

SMT405-S1

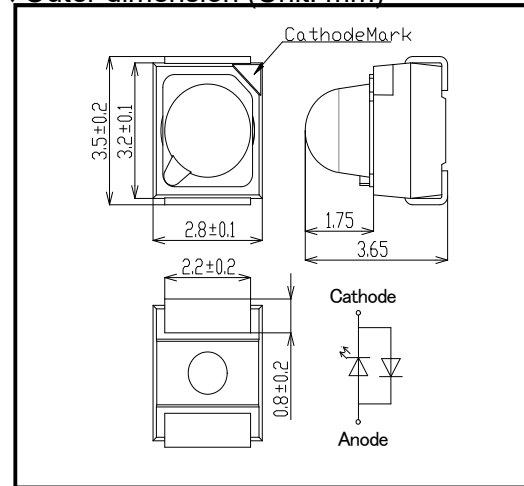
High Performance TOP LED

SMT405-S1 consists of an InGaN LED mounted on the lead frame as TOP LED package, and is 75mW/sr of Radiant Intensity. It emits a spectral band of radiation at 405nm.

◆ Specifications

- 1) Product Name TOP LED
- 2) Type No. SMT405-S1
- 3) Chip
 - (1) Chip Material InGaN
 - (2) Peak Wavelength 405nm typ.
- 4) Package
 - (1) Lead Frame Die Silver Plated
 - (2) Package Resin PA6T Resin
 - (3) Lens Silicone presin

◆ Outer dimension (Unit: mm)



◆ Absolute Maximum Ratings [Ta=25°C]

Item	Symbol	Maximum Rated Value	Unit
Power Dissipation	P _D	200	mW
Forward Current	I _F	50	mA
Pulse Forward Current	I _{FP}	100	mA
Reverse Voltage	V _R	not designed for reverse operation	V
Thermal Resistance	R _{thja}	80	K/W
Junction Temperature	T _j	120	°C
Operating Temperature	T _{OPR}	-40 ~ +100	°C
Storage Temperature	T _{STG}	-40 ~ +100	°C
Soldering Temperature	T _{SOL}	250	°C

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

‡Soldering condition: Soldering condition must be completed within 5 seconds at 250°C

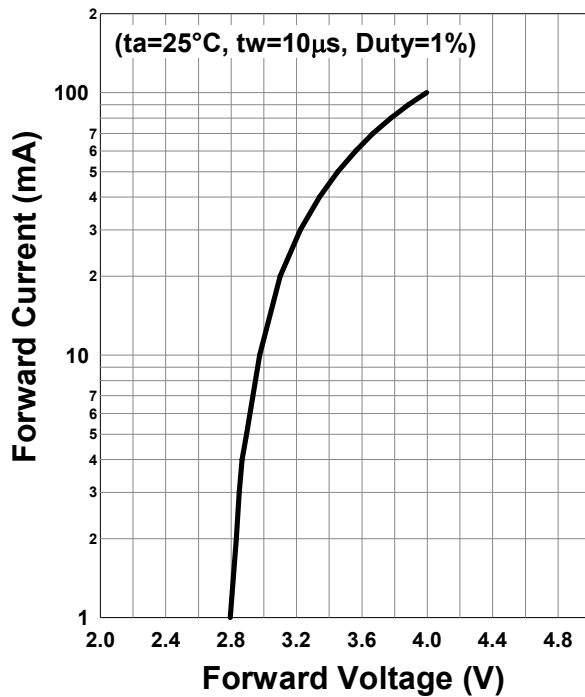
◆ Electro-Optical Characteristics [Ta=25°C typ.]

Item	Symbol	Condition	Minimum	Typical	Maximum	Unit
Forward Voltage	V _F	I _F =20mA		3.1	4.0	V
	V _{FP}	I _{FP} =100mA		4.0		
Total Radiated Power	P _O	I _F =20mA		26		mW
		I _{FP} =100mA		110		
Radiant Intensity	I _E	I _F =20mA		17		mW/sr
		I _{FP} =100mA		75		
Luminous Flux	Φ _v	I _F =20mA		90		lm
Peak Wavelength	λ _P	I _F =20mA	395	405	415	nm
Half Width	Δλ	I _F =20mA		15		nm
Viewing Half Angle	θ _{1/2}	I _F =20mA		±6		deg.
Rise Time	t _r	I _F =20mA		35		ns
Fall Time	t _f	I _F =20mA		45		ns

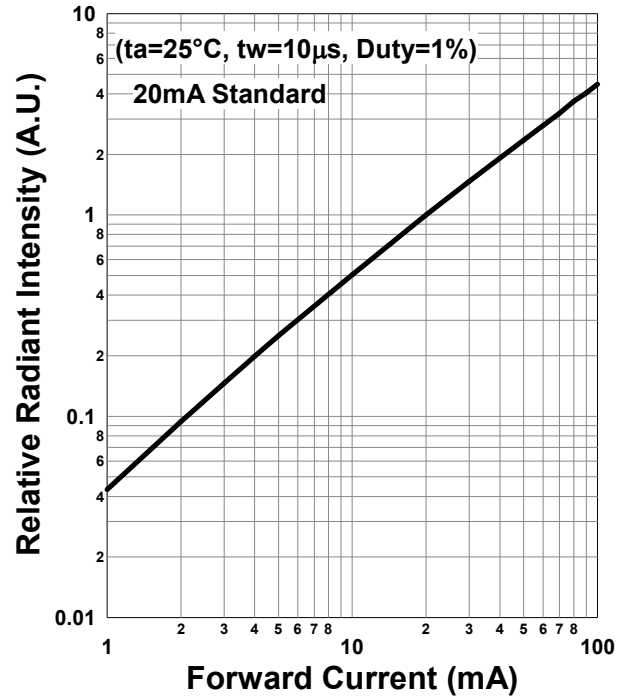
‡Radiated Power is measured by S3584-08.

‡Radiant Intensity is measured by CIE127-2007 Condition B.

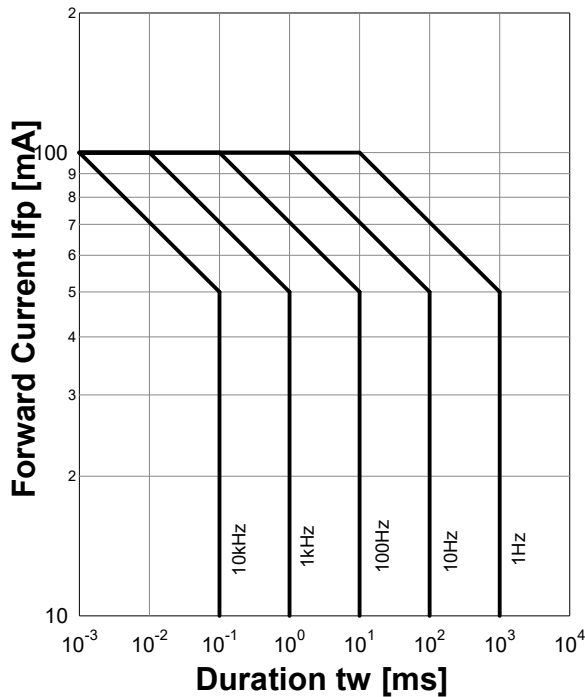
Forward Current - Forward Voltage



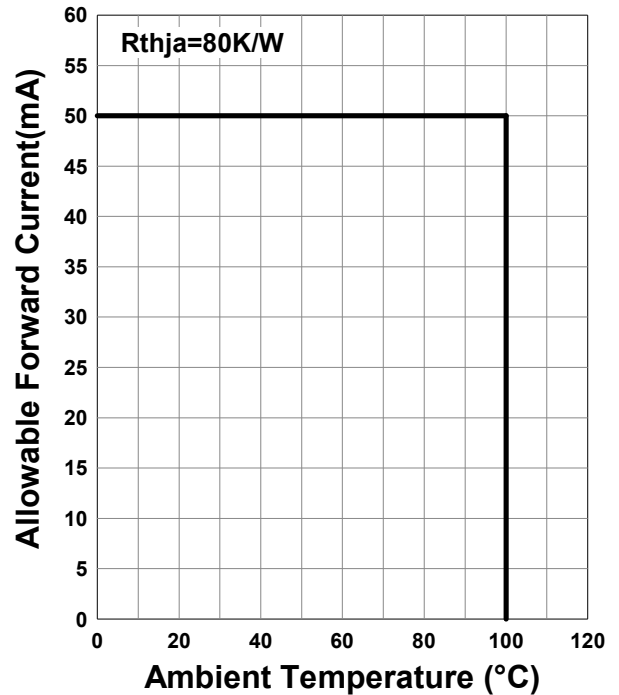
Relative Radiant Intensity - Forward Current



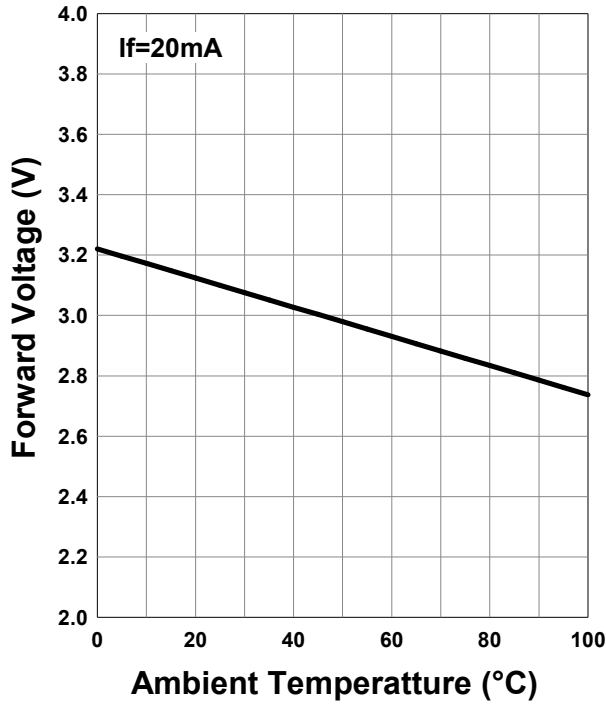
Forward Current - Pulse Duration



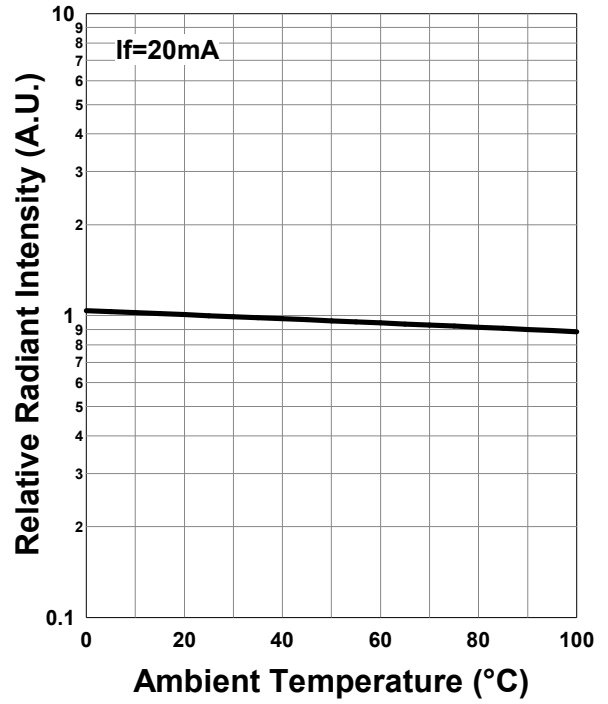
Allowable Forward Current - Ambient Temperature



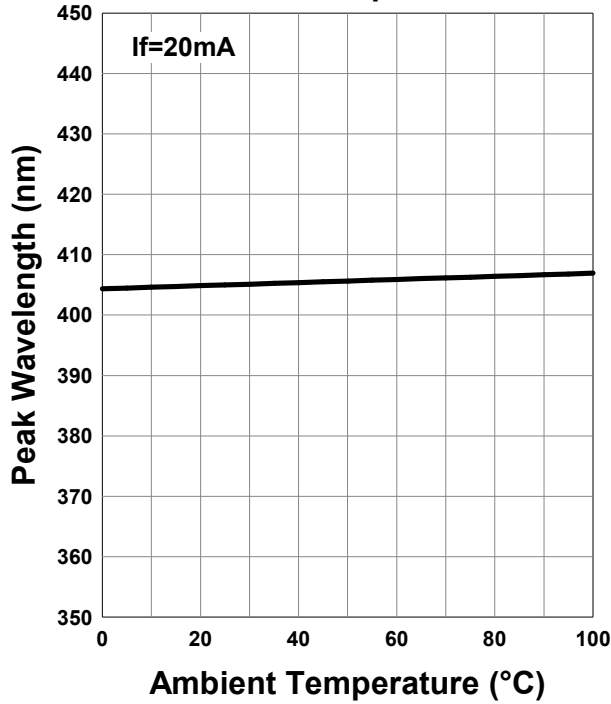
Forward Voltage - Ambient Temperature



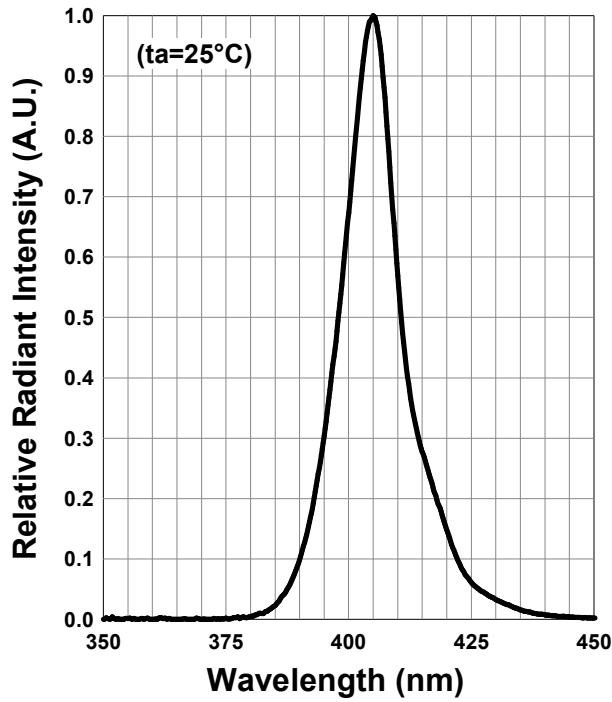
Relative Radiant Intensity - Ambient Temperature



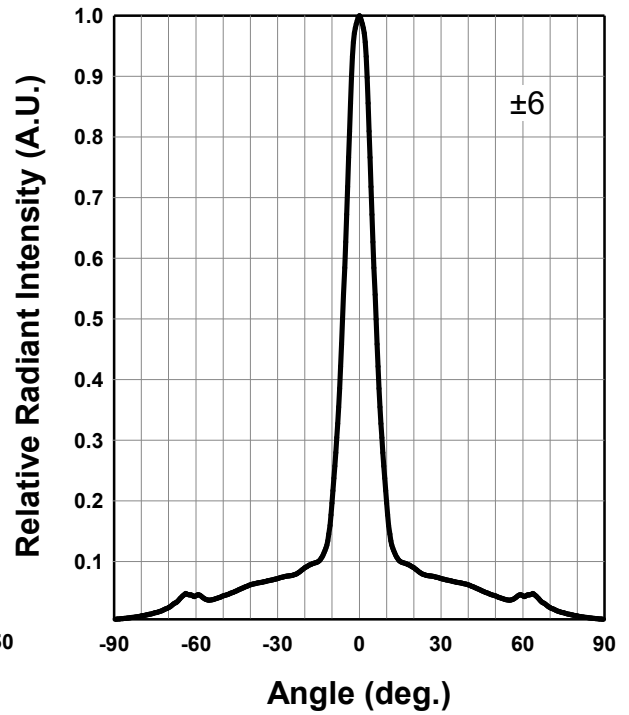
Peak Wavelength - Ambient Temperature



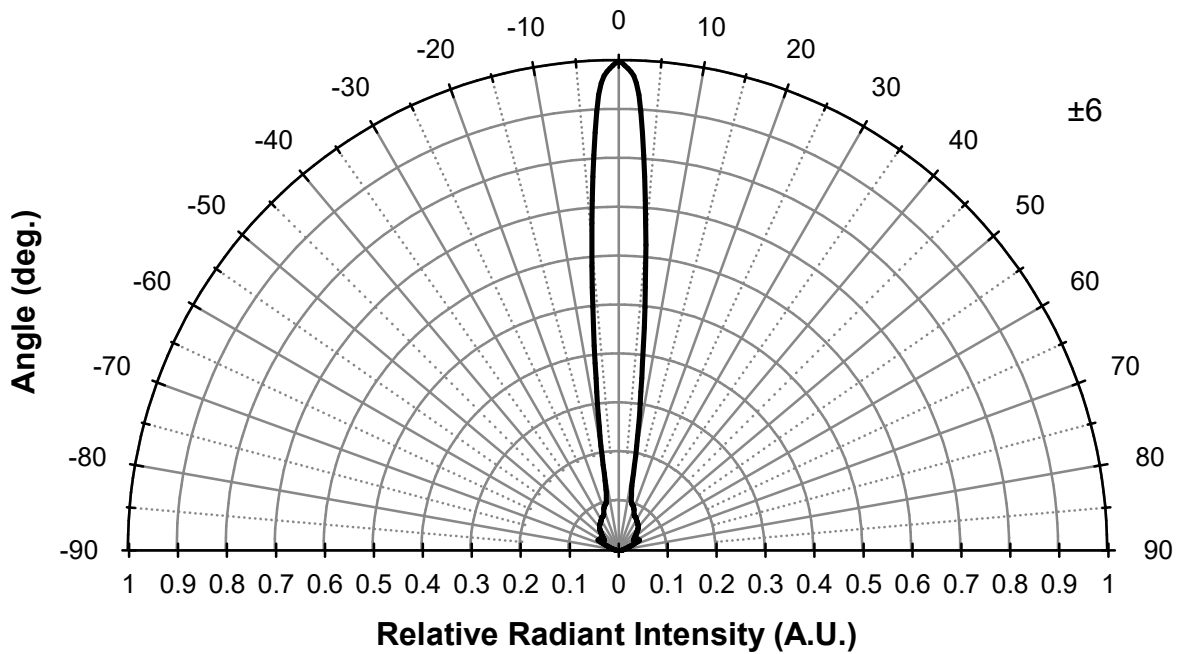
Relative Spectral Emission



Radiation Characteristics

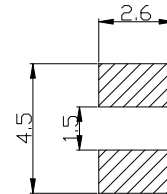
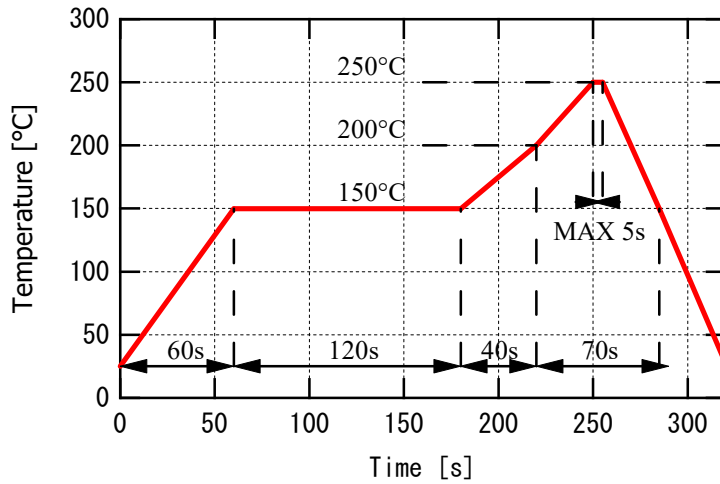


Radiation Characteristics



◆ SMD Application

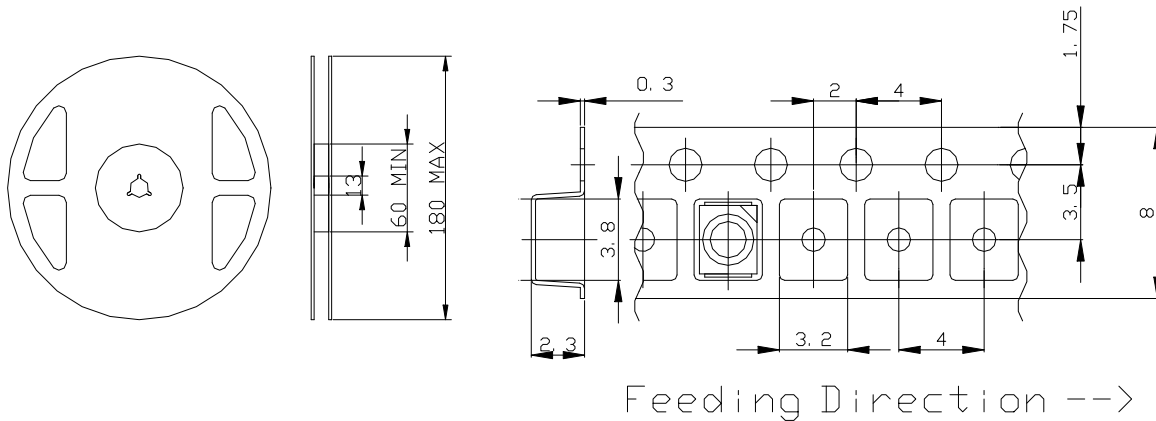
IR-Reflow Soldering Profile for lead free soldering



◆ Recommended Lnd Layout (Unit : mm)

◆ SMD Packing

Tape and Reel Dimensions (Unit: mm)



◆ Wrapping

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

Disclaimer

Product specifications and data shown in this product catalog are subject to change without notice for the purposes of improving product performance, reliability, design, or otherwise.

Product data and parameters in this catalog are typical values based on reasonably up-to-date measurements. Product data and parameters may vary by user application and over time.

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2014.06