

SMB470-1100-03

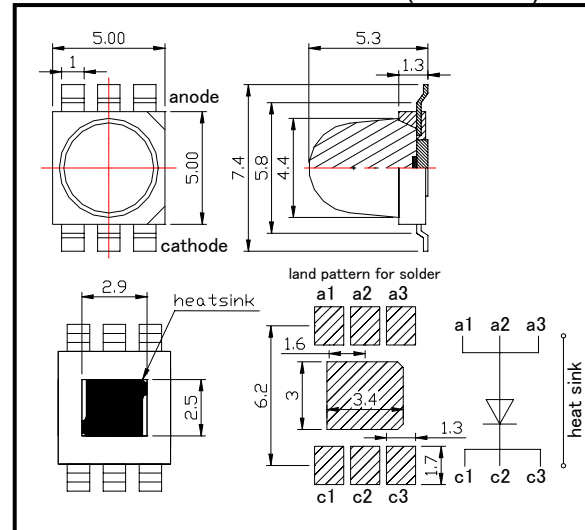
High Power type Top LED with Lens

SMB470-1100-03 is an InGaN LED mounted on copper heat sink with a 5x5 mm package. These devices are available to be operated and 46000mcd at I_{FP}=700mA.

◆ Specifications

- | | |
|---------------------|-------------------------|
| 1) Product Name | High Power Top LED |
| 2) Type No. | SMB470-1100-03 |
| 3) Chip | |
| (1) Chip Material | InGaAs |
| (2) Chip Dimension | 1000um*1000um |
| (3) Chip Number | 1pce |
| (4) Peak Wavelength | 470nm typ. |
| 4) Package | |
| (1) Lead Frame Die | Silver Plated on Copper |
| (2) Package Resin | PPA Resin |
| (3) Lens | Epoxy Resin |

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings

Item	Symbol	Maximum Rated Value	Unit	Ambient Temperature
Power Dissipation	P _D	1400	mW	T _a =25°C
Forward Current	I _F	350	mA	T _a =25°C
Pulse Forward Current	I _{FP}	700	mA	T _a =25°C
Reverse Voltage	V _R	10	V	T _a =25°C
Operating Temperature	T _{OPR}	-30 ~ +85	°C	
Storage Temperature	T _{STG}	-30 ~ +100	°C	
Soldering Temperature	T _{SOL}	255	°C	

‡Pulse Forward Current condition: Duty=1% and Pulse Width=10us.

‡Soldering condition: Soldering condition must be completed within 5 seconds at 255°C

‡Thermal resistance: junction – ambient air flow

◆ Electro-Optical Characteristics [T_a=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =250mA		3.2	3.8	V
	V _{FP}	I _{FP} =700mA		3.7	4.5	
Radiated Power	P _O	I _F =250mA		170		mW
		I _{FP} =700mA		480		
Brightness	I _v	I _F =250mA		16,500		mcd
		I _{FP} =700mA		46,000		
Radiant Intensity	I _E	I _F =250mA		250		mW/sr
		I _{FP} =700mA		540		
Peak Wavelength	λ _P	I _F =50mA		470		nm
Half Width	Δλ	I _F =50mA		20		nm
Viewing Half Angle	θ _{1/2}	I _F =50mA		±10		deg.
Rise Time	t _r	I _F =50mA		200		ns
Fall Time	t _f	I _F =50mA		150		ns

‡Radiated Power is measured by S3584-08.

‡Brightness is measured by Tektronix J-6512.

USHIO EUROPE B.V. (www.ushio.eu)

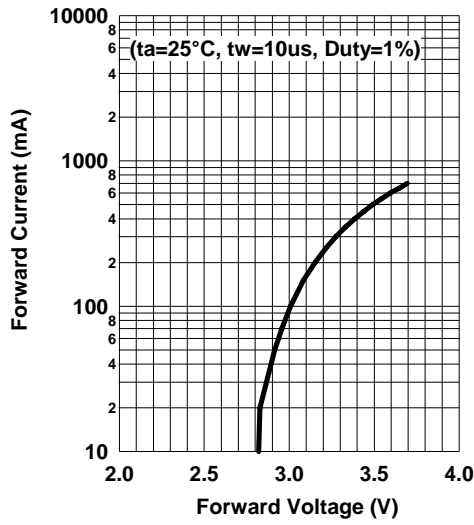
Sky Park, Breguetlaan 16-18, 1438 BC, Oude Meer, The Netherlands

Tel: +31-20-4469-333

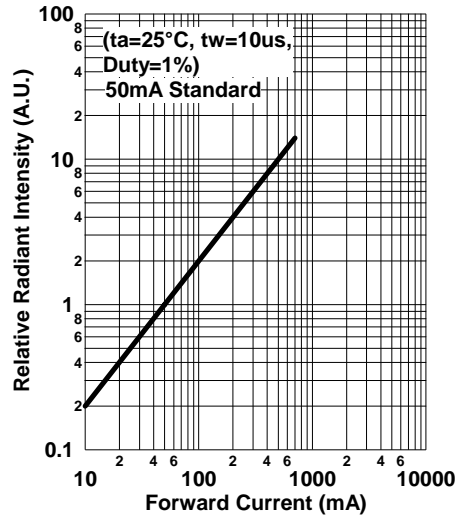
Fax: +31-20-4469-360

E-mail: led@ushio-europe.nl

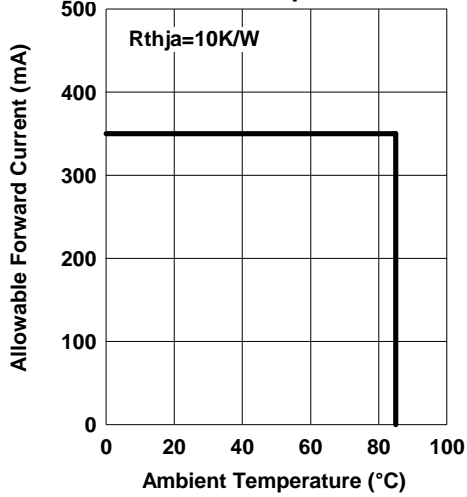
Forward Current - Forward Voltage



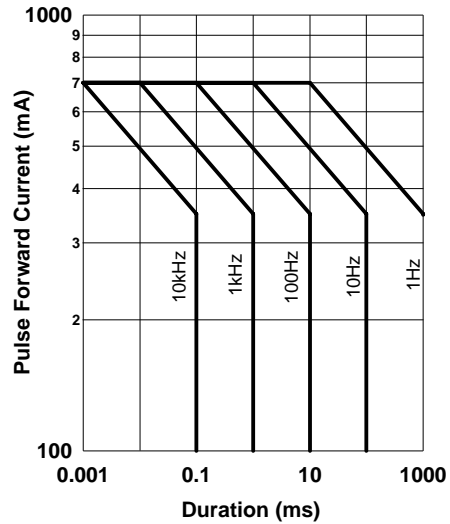
Relative Radiant Intensity - Forward Current



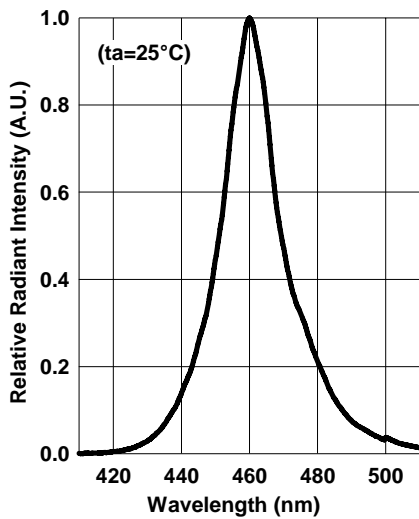
Allowable Forward Current - Ambient Temperature

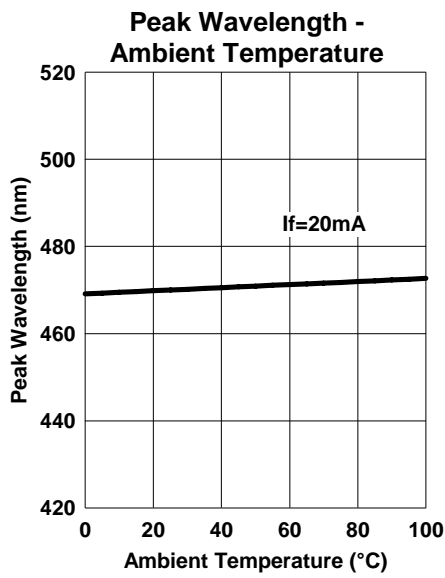
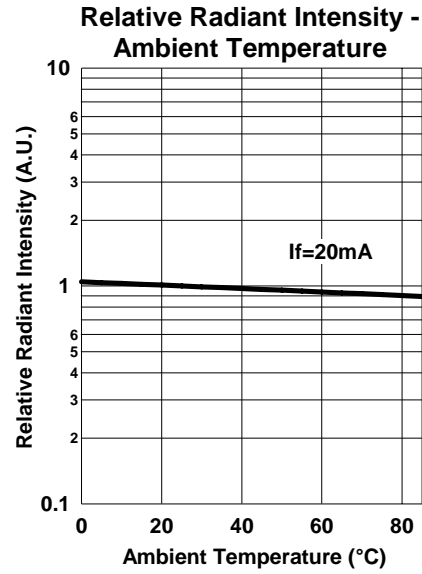
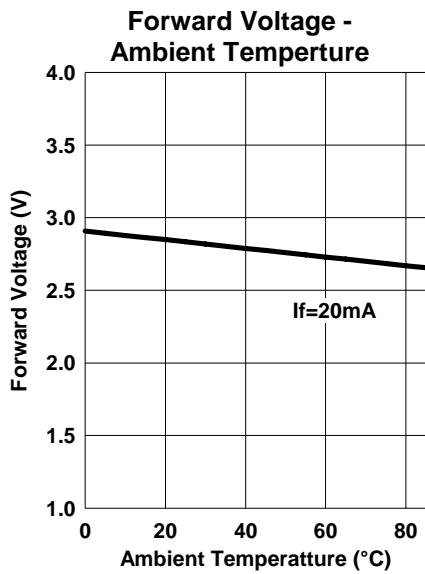


Forward Current-Pulse Duration



Relative Spectral Emission





◆ Wrapping

Moisture barrier bag aluminum laminated film with a desiccant to keep out the moisture absorption during the transportation and storage.

