

High Brightness 15.0×15.0mm Flat LED Displays

SBD-1515

GENERAL DESCRIPTION

The SBD-1515 series are a reflecting high brightness flat LED displays.

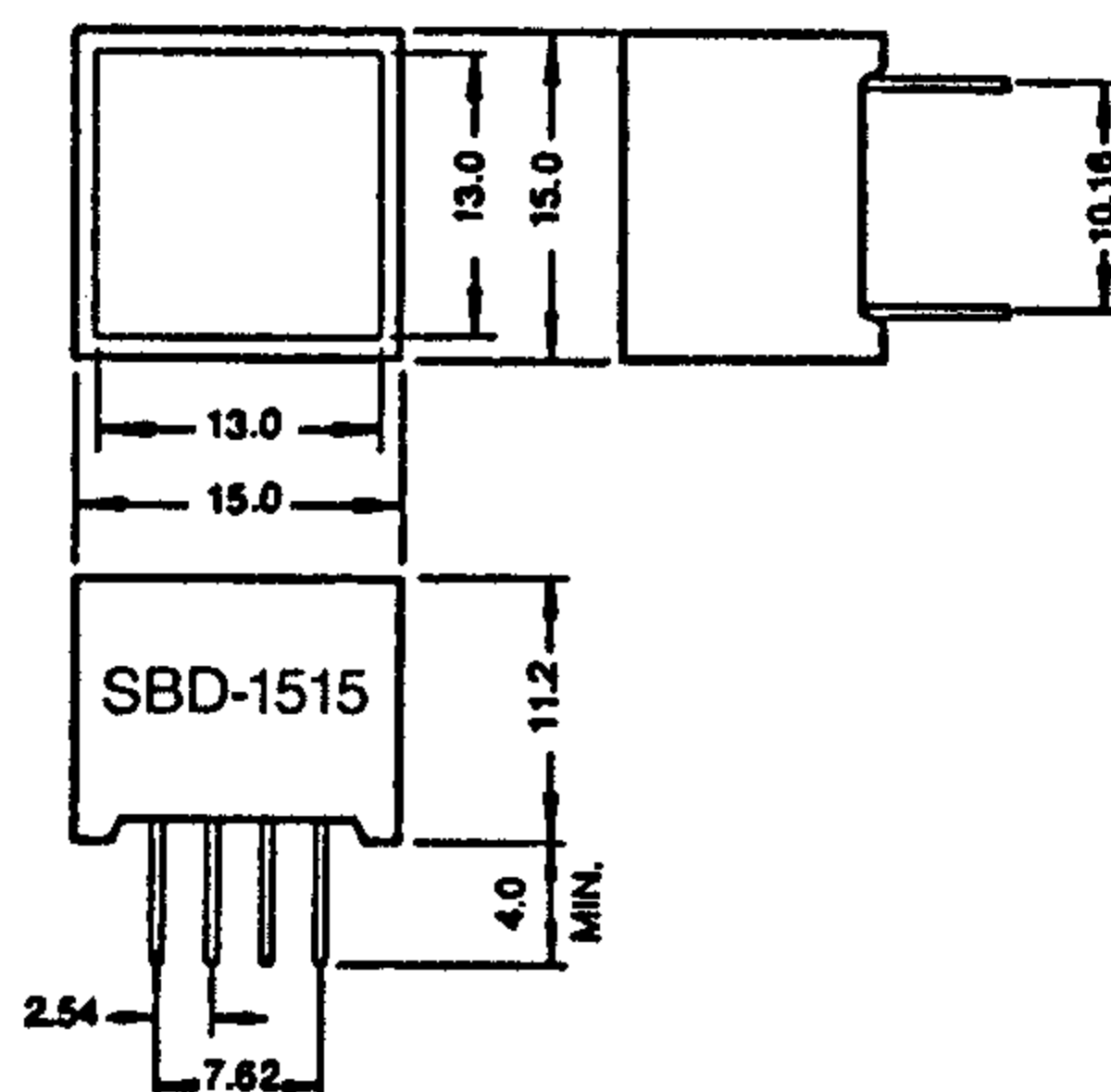
The active face size is 13.0 × 13.0 mm and available in red, orange and yellow-green emitting colors.

FEATURES

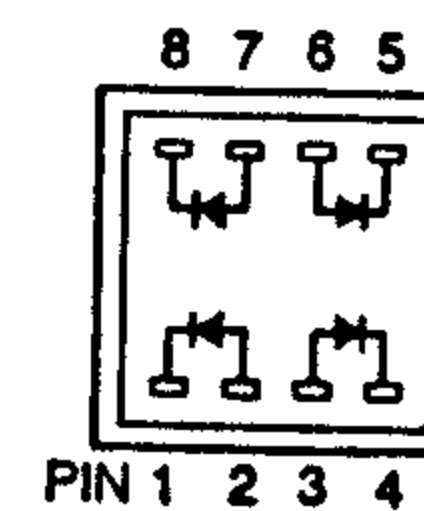
1. High brightness and high contrast
2. Low power consumption
3. Solid state stability; Long operation life
4. Wide angle viewing

PACKAGE DIMENSIONS AND CONNECTIONS GUIDE

SCALE 1:1 (mm)



Top View



Orange SBD 1515SR (GaAsP/GaP)

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Power dissipation/Total	160	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	-25 ~ +85	$^\circ\text{C}$
Storage temperature	-55 ~ +100	$^\circ\text{C}$

Electrical/Optical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Chip	V_F	$I_F = 10\text{mA}$	—	2.0	2.2	V
Reverse current/Chip	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous Intensity/Chip	I_V	$I_F = 10\text{mA}$	500	1000	—	μcd
Peak wavelength	λ_P	$I_F = 10\text{mA}$	—	635	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	35	—	nm

Yellow-green SBD 1515UG (GaP)

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Power dissipation/Total	160	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	-25 ~ +85	$^\circ\text{C}$
Storage temperature	-55 ~ +100	$^\circ\text{C}$

Electrical/Optical Characteristics ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Chip	V_F	$I_F = 10\text{mA}$	—	2.1	2.3	V
Reverse current/Chip	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous intensity/Chip	I_V	$I_F = 10\text{mA}$	600	1200	—	μcd
Peak wavelength	λ_P	$I_F = 10\text{mA}$	—	565	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	30	—	nm

Red SBD 1515UR (GaAlAs)

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

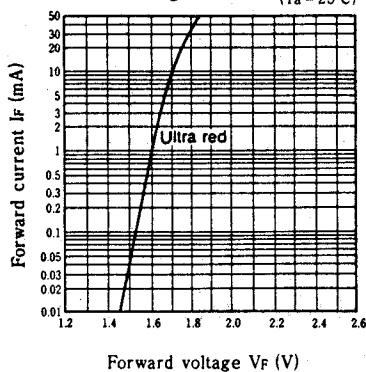
Power dissipation/Total	160	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	-25 ~ +85	$^\circ\text{C}$
Storage temperature	-55 ~ +100	$^\circ\text{C}$

Electrical/Optical Characteristics ($T_a = 25^\circ\text{C}$)

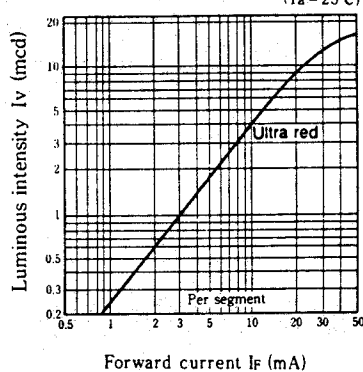
Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Chip	V_F	$I_F = 10\text{mA}$	—	1.9	2.1	V
Reverse current/Chip	I_R	$V_R = 4\text{V}$	—	—	10	μA
Luminous intensity/Chip	I_V	$I_F = 10\text{mA}$	1300	2500	—	μcd
Peak wavelength	λ_P	$I_F = 10\text{mA}$	—	660	—	nm
Spectral line halfwidth	$\Delta\lambda$	$I_F = 10\text{mA}$	—	20	—	nm

* Pulse Width 1 ms
Duty Cycle 1/5

Forward Current vs. Forward Voltage ($T_a = 25^\circ\text{C}$)



Luminous Intensity vs. Forward Current ($T_a = 25^\circ\text{C}$)



Spectrum Distribution ($T_a = 25^\circ\text{C}$)

