

Avago ASMT-CB30

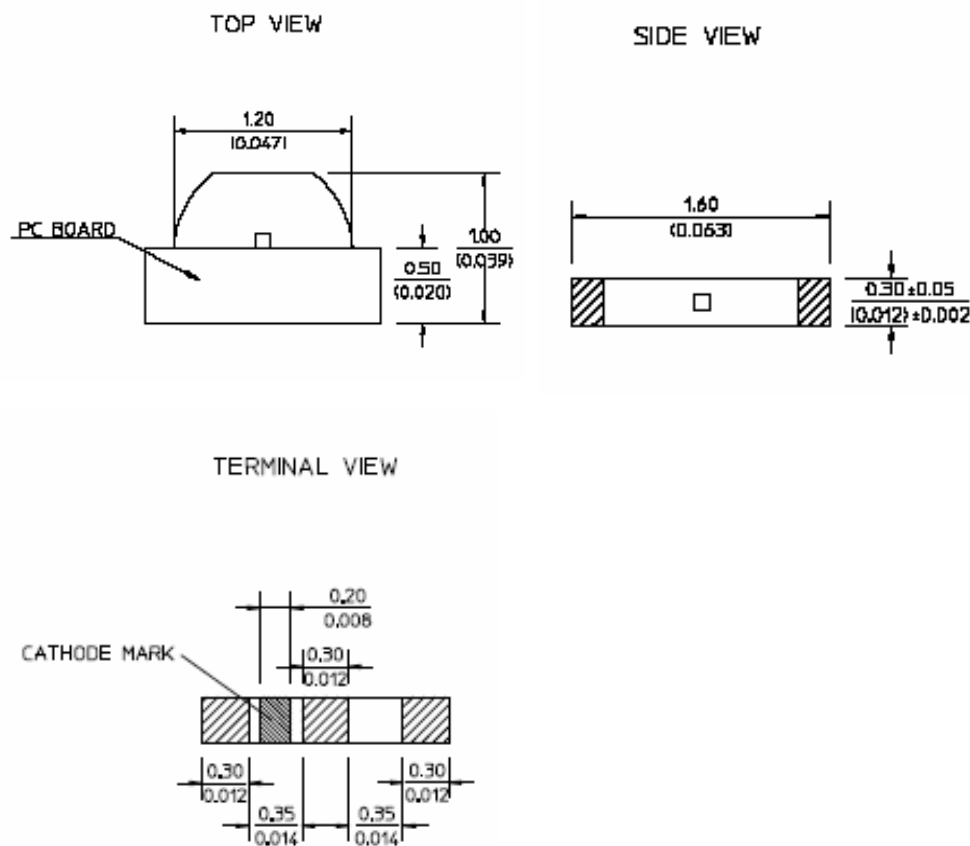
0.3mm Right Angle Surface Mount ChipLED

InGaN Blue

Datasheet



Package Dimension



NOTES:

1. ALL DIMENSIONS IN MILLIMETERS (INCHES).
2. TOLERANCE IS ± 0.1 mm (± 0.004 IN.) UNLESS OTHERWISE SPECIFIED.

Device Selection Guide

Package Dimension (mm)	Parts per Reel	Package Description
1.6 (L) x 1.0 (W) x 0.3 (H)	4000	Untinted, Diffused

CAUTION: ASMT-CB30 LEDs are Class 1A ESD sensitive per JESD22-A114C.01. Please observe appropriate precautions during handling and processing. Refer to Application Note AN-1142 for additional details.

For product information and a complete list of distributors, please go to our web site: www.avagotech.com

1



Absolute Maximum Ratings at T_A = 25°C

Parameter	ASMT-CB30	Unit
DC Forward Current ^[1]	10	mA
Power Dissipation	32	mW
Reverse Voltage (I _R = 100μA)	5	V
LED Junction Temperature	95	°C
Operating Temperature Range	-40 to 85	°C
Storage Temperature Range	-40 to 85	°C
Soldering Temperature	See reflow soldering profile (Figure 7 & 8)	

Note:

- Derate linearly as shown in Figure 4.

Electrical Characteristics at T_A = 25°C

Part Number	Forward Voltage		Reverse Breakdown
	V _F (Volts) ^[1]		V _R (Volts)
	@ I _F = 5mA		@ I _R = 100μA
	Typical	Maximum	Minimum
ASMT-CB30	2.85	3.15	5

Notes:

- V_F tolerance : ±0.1V

Optical Characteristics at T_A = 25°C

Part Number	Luminous Intensity		Peak		Viewing Angle
	I _v ^[1] (mcd)		Wavelength		2 θ _{1/2} ^[3]
	@ 5mA		λ _{peak} (nm)		(Degrees)
	Min.	Typ.	Min	Max	Typ.
ASMT-CB30	11.2	15.0	460.0	480.0	464

Notes:

- The luminous intensity I_v is measured at the peak of the spatial radiation pattern which may not be aligned with the mechanical axis of the LED package.
- The dominant wavelength, λ_d, is derived from the CIE Chromaticity Diagram and represents the perceived color of the device.
- θ_{1/2} is the off-axis angle where the luminous intensity is ½ the peak intensity.

Light Intensity (I_v) Bin Limits

Bin ID	Intensity (mcd)	
	Minimum	Maximum
L	11.20	18.00
M	18.00	28.50
N	28.50	45.00
P	45.00	71.50

Tolerance : $\pm 15\%$

Forward Voltage (V_F) Bin Limits

Bin ID	Forward Voltage (V)	
	Minimum	Maximum
1	2.55	2.75
2	2.75	2.95
3	2.95	3.15

Tolerance : $\pm 0.1V$

Color Bin Limits

Bin ID	Dominant Wavelength (nm)	
	Minimum	Maximum
A	460.0	465.0
B	465.0	470.0
C	470.0	475.0
D	475.0	480.0

Tolerance : $\pm 1nm$

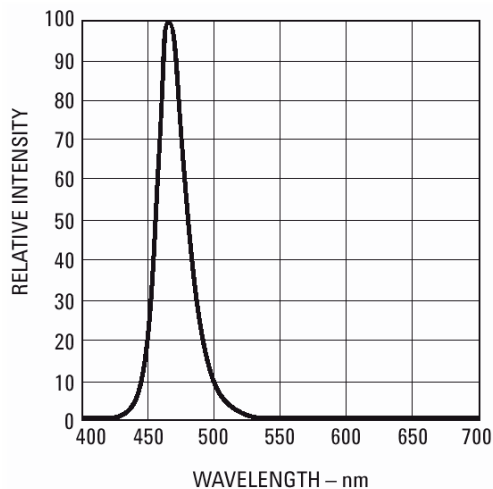


Figure 1. Relative Intensity vs. Wavelength

Notes:

1. Bin categories are established for classification of products. Products may not be available in all categories. Please contact your Avago representative for information on current available bins.
2. The I_v binning specification set-up is for lowest allowable I_v binning only. There is no upper I_v bin limits.

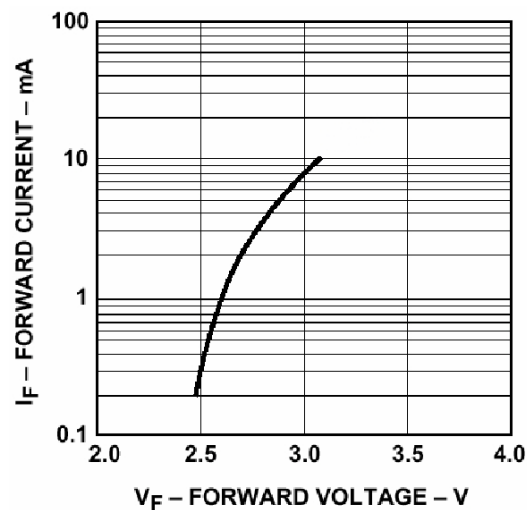


Figure 2. Forward Voltage vs. Forward Current

For product information and a complete list of distributors, please go to our web site: www.avagotech.com

3

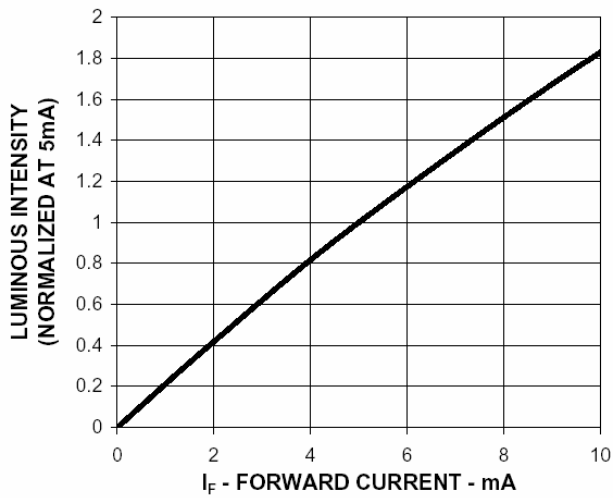


Figure 3. Luminous Intensity vs. Forward Current

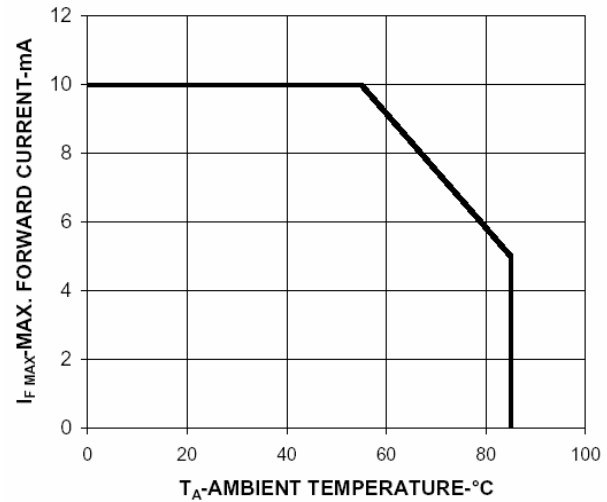


Figure 4. Maximum Forward Current vs. Ambient Temperature

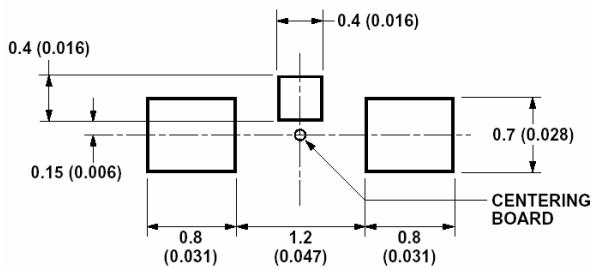


Figure 5. Recommended soldering land pattern

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1\text{mm}$ ($\pm 0.004\text{in.}$) unless otherwise specified.

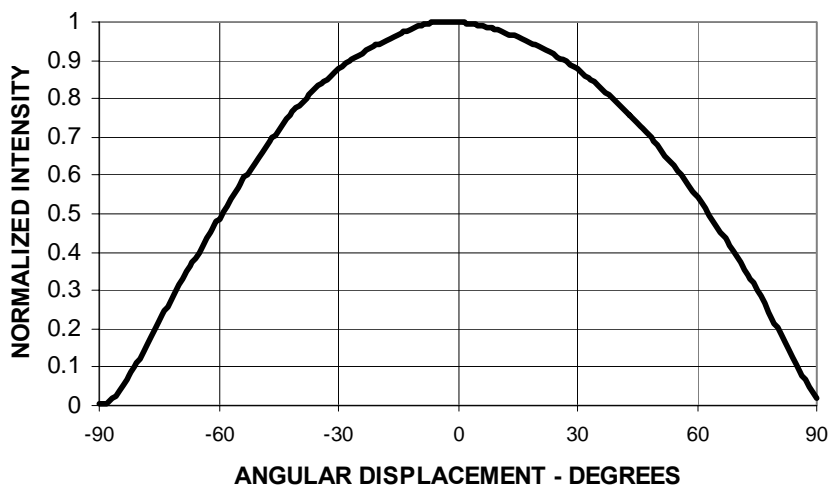
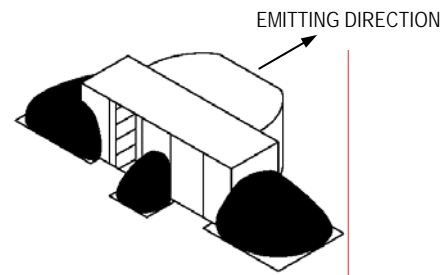


Figure 6. Relative intensity vs. angle.

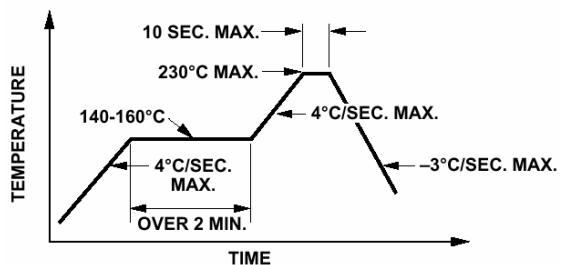


Figure 7. Recommended Reflow Soldering Profile

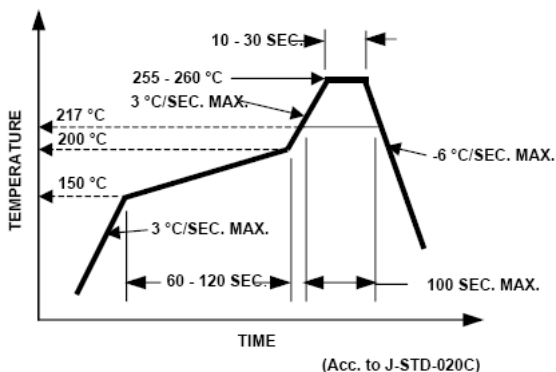


Figure 8. Recommended Pb-Free Reflow Soldering Profile

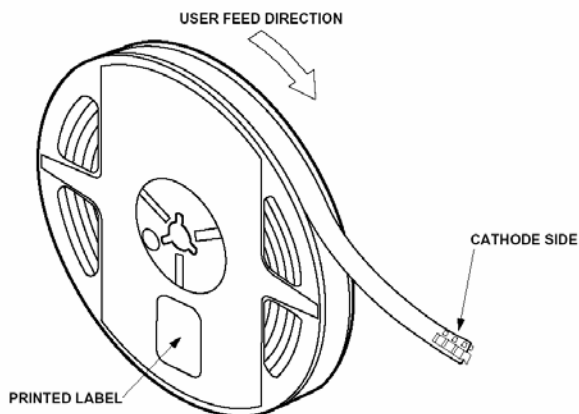


Figure 9. Reeling orientation.

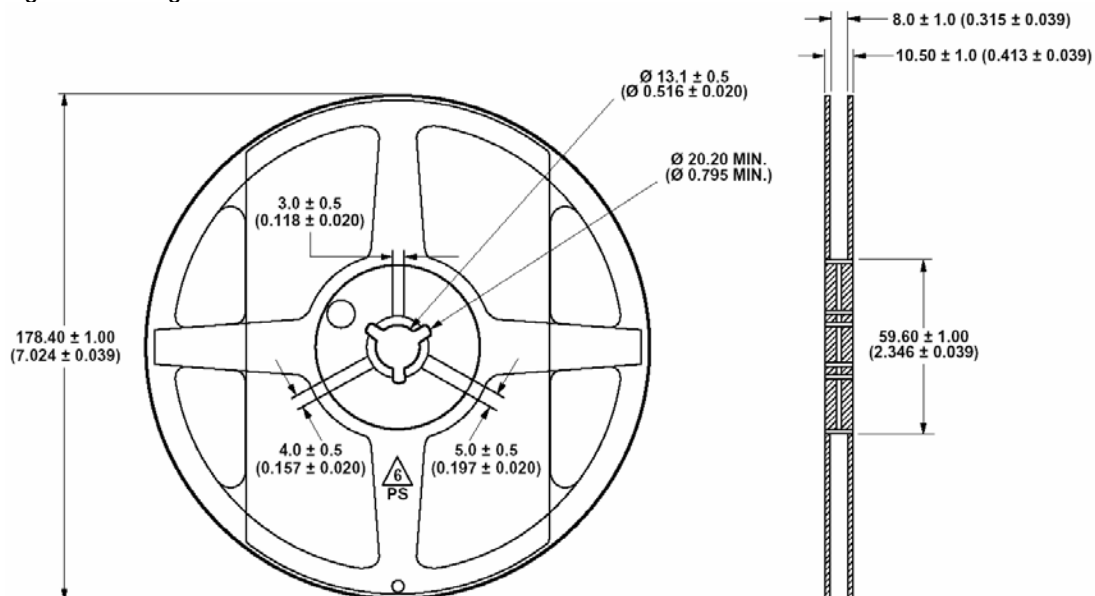


Figure 10. Reel dimensions.

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is $\pm 0.1\text{mm}$ ($\pm 0.004\text{in.}$) unless otherwise specified.

For product information and a complete list of distributors, please go to our web site: www.avagotech.com

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Avago Technologies:](#)

[ASMT-CB30](#)