High Brightness 6.4×4.0 6 Bar LED Arrays

SBD-646

GENERAL DESCRIPTION

The SBD-646 series of 6 bar light emitting diode arrays has been developed for level meters and other linear display and available in red, orange, green and yellow emitting colors.
The standard units are constructed with black or gray face and milky white segment colors.

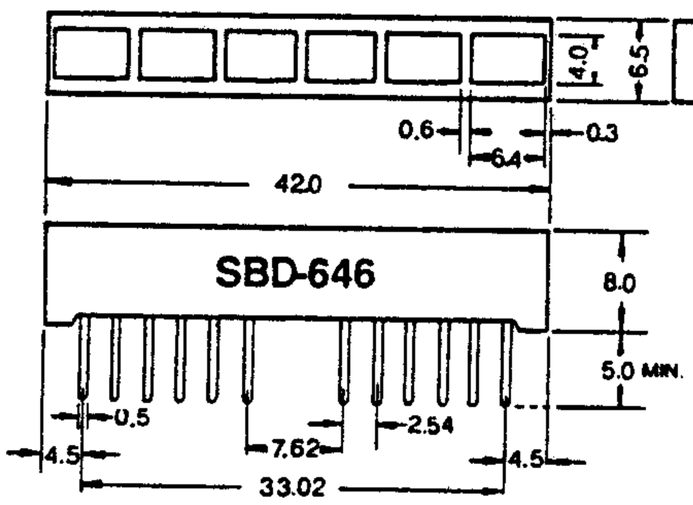
Actual size

FEATURES

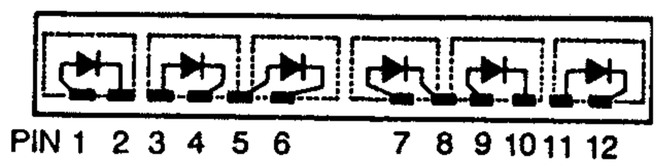
1. High brightness
2. Low power consumption; Directly drive with IC
3. Solid state stability; Long-operation life
4. Could be matched to SBD-446 for 10 bars

PACKAGE DIMENSIONS AND CONNECTIONS GUIDE

SCALE 1:1 (mm)



(Top View)



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Red SBD 646R (GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	240	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Chip	V_F	I_F = 10mA	—	2.1	2.3	V
Reverse current/Chip	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/Chip	I_V	I_F = 10mA	300	800	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	700	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	100	—	nm

Green SBD 646G (GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	240	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Chip	V_F	I_F = 10mA	—	2.1	2.3	V
Reverse current/Chip	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/Chip	I_V	I_F = 10mA	350	900	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	555	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	30	—	nm

Orange SBD 646SR (GaAsP/GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	240	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Chip	V_F	I_F = 10mA	—	2.0	2.2	V
Reverse current/Chip	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/Chip	I_V	I_F = 10mA	700	1500	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	635	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	35	—	nm

Yellow-green SBD 646UG (GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	240	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

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

Yellow SBD 646Y (GaAsP/GaP)

Absolute Maximum Ratings (T_a=25°C)

Power dissipation/Total	240	mW
Power dissipation/Chip	40	mW
Forward current	20	mA
Peak forward current	60*	mA
Reverse voltage	4	V
Operating temperature	−25 ~ +85	°C
Storage temperature	−55 ~ +100	°C

Electrical/Optical Characteristics (T_a=25°C)

Parameter	Symbol	Conditions	Min	Typ	Max.	Unit
Forward voltage/Chip	V_F	I_F = 10mA	—	2.0	2.2	V
Reverse current/Chip	I_R	V_R = 4V	—	—	10	μA
Luminous intensity/Chip	I_V	I_F = 10mA	600	1000	—	μcd
Peak wavelength	λ_P	I_F = 10mA	—	585	—	nm
Spectral line halfwidth	$\Delta\lambda$	I_F = 10mA	—	30	—	nm

* Pulse Width ..... 1 ms
  Duty Cycle 1/5