



BL-5019D

10X10 matrix light source module
Current pattern generator / High current lighting source driver
Synchronous pulse type constant current source
http://www.BoardFree.kr/custom_products

1.Features

Maximum Ratings

$T_A = 25\text{ }^{\circ}\text{C}$

Parameter	Symbol	Values
Operating temperature	T_{op}	min. $-40\text{ }^{\circ}\text{C}$ max. $105\text{ }^{\circ}\text{C}$
Storage temperature	T_{stg}	min. $-40\text{ }^{\circ}\text{C}$ max. $105\text{ }^{\circ}\text{C}$
Junction temperature	T_j	max. $145\text{ }^{\circ}\text{C}$
Forward current	I_F	min. 10 mA max. 1000 mA
Forward current pulsed $t_p \leq 700\text{ }\mu\text{s}$; $D \leq 0.005$	$I_{F\text{ pulse}}$	max. 2 A
Reverse voltage ³⁾	V_R	max. 5 V
ESD withstand voltage acc. to ANSI/ESDA/JEDEC	V_{ESD}	max. 2 kV

Characteristics

$I_F = 1000\text{ mA}$; $t_p = 10\text{ ms}$; $T_A = 25\text{ }^{\circ}\text{C}$

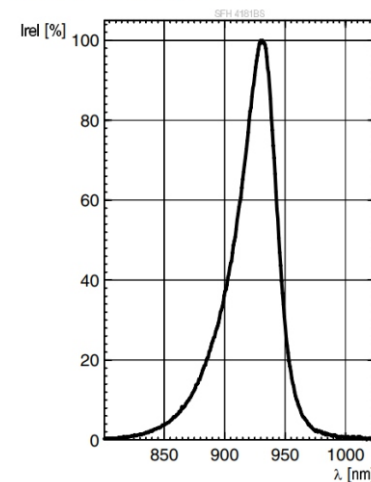
Parameter	Symbol	Values
Centroid wavelength ⁴⁾	$\lambda_{\text{centroid}}$	min. 912 nm max. 950 nm
Spectral bandwidth at 50% $I_{\text{rel,max}}$	$\Delta\lambda$	typ. 37 nm
Half angle	ϕ	typ. 35 °
Dimensions of chip area	$L \times W$	typ. $0.73 \times 0.73\text{ mm} \times \text{mm}$
Rise time (10% / 90%) $I_F = 1\text{ A}$; $R_L = 5\text{ }\Omega$	t_r	typ. 12 ns
Fall time (10% / 90%) $I_F = 1\text{ A}$; $R_L = 5\text{ }\Omega$	t_f	typ. 11.5 ns
Forward voltage ⁵⁾	V_F	typ. 2.8 V max. 3.2 V
Forward voltage ⁵⁾ $I_F = 2\text{ A}$; $t_p = 100\text{ }\mu\text{s}$	V_F	typ. 3.0 V max. 3.7 V
Reverse current ³⁾ $V_R = 5\text{ V}$	I_R	typ. $0.01\text{ }\mu\text{A}$ max. $10\text{ }\mu\text{A}$
Total radiant flux ⁶⁾ $I_F = 1\text{ A}$; $t_p = 100\text{ }\mu\text{s}$	Φ_e	typ. 1550 mW

2.Applications

- Package: clear silicone
- ESD: 2 kV acc. to ANSI/ESDA/JEDEC JS-001 (HBM)
- IR lightsource with high efficiency
- Double stack emitter

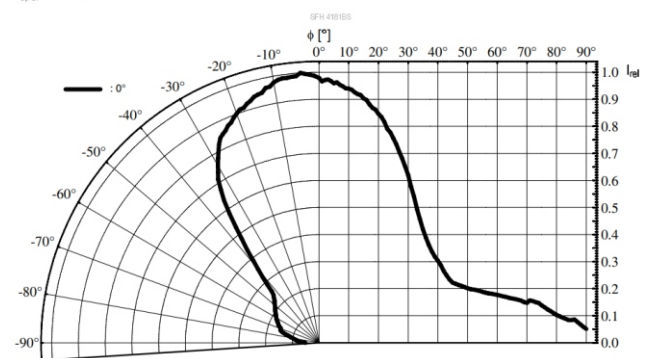
3.Relative Spectral Emission

Centroid wavelength 920nm

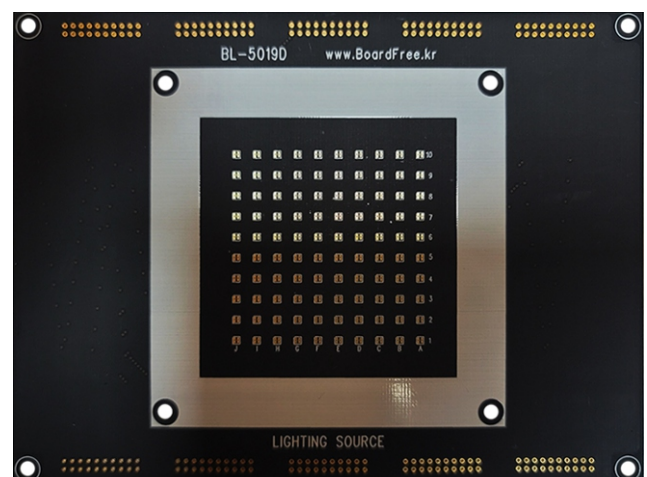


Radiation Characteristics

$I_{e,rel} = f(\phi)$



4.Shape and size of the product



155mm X 115mm