imall

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

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Tel: +86-755-8981 8866 Fax: +86-755-8427 6832 Email & Skype: info@chipsmall.com Web: www.chipsmall.com Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



PRELIMINARY SPEC

2.5X2.0mm SURFACE MOUNT LED LAMP

Part Number: AT2520QB10ZS

Blue



ATTENTION OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC DISCHARGE SENSITIVE DEVICES

Features

- Dimension: 2.5mmx 2.0mm x 0.8mm.
- Low thermal resistance.
- Ceramic package with silicone resin.
- Small package with high efficiency.
- Surface mount technology.
- ESD protection.
- Package : 2000pcs / reel.
- Moisture sensitivity level : level 2a.
- Soldering methods: IR reflow soldering.
- · RoHS compliant.

Application Note

Static electricity and surge damage the LEDS.

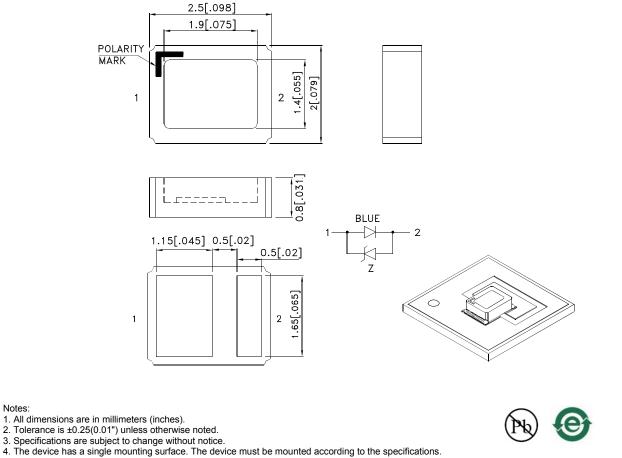
It is recommended to use a wrist band or anti-electrostatic glove when handling the LEDs.

All devices, equipment and machinery must be electrically grounded.

Typical Applications

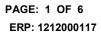
PDAs

- Room lighting
- Architectural lighting
- Decorative/pathway lighting
- Front panel backlight
- Exterior automotive lighting:
- (brake lights, turn lights, backlighting)



Notes:

DATE: JAN/13/2009 DRAWN: Y.F.Lu

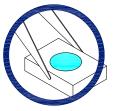


Package Dimensions

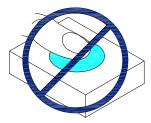
Handling Precautions

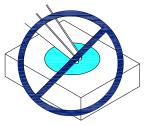
Compare to epoxy encapsulant that is hard and brittle, silicone is softer and flexible. Although its characteristic significantly reduces thermal stress, it is more susceptible to damage by external mechanical force. As a result, special handling precautions need to be observed during assembly using silicone encapsulated LED products. Failure to comply might leads to damage and premature failure of the LED.

1. Handle the component along the side surfaces by using forceps or appropriate tools.



2. Do not directly touch or handle the silicone lens surface. It may damage the internal circuitry.





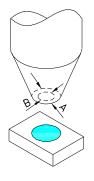
3. Do not stack together assembled PCBs containing exposed LEDs. Impact may scratch the silicone lens or damage the internal circuitry.



4. The outer diameter of the SMD pickup nozzle should not exceed the size of the LED to prevent air leaks. The inner diameter of the nozzle should be as large as possible.

5. A pliable material is suggested for the nozzle tip to avoid scratching or damaging the LED surface during pickup.

6. The dimensions of the component must be accurately programmed in the pick-and-place machine to insure precise pickup and avoid damage during production.



Selection Guide)					
Part No.	Dice	luminous Intensity [2] lv(mcd)@ 250mA		Φν (lm) [2] @ 250mA		Viewing Angle [1]
		Min.	Тур.	Min.	Тур.	2 θ 1/2
AT2520QB10ZS	Blue (InGaAIN)	1800	2500	9	12	120 °

Notes:

1. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
2. Luminous intensity/ luminous Flux: +/-15%.

Absolute Maximum Ratings at TA=25°C

Parameter	Symbol	Value	Unit	
Power dissipation	Pt	1.0	W	
Junction temperature[1]	TJ	110	°C	
Operating Temperature	Тор	-40 To +100	°C	
Storage Temperature	Tstg	-40 To +120	°C	
DC Forward Current [1]	lF	250	mA	
Peak Forward Current [2]	Іғм	400	mA	
Thermal resistance [1]	Rth j-a	110	°C/W	
Electrostatic Discharge Threshold (HBM)	8000	V		

Notes:

1. Results from mounting on PC board FR4, mounted on pc board-metal core PCB is recommend

for lowest thermal resistance. 2. 1/10 Duty Cycle, 0.1ms Pulse Width.

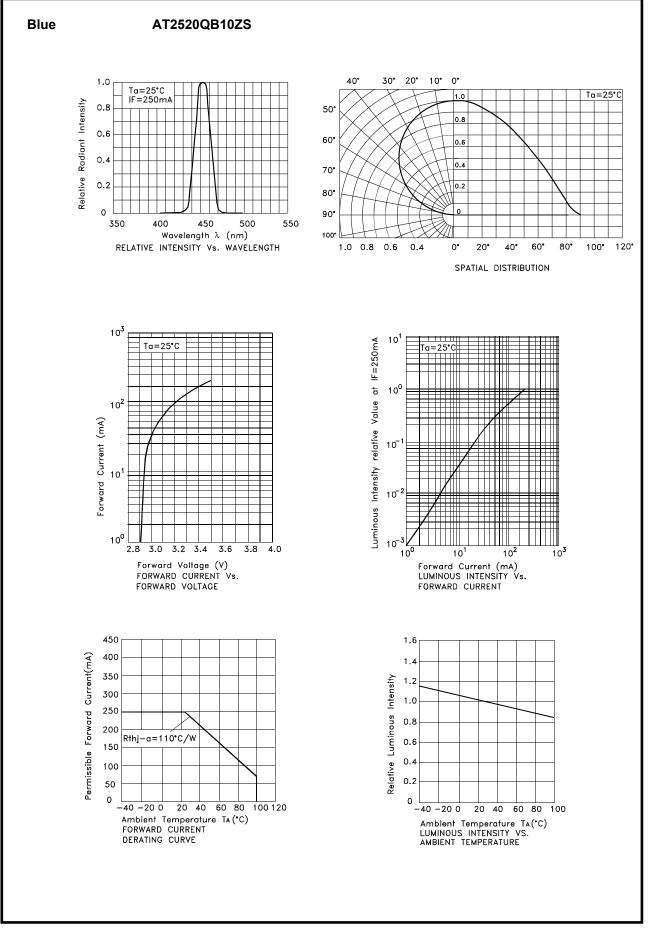
Electrical / Optical Characteristics at TA=25°C

Parameter	Symbol	Value	Unit	
Wavelength at peak emission I⊧=250mA [Typ.]	λ peak	452	nm	
Dominant Wavelength I⊧=250mA [Typ.]	λ dom [1]	458	nm	
Spectral bandwidth at 50% Φ REL MAX IF=250mA [Typ.]	Δλ	20	nm	
Forward Voltage IF=250mA [Min.]		3.0		
Forward Voltage I⊧=250mA [Typ.]	VF [2]	3.5	V	
Forward Voltage IF=250mA [Max.]		4.0		
Temperature coefficient of λ peak IF=250mA, -10 ° C \leq T \leq 100 ° C [Typ.]	$TC \lambda$ peak	0.13	nm/°C	
Temperature coefficient of λ dom IF=250mA, -10 ° C \leq T \leq 100 ° C [Typ.]	TC λ dom	0.11	nm/°C	
Temperature coefficient of VF IF=250mA, -10 $^\circ$ C \leq T \leq 100 $^\circ$ C [Typ.]	TCv	-3.0	mV/°C	

Notes:

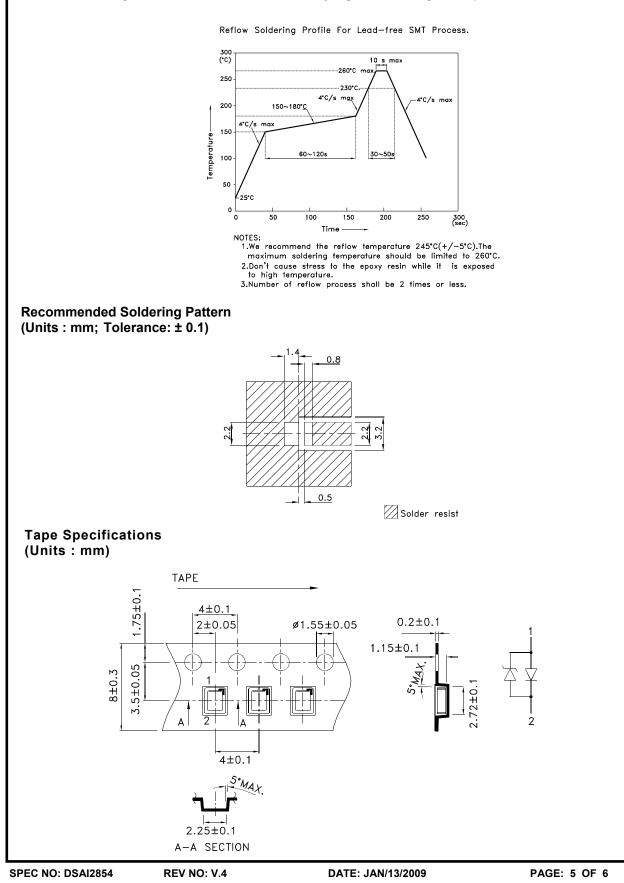
1.Wavelength: +/-1nm.

2. Forward Voltage: +/-0.1V.



AT2520QB10ZS

Reflow soldering is recommended and the soldering profile is shown below. Other soldering methods are not recommended as they might cause damage to the product.



APPROVED: WYNEC CHECKED: Allen Liu DRAWN: Y.F.Lu

ERP: 1212000117

