

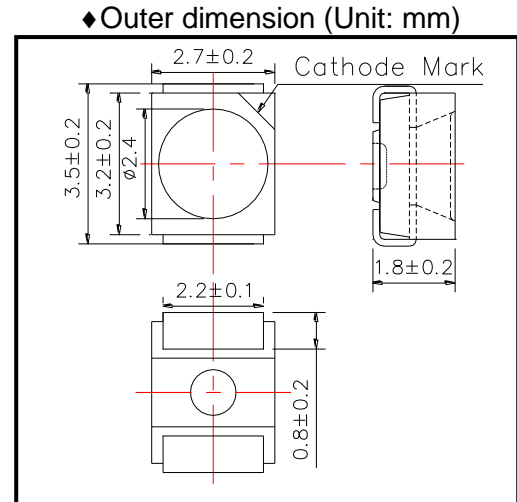
SMTW47N

High Performance White color TOP LED

SMTW47N consists of an InGaN LED mounted with phosphor on the lead frame as TOP LED package and emits white color radiation. and is 80lm/W typical at IF=20mA.

◆ Specifications

- 1) Product Name TOP LED
 - 2) Type No. SMTW47N
 - 3) Chip
 - (1) Chip Material InGaN
 - (2) Peak Wavelength White color (*1) typ.
 - 4) Package
 - (1) Lead Frame Die Silver Plated
 - (2) Package Resin PPA Resin, colored diffused silicone resin
- (*1): x: 0.33±0.05, y: 0.33±0.07



◆ Absolute Maximum Ratings

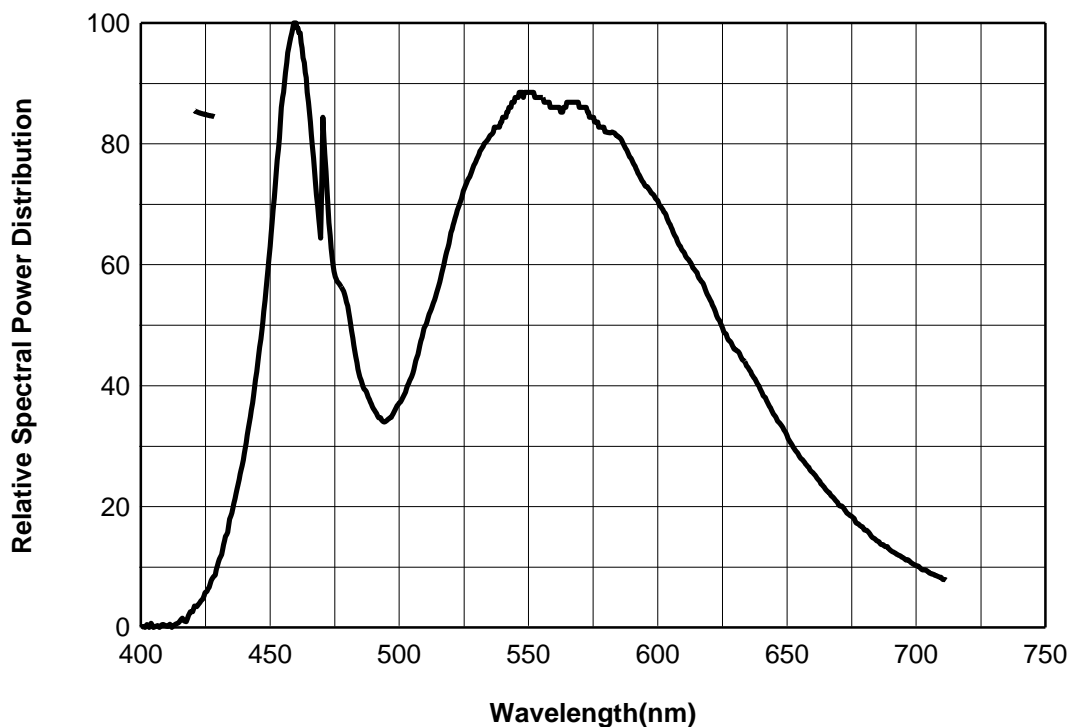
Item	Symbol	Maximum Rated Value	Unit	
Power Dissipation	P _D	120	mW	T _a =25°C
Forward Current	I _F	30	mA	T _a =25°C
Reverse Voltage	V _R	5	V	T _a =25°C
Operating Temperature	T _{OPR}	-30 ~ +80	°C	
Storage Temperature	T _{STG}	-40 ~ +80	°C	
Thermal resistance				
Junction/ambient	R _{thJA}	165	K/W	T _a =25°C
Junction/solder point	R _{thJS}	135	K/W	T _s =25°C
Temperature Coefficient of Forward Voltage	TC _V	-1.5~-2.0	mV/K	T _a =25°C
Soldering Temperature	T _{SOL}	260	°C	

‡Soldering condition: Soldering condition must be completed within 3 seconds at 260°C

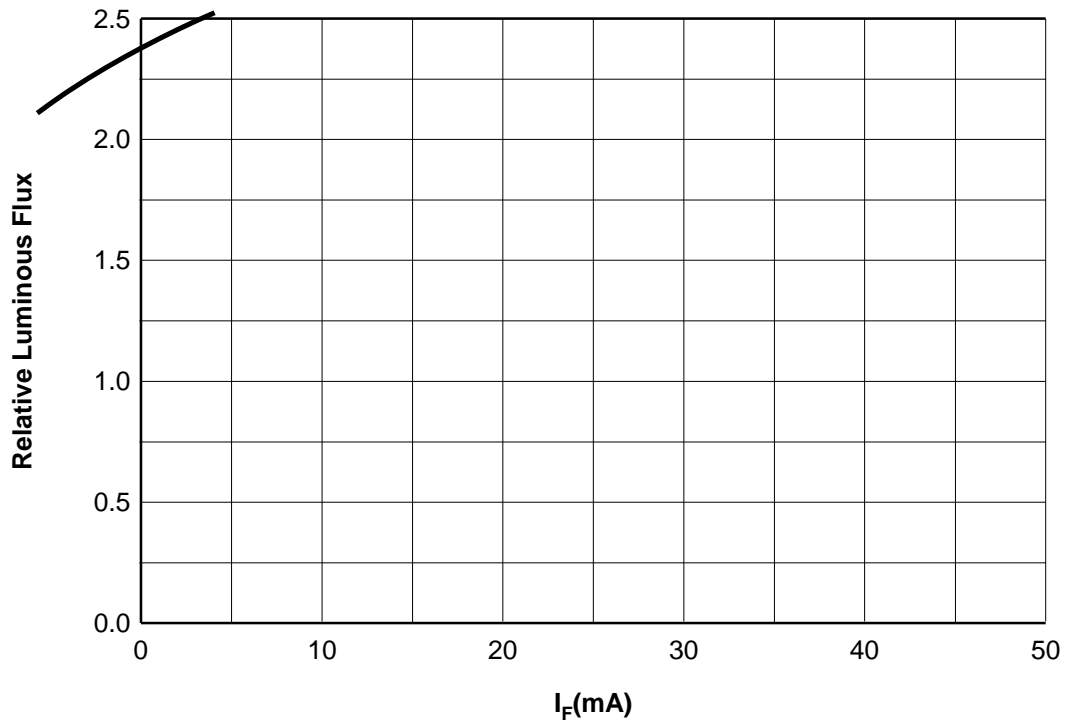
◆ Electro-Optical Characteristics [Ta=25°C]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =20mA		3.10	3.60	V
		I _F =30mA		3.20	4.00	
Chromaticity Coordinate	CIE x	I _F =20mA		0.34		-
Chromaticity Coordinate	CIE y	I _F =20mA		0.36		
Color Temperature	T _c	I _F =20mA		4700		K
		I _F =30mA		4750		
General Color Rendering Index	Ra	I _F =20mA		71		-
		I _F =30mA		71		
Total Radiated Power	P _o	I _F =20mA		-		mW
		I _F =30mA		-		
Brightness	I _v	I _F =20mA		2000		mcd
		I _F =30mA		3000		
Luminous Flux	φ _v	I _F =20mA		5		lm
		I _F =30mA		7.4		
Optical Efficient	η _{opt}	I _F =20mA		80		lm/W
		I _F =30mA		75		
Viewing Half Angle	θ _{1/2}	I _F =20mA		±55		deg.

◆ Relative Spectral Distribution vs. Wavelength [Ta=25°C; I_F=20mA]



◆ Relative Luminous Flux vs. Forward Current [Ta=25°C]



◆ Forward Current Characteristics [Ta=25°C]

