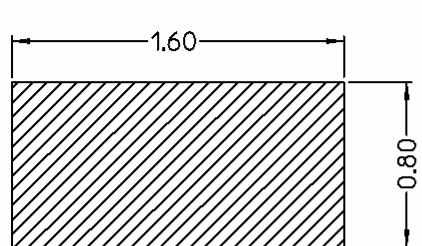
Data Sheet



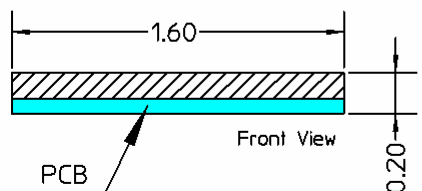
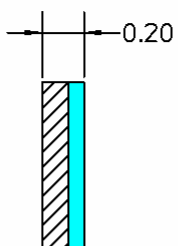
Lead (Pb) Free
RoHS 6 fully
compliant



Package Drawing

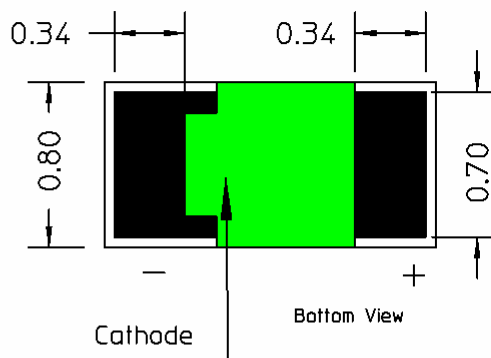


Top View

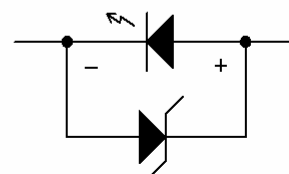


Front View

PCB



Bottom View



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

Device Selection Guide

Part Number	Color	Material
ASMT-CW20	White	InGaN

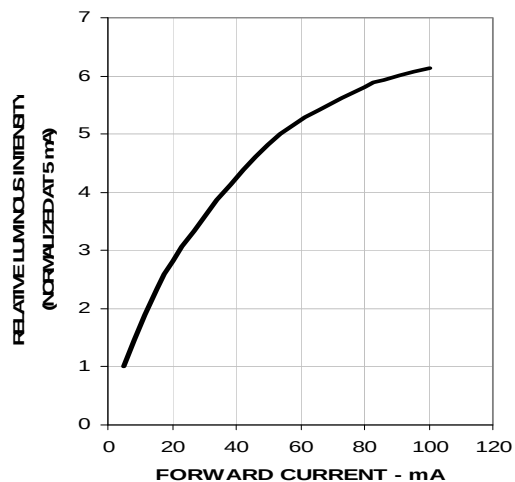
CAUTION: Class 1A static sensitive device per JESD22A114. Please observe appropriate precautions during handling and processing.

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

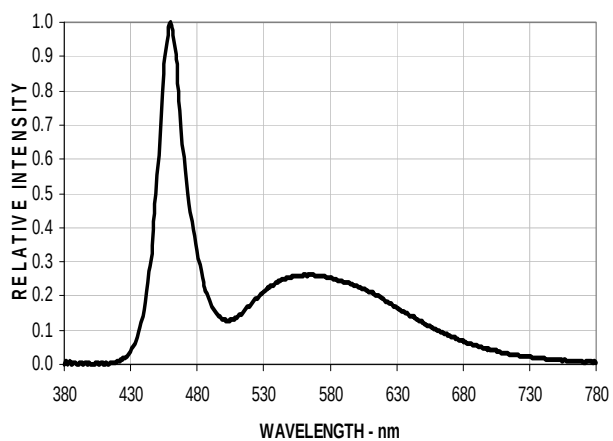
Parameter	Rating	Unit
DC Forward Current	10	mA
Power Dissipation	32	mW
Operating Temperature	-40 to +85	$^{\circ}\text{C}$
Storage Temperature	-40 to +85	$^{\circ}\text{C}$
Moisture Sensitivity Level (IPC/JEDEC JSTD020)	2A	-

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

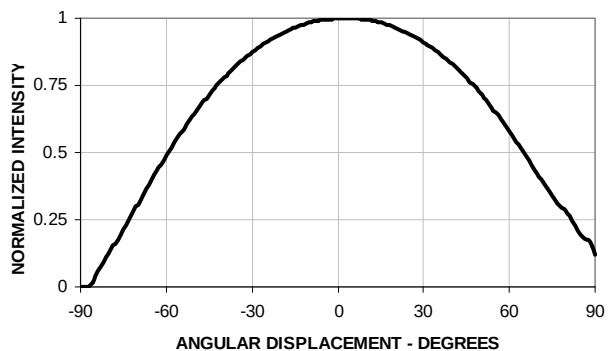
Parameter		Test condition	Rating			Unit
			Min	Typ	Max	
Luminous intensity (I_v)		$I_F=5\text{mA}$	112.5	180.0		mcd
Viewing angle ($2\theta_{1/2}$)		$I_F=5\text{mA}$		130		Deg.
Chromaticity Coordinates	x	$I_F=5\text{mA}$		0.28		-
	y	$I_F=5\text{mA}$		0.27		-
Forward voltage (V_F)		$I_F=5\text{mA}$	2.55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



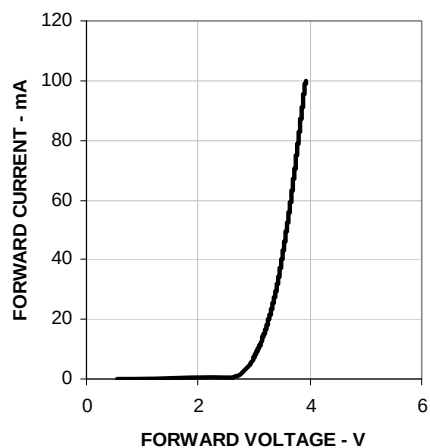
Relative Luminous Intensity vs. Forward Current



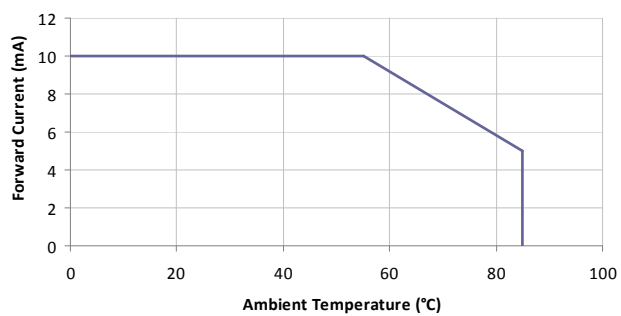
Relative Intensity vs. Wavelength



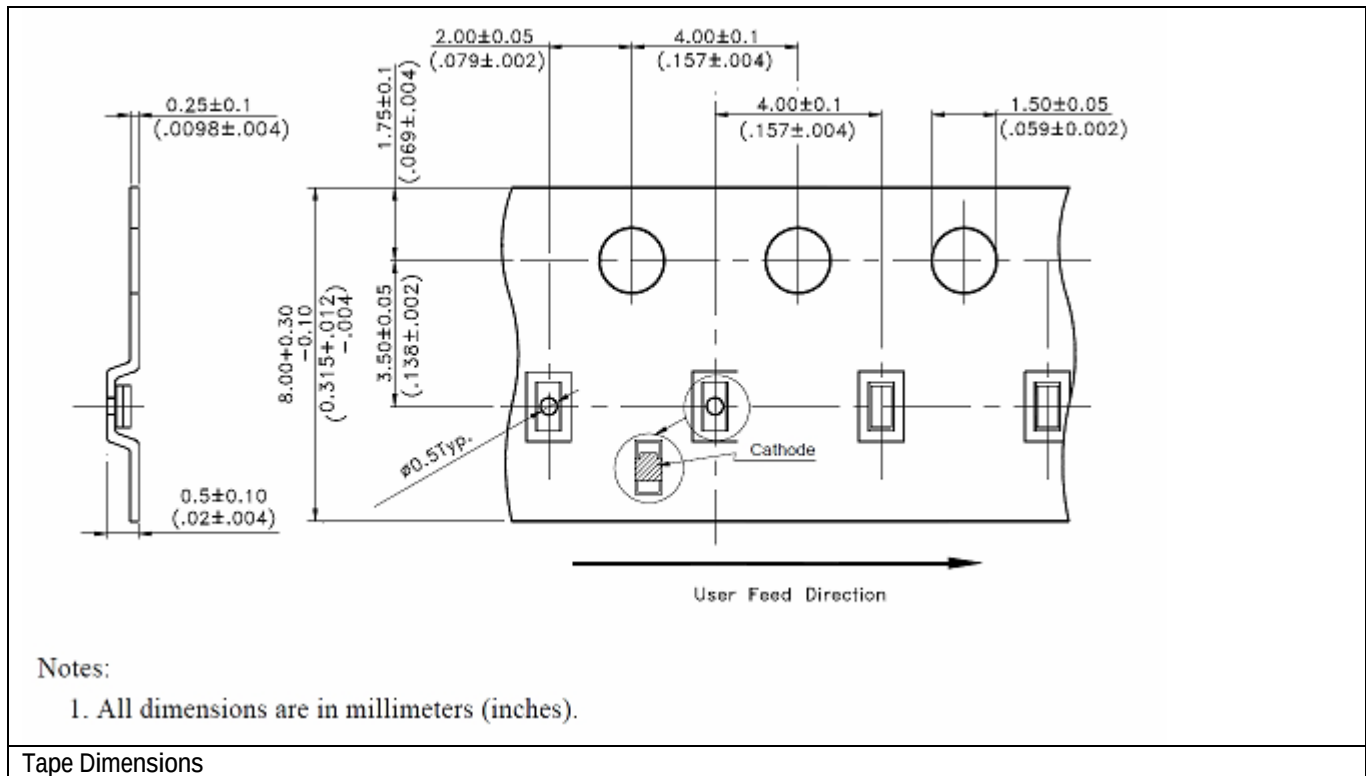
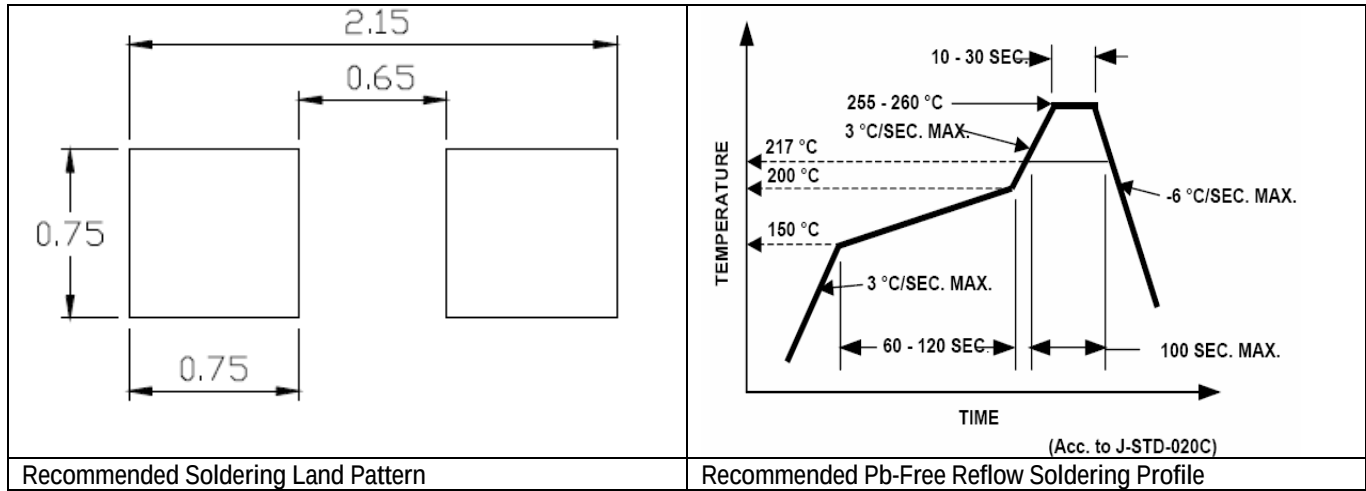
Radiation Pattern



Forward Current vs. Forward Voltage



Maximum Forward Current vs. Ambient Temperature



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

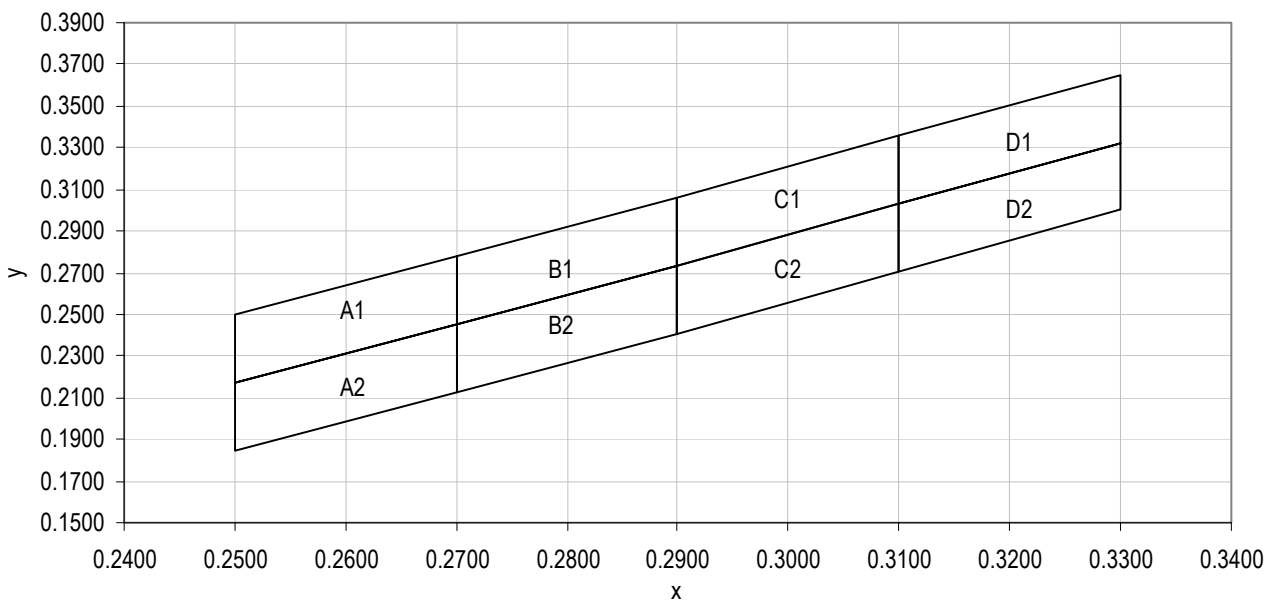
Bin	Min (V)	Max (V)
1	2.55	2.75
2	2.75	2.95
3	2.95	3.15

Tolerance ± 0.1V

Color Bin

Bin	Chromaticity Coordinate				
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