

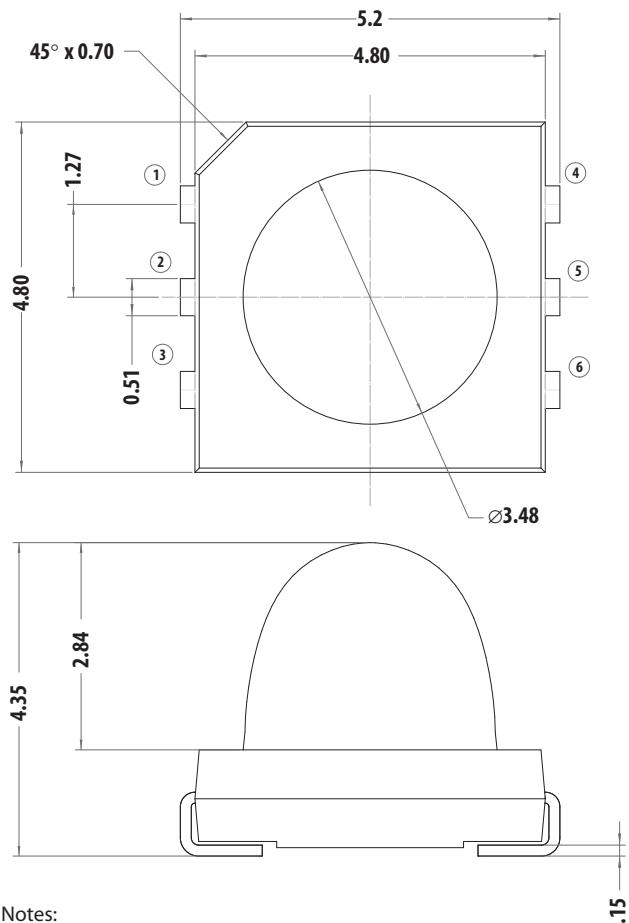
## Data Sheet

### Description

Avago Technologies ASMT-FJ60-AFJ00 is a SMT dome lamp that uses an untinted, non diffused lens to provide a high luminous intensity within a narrow radiation pattern.

The device is made by encapsulating an LED chip on an axial lead frame to form a molded epoxy lamp package with six bent leads for surfacing mounting.

### Package Dimensions



#### Notes:

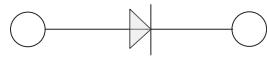
1. All dimensions in millimeters.
2. Tolerance is  $\pm 0.1$ mm unless otherwise specified.

### Features

- Smooth, consistent narrow radiation pattern
- 10degree viewing angle
- 4.8L x4.8W x4.35H mm package dimension
- Available in 16mm tape on 15" (380mm) diameter reel
- Clear, non-diffused epoxy.
- RoHS compliant

### Application

- Camera



Pin 1,2,4 - Anode  
Pin 3,5,6 - Cathode

**CAUTION:** ASMT-FJ60-AFJ00 LED is Class 1A ESD sensitive per JESD22-A114C.01 standard. Please observe appropriate precautions during handling and processing.

## Device Selection Guide

Color	Parts Number	Typ. Iv (cd)	Test Current (mA)	Dice Technology
Orange	ASMT-FJ60-AFJ00	29	20	AlInGaP

Notes:

1. 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.
2.  $I_v$  Tolerance =  $\pm 15\%$ .

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

Parameter	ASMT-FJ60-AFJ00	Units
DC Forward Current	70	mA
Power Dissipation	180	mW
LED Junction Temperature	110	°C
Operating Temperature Range	-40 to 85	°C
Storage Temperature Range	-40 to 85	°C

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

Part Number	Color	Peak Wavelength	Dominant Wavelength	Viewing Angle 2
		$\lambda_{\text{peak}}$ (nm)	$\lambda_d$ [1] (nm)	$\theta_{1/2}$ [2] (Degrees)
ASMT-FJ60-AFJ00	Orange	612	605	10

Notes:

1. The dominant wavelength,  $\lambda_d$ , is derived from the CIE Chromaticity Diagram and represents the perceived color of the device.
2.  $\theta_{1/2}$  is the off-axis angle where the luminous intensity is  $\frac{1}{2}$  the peak intensity.

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

Color	Forward Voltage $V_F$ (Volts) [1]				Reverse Breakdown, $V_R$ (Volts) @ $I_R = 10\mu\text{A}$
	Test Current	Min.	Typ.	Max.	Min.
Orange	20mA	1.8	2.1	2.6	5

Notes:

1.  $V_f$  tolerance :  $\pm 0.1\text{V}$

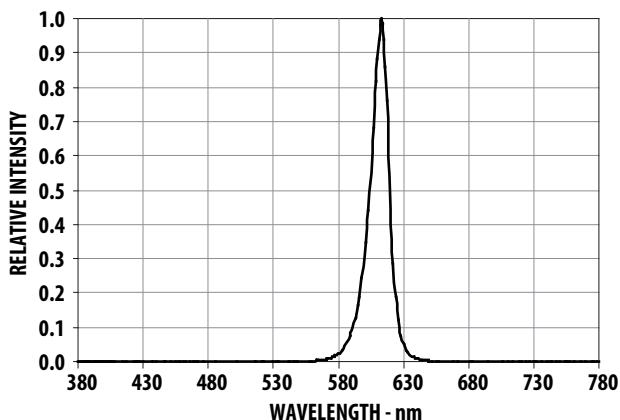


Figure 1. Relative Intensity vs. Wavelength

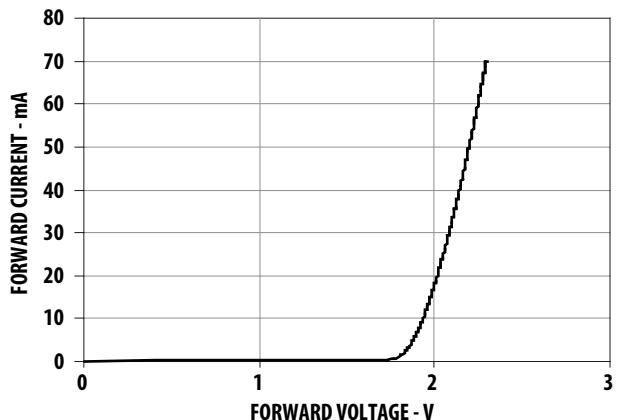


Figure 2. Forward Current vs Forward Voltage

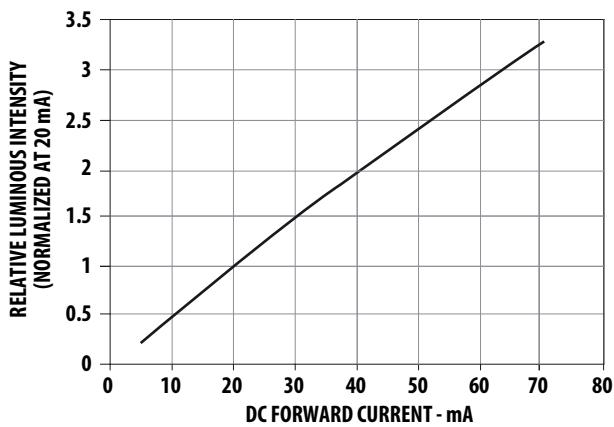


Figure 3. Relative Intensity vs. Forward Current

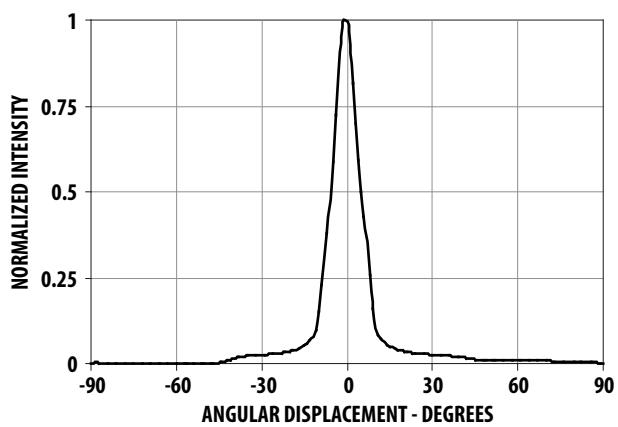


Figure 4. Radiation Pattern

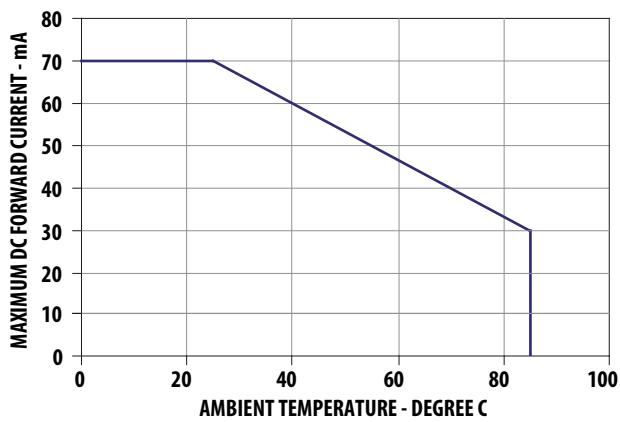


Figure 5. Maximum forward current vs ambient temperature.

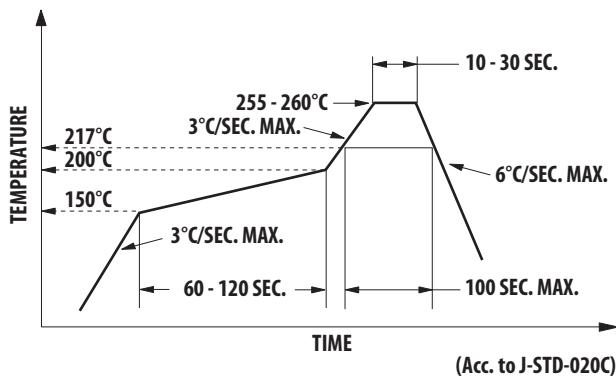


Figure 6. Recommended reflow soldering profile

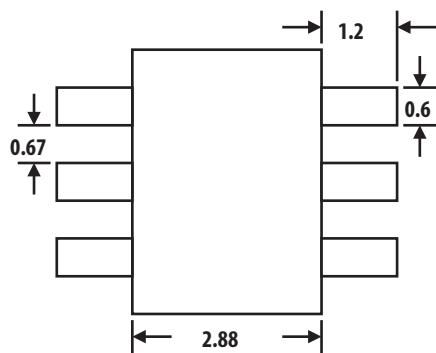


Figure 7. Recommended soldering land pattern

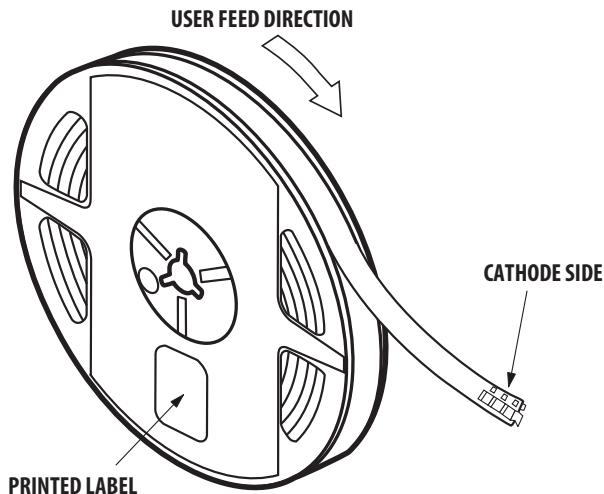


Figure 8. Reel Orientation

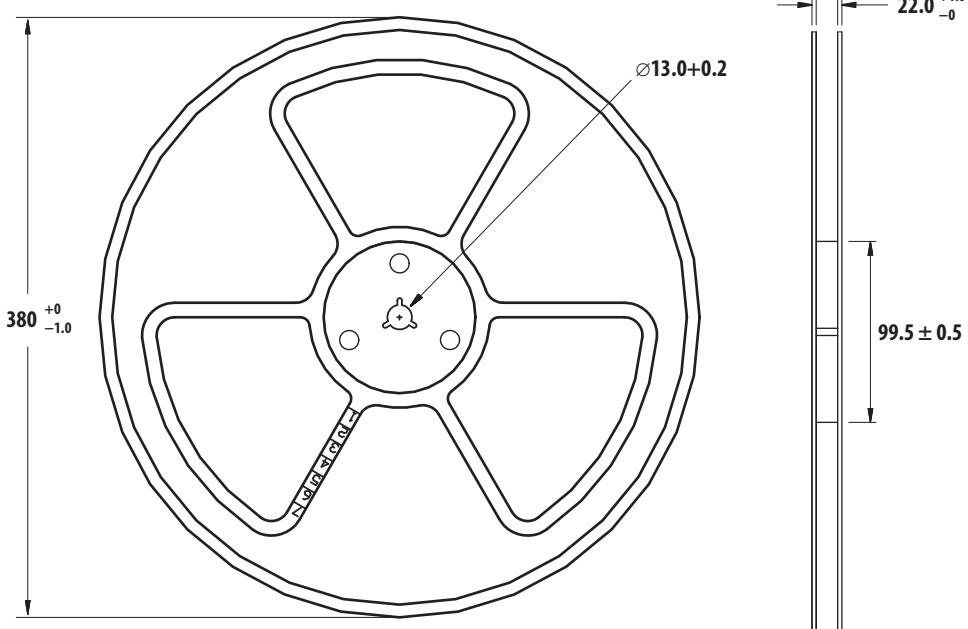


Figure 9. Reel Dimensions

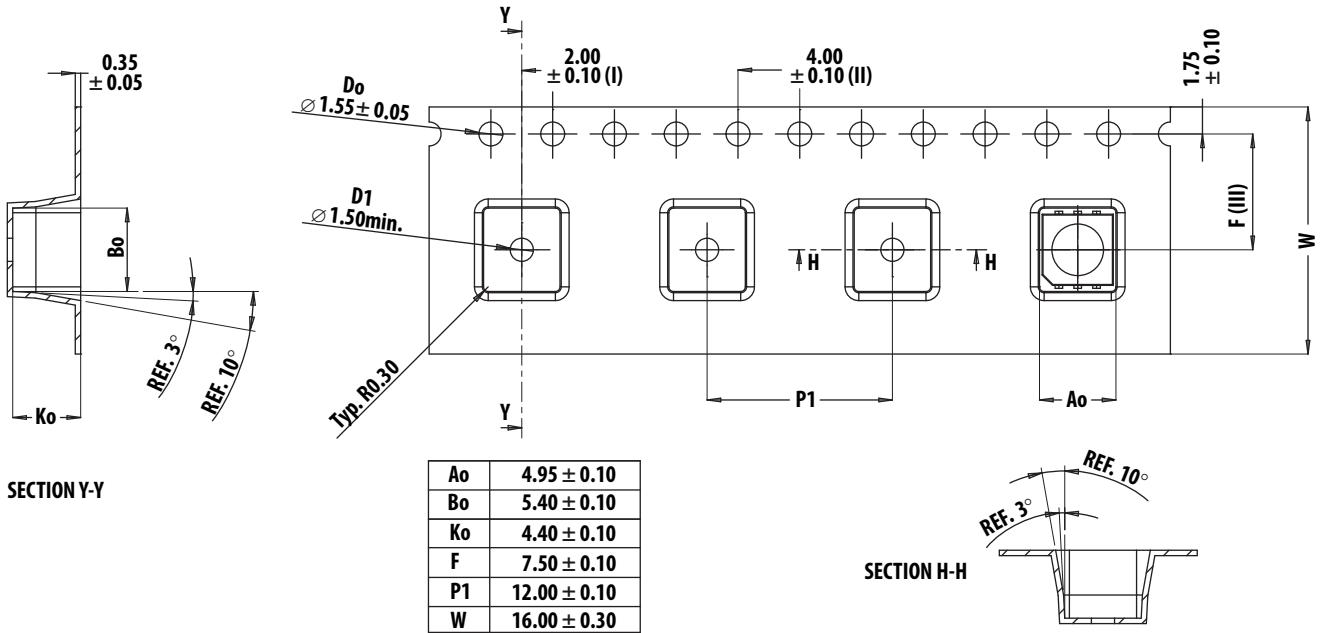


Figure 10. Tape Dimensions

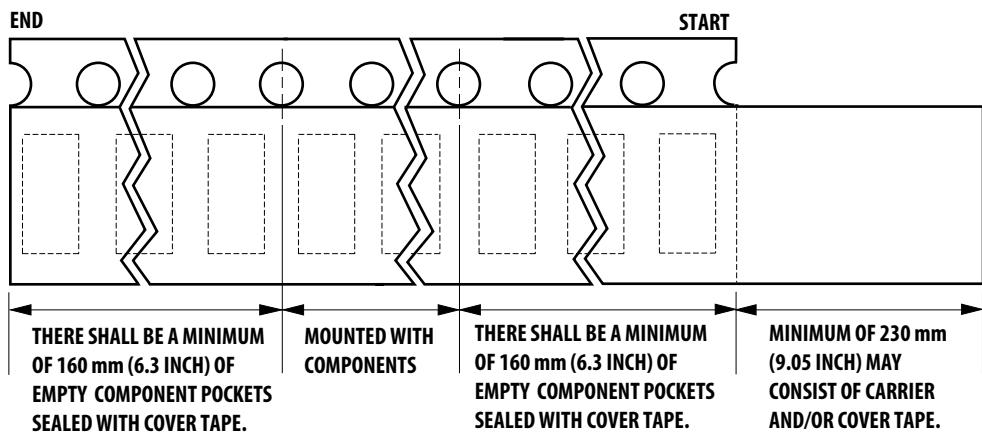


Figure 11. Tape Leader and Trailer Dimensions

Notes:

1. All dimensions in millimeters.
2. Tolerance is  $\pm 0.1$  mm unless otherwise specified

**Iv Bin Category (cd)**

Bin ID	Min	Max
F	15.0	19.5
G	19.5	25.5
H	25.5	33.0
I	33.0	43.0
J	43.0	56.0

Iv Tolerance =  $\pm 15\%$ **Color Bin Category****Orange**

Orange	Min (nm)	Max (nm)
A	600	604
B	604	608
C	608	612

Tolerance =  $\pm 1\text{nm}$ **Handling Precaution****This products is classified as moisture sensitive level 3**

When the bag is opened, parts required to mount within 168 hours of factory conditions  $\leq 30^\circ\text{C}/60\%$ , and stored at  $<10\%$  RH.

Devices required bake, before mounting if:

- The humidity indicator card is  $> 10\%$  when read at  $23 \pm 5^\circ\text{C}$
- The pack has been opened for more than 168 hours.

Baking recommended condition:  $60 \pm 5^\circ\text{C}$  for 20 hours.

**Note:**

- Do not stack the units after reflow.

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