

AM23HD-F

AM23HC-F

AM23ID-F

AM23EC-F

AM23YD-F

AM23YC-F

AM23SGD-F

AM23SGC-F

### Features

- SOT-23 PACKAGE SURFACE MOUNT LED LAMP.
- LOW POWER CONSUMPTION.
- LONG LIFE - SOLID STATE RELIABILITY.

### Description

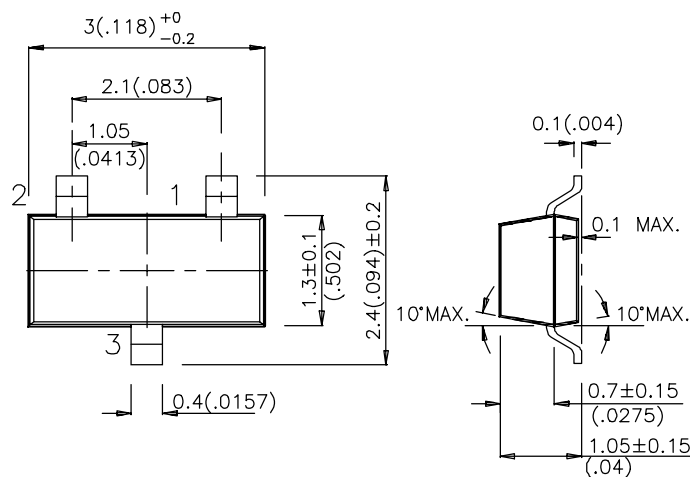
The Bright Red source color devices are made with Gallium Phosphide Red Light Emitting Diode.

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

The Super Bright Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The Yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

### Package Dimensions



- 1 ANODE  
2 N.C.  
3 CATHODE

#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subjected to change without notice.

## Selection Guide

Part No.	Dice	Lens Type	I <sub>v</sub> (mcd) @ 20 mA		Viewing Angle
			Min.	Typ.	
AM23HD-F	BRIGHT RED (GaP)	RED DIFFUSED	0.5	1	140°
AM23HC-F		WATER CLEAR	0.5	1	140°
AM23ID-F	HIGH EFFICIENCY RED (GaAsP/GaP)	RED DIFFUSED	8	20	140°
AM23EC-F		WATER CLEAR	8	20	140°
AM23YD-F	YELLOW (GaAsP/GaP)	YELLOW DIFFUSED	5	8	140°
AM23YC-F		WATER CLEAR	5	8	140°
AM23SGD-F	SUPER BRIGHT GREEN (GaP)	GREEN DIFFUSED	8	15	140°
AM23SGC-F		WATER CLEAR	8	15	140°

Note:

1.  $\theta_{1/2}$  is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

## Electrical / Optical Characteristics at T<sub>A</sub>=25°C

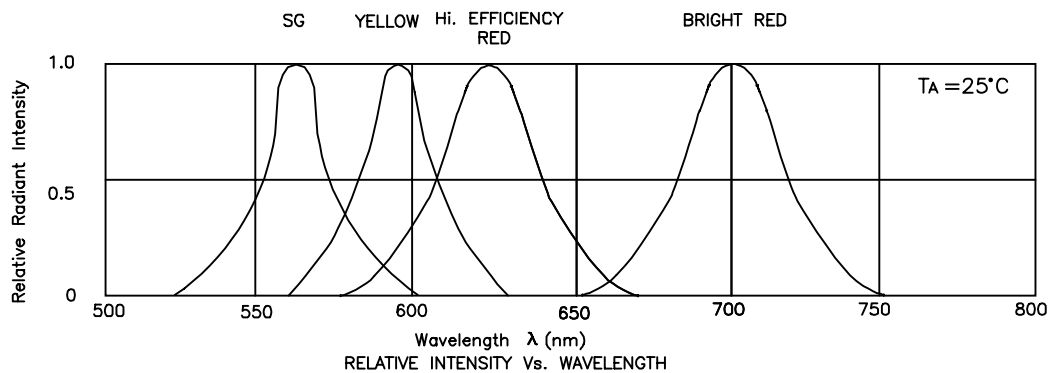
Symbol	Parameter	Device	Typ.	Max.	Units	Test Conditions
$\lambda_{peak}$	Peak Wavelength	Bright Red High Efficiency Red Super Bright Green Yellow	700 625 565 590		nm	IF=20mA
$\Delta\lambda_{1/2}$	Spectral Line Halfwidth	Bright Red High Efficiency Red Super Bright Green Yellow	45 45 30 35		nm	IF=20mA
C	Capacitance	Bright Red High Efficiency Red Super Bright Green Yellow	40 12 45 10		pF	VF=0V;f=1MHz
V <sub>F</sub>	Forward Voltage	Bright Red High Efficiency Red Super Bright Green Yellow	2.0 2.0 2.2 2.1	2.5 2.5 2.5 2.5	V	IF=20mA
I <sub>R</sub>	Reverse Current	All		10	uA	VR = 5V

## Absolute Maximum Ratings at T<sub>A</sub>=25°C

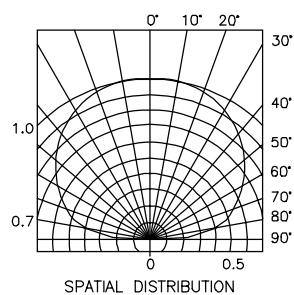
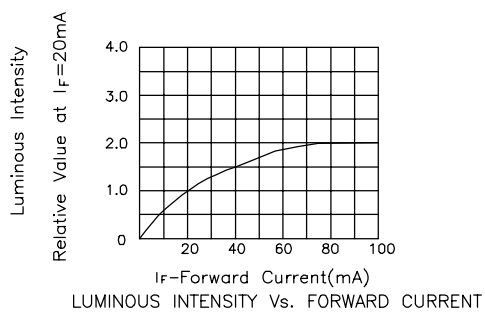
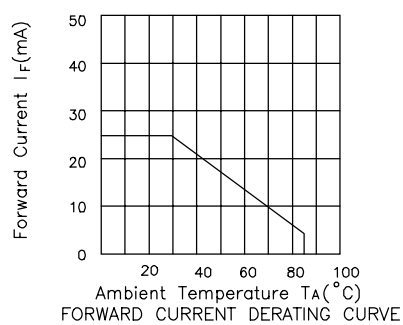
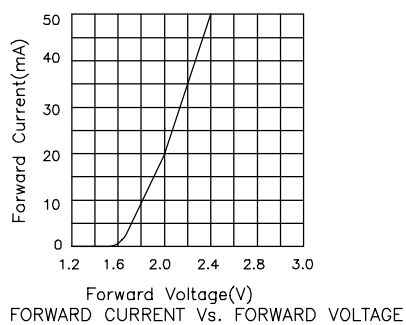
Parameter	Bright Red	High Efficiency Red	Super Bright Green	Yellow	Units
Power dissipation	120	105	105	105	mW
DC Forward Current	25	30	25	30	mA
Peak Forward Current [1]	150	150	150	150	mA
Reverse Voltage	5	5	5	5	V
Operating/Storage Temperature	-40°C To +85°C				

Note:

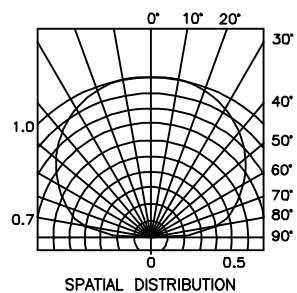
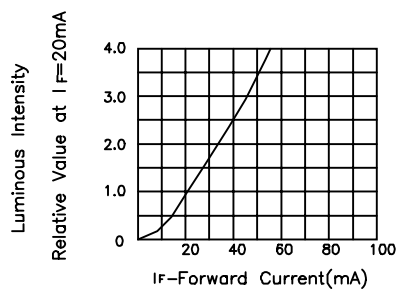
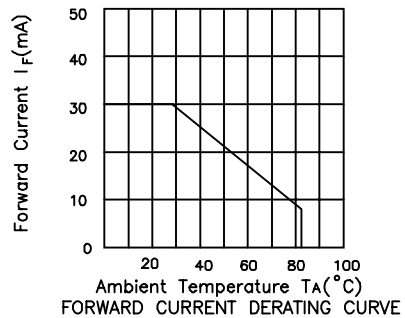
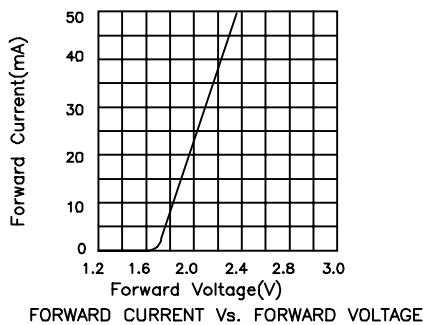
1. 1/10 Duty Cycle, 0.1ms Pulse Width.



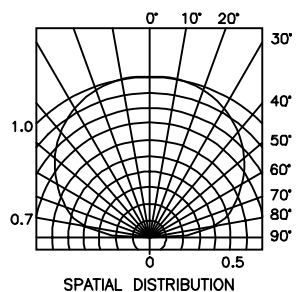
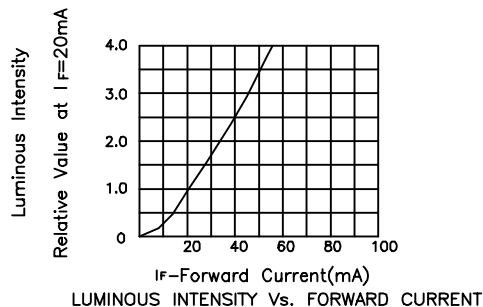
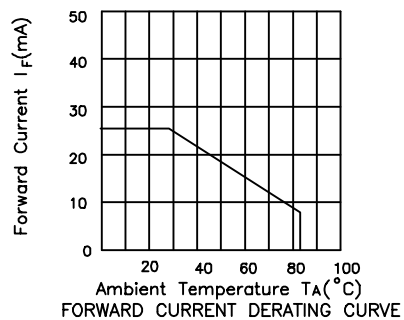
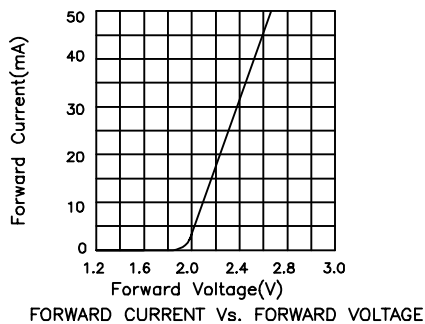
## Bright Red AM23HD-F, AM23HC-F



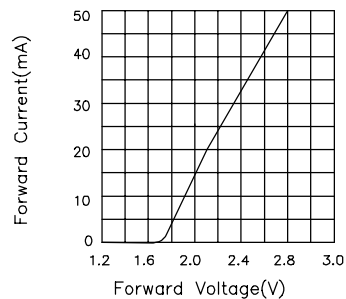
## High Efficiency Red AM23ID-F,AM23EC-F



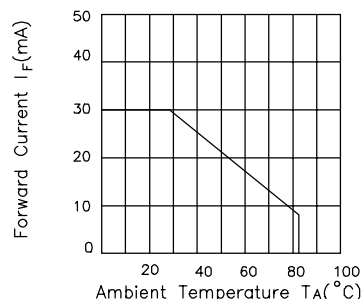
## Super Bright Green AM23SGD-F,AM23SGC-F



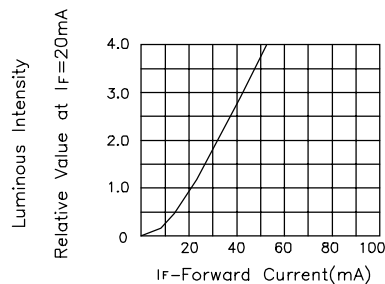
## Yellow AM23YD-F,AM23YC-F



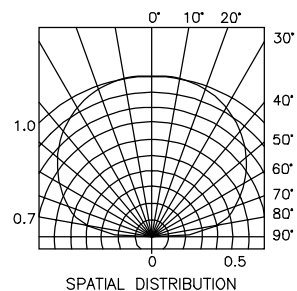
FORWARD CURRENT Vs. FORWARD VOLTAGE



FORWARD CURRENT DERATING CURVE



LUMINOUS INTENSITY Vs. FORWARD CURRENT



SPATIAL DISTRIBUTION

## AM23-F SERIES SMT Reflow Soldering Instructions

