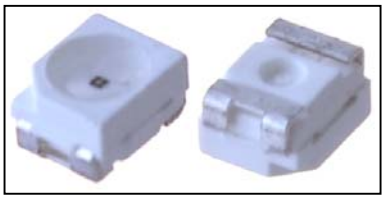
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SMT720



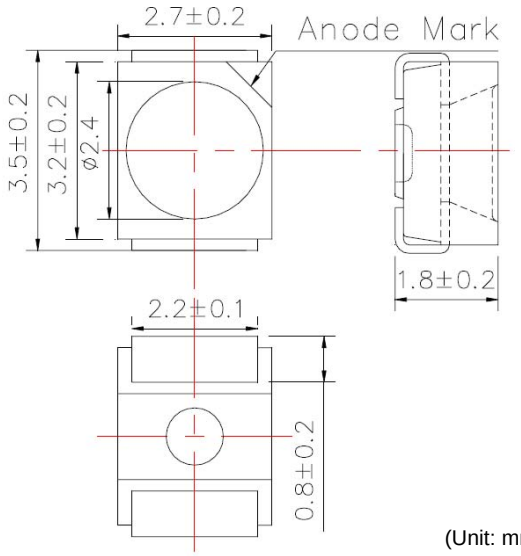
TECHNICAL DATA

Visible LED, SMT AlGaAs

SMT720 is a AlGaAs LED mounted on the lead frame as TOP LED package and sealed with epoxy resin for damp proof. On forward bias, it emits a radiation of typical 8 mW at a peak wavelength of 720 nm.

Specifications

- Structure: AlGaAs
- Peak Wavelength: typ. 720 nm
- Optical Output Power: typ. 8 mW
- Package: PPA resin, epoxy resin



(Unit: mm)

Absolute Maximum Ratings (T_a=25°C)

Item	Symbol	Value	Unit
Power Dissipation	P_D	100	mW
Forward Current	I_F	50	mA
Pulse Forward Current**	I_{FP}	200	mA
Reverse Voltage	V_R	5	V
Operating Temperature	T_{opr}	-20 … +80	°C
Storage Temperature	T_{stg}	-30 … +80	°C
Soldering Temperature *	T_{sol}	240	°C

* must be completed within 5 seconds
** max duty cycle 1%, max puls width 10µs

Electro-Optical Characteristics

Item	Symbol	Condition	Min.	Typ.	Max.	Unit
Forward Voltage	V_F	I_F = 50 mA	-	1.90	2.30	V
Reverse Current	I_R	V_R = 5 V	-	-	10	µA
Total Radiated Power*	P_O	I_F = 50 mA	4.0	8.0	-	mW
Radiation Intensity	I_E	I_F = 50 mA	2.0	5.0	-	mW/sr
Peak Wavelength	λ_P	I_F = 50 mA	-	720	-	nm
Half Width	$\Delta\lambda$	I_F = 50 mA	-	20	-	nm
Viewing Half Angle	$\Theta_{1/2}$	I_F = 50 mA	-	±55	-	deg.
Rise Time	t_R	I_F = 50 mA		80		ns
Fall Time	t_F	I_F = 50 mA		80		ns

Total Radiated Power is measured by Photodyne #500
Radiant Intensity is measured by Tektronix J-6512

Notes

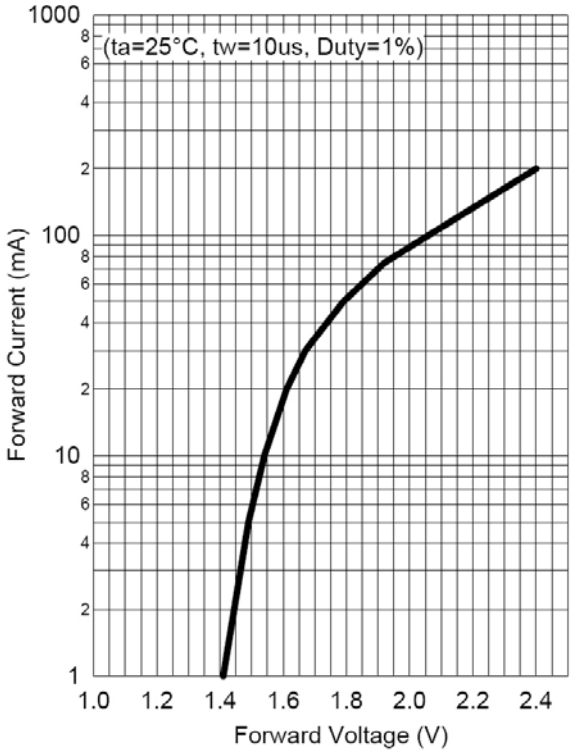
- Do not view directly into the emitting area of the LED during operation!
- The above specifications are for reference purpose only and subjected to change without prior notice.



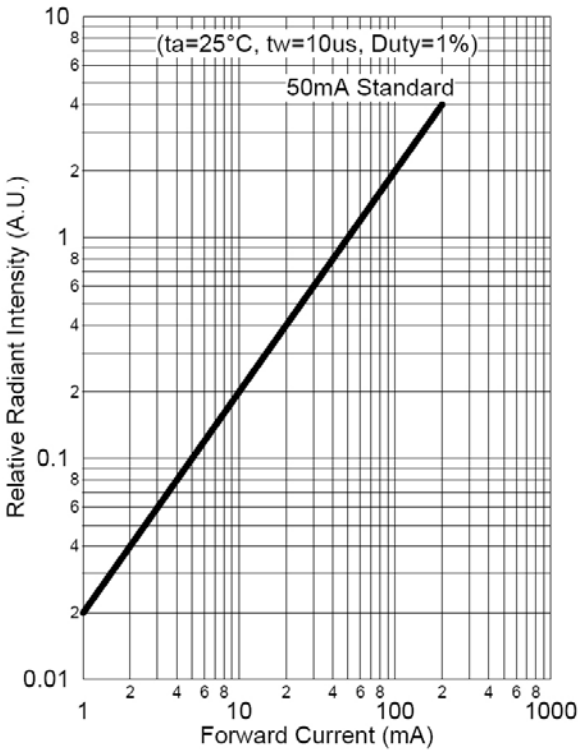
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Typical Performance Curves

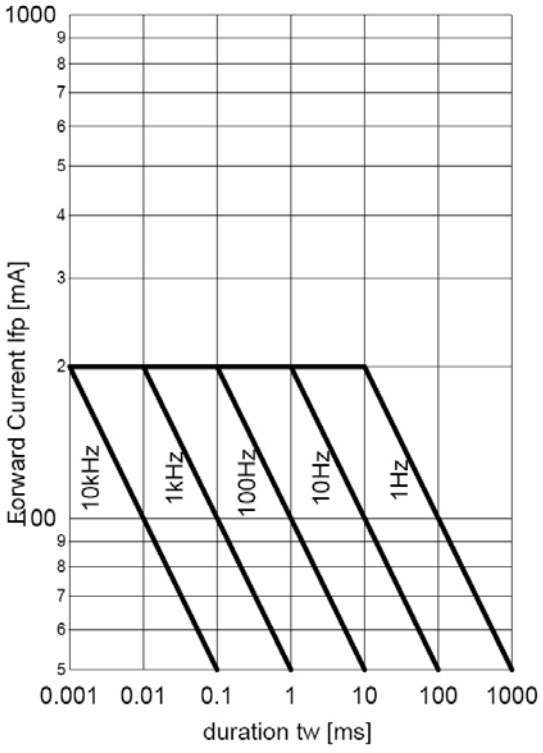
Forward Current – Forward Voltage



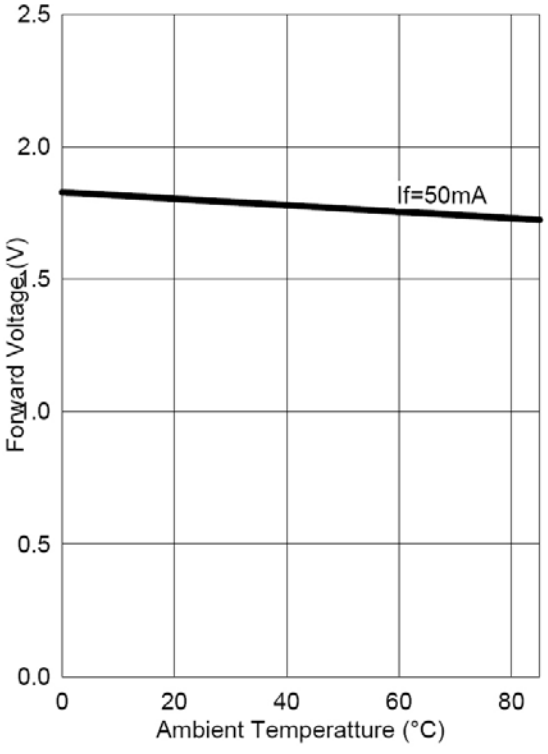
Relative Radiant Intensity – Pulsed Forward Current



Forward Current – Pulse Duration

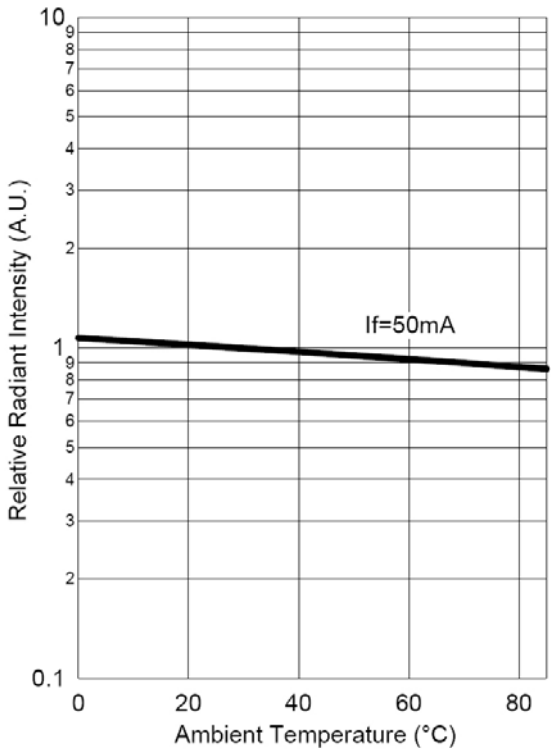


Forward Voltage – Ambient Temperature

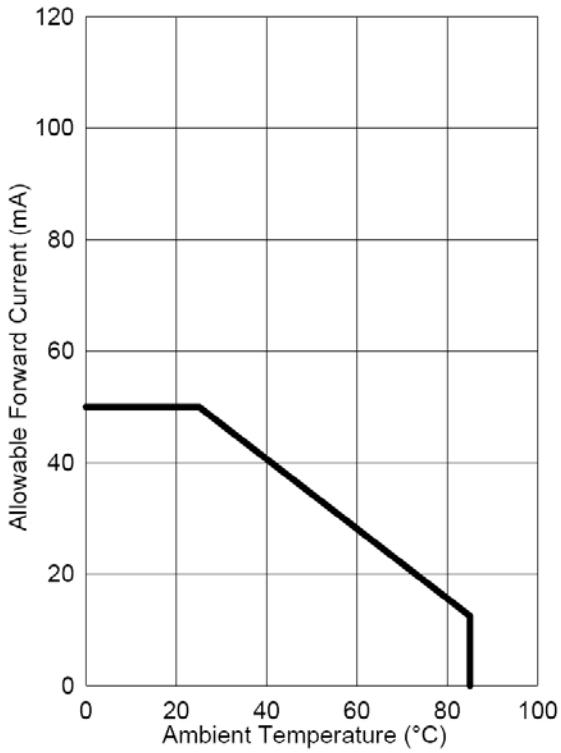


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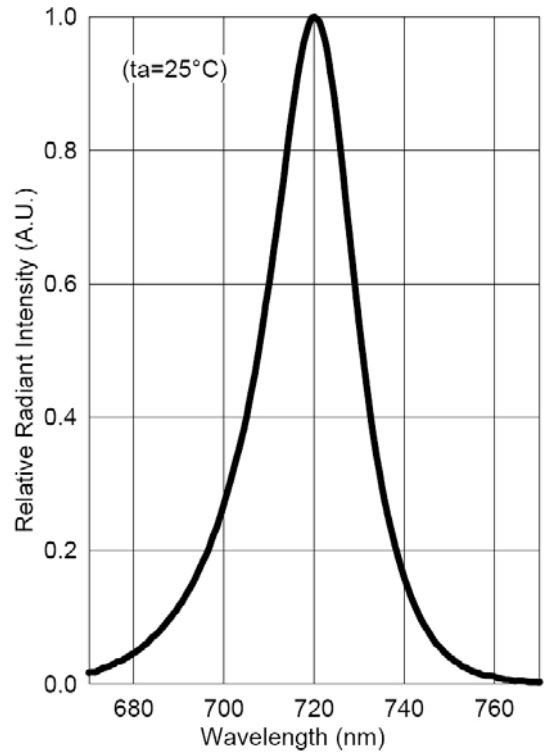
Relative Radiant Intensity – Ambient Temperature



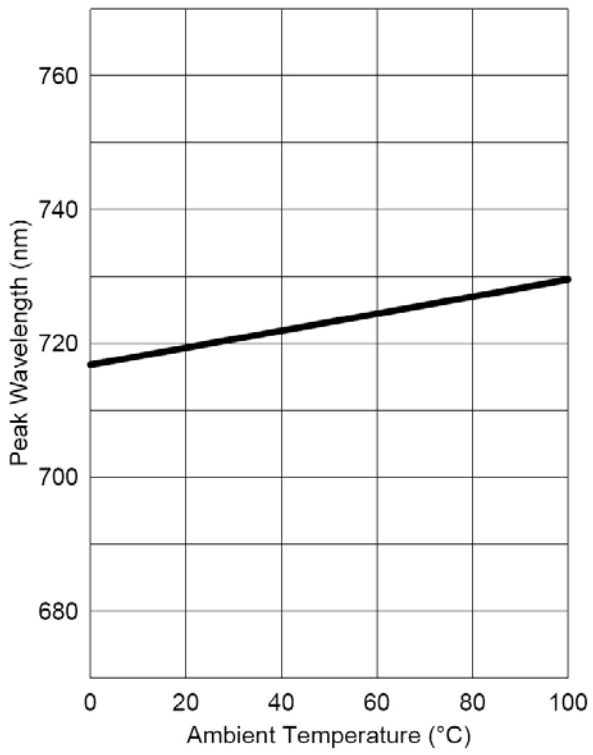
Allowable Forward Current – Ambient Temperature



Peak Wavelength



Peak Wavelength – Ambient Temperature

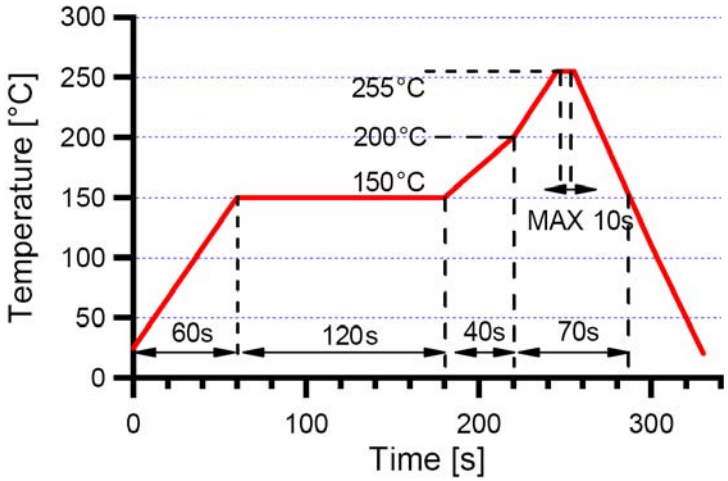


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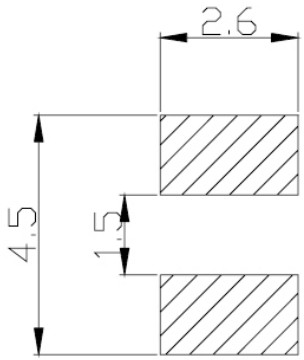
Soldering Conditions

- DO NOT apply any stress to the lead particularly when heat.
- After soldering the LEDs should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.

Temperature Profile



PCB Footprint Layout



(Unit: mm)

Static Electricity

- LEDs are very sensitive to Static Electricity and surge voltage. It is recommended to always wear a wrist band or an anti-electrostatic glove when handling the LEDs.
- All devices, equipment and machinery must be grounded properly. It is recommended that precautions should be taken against surge voltage to the equipment that mounts the LEDs.