SunLED
www.SunLEDusa.com

Part Number: **XZDG10X95W-2**

APOLLO

PRELIMINARY SPEC

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

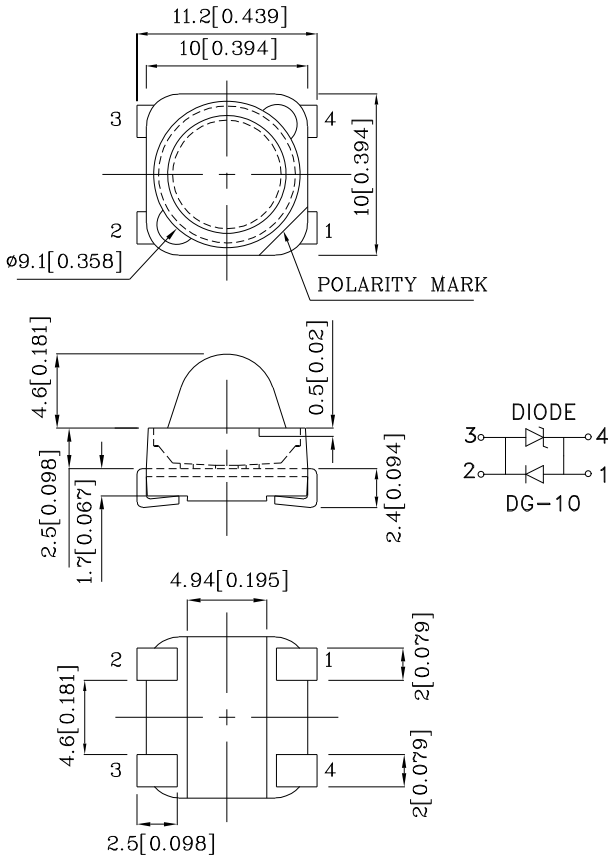
Features

- PLCC-4 PACKAGE.
- SINGLE COLOR.
- HIGH LUMINANCE.
- HIGH POWER,OPERATING CURRENT @ 350MA.
- SUITABLE FOR ALL SMT ASSEMBLY METHODS.
- PACKAGE : 300PCS / REEL.
- MOISTURE SENSITIVITY LEVEL : LEVEL 4.
- RoHS COMPLIANT.

Applications

- Traffic signaling.
- Backlighting (illuminated advertising , general lighting).
- Interior and exterior automotive lighting.
- Substitution of micro incandescent lamps.
- Portable light source (e.g. bicycle flashlight).
- Signal and symbol luminaire for orientation.
- Marker lights (e.g. steps, exit ways, etc).
- Decorative and entertainment lighting .
- Indoor and outdoor commercial and residential architectural lighting.

Outline Drawings



Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is ± 0.25(0.01") unless otherwise noted.

Part Number	Emitting Color	Emitting Material	Lens-color	Luminous Intensity (IF=350mA) cd		Luminous Flux (IF=350mA) lm		Wavelength nm λ P	Viewing Angle 2 θ 1/2 [2]
				min.	typ.	min.	typ.		
XZDG10X95W-2	Green	AlInGaN	Water Clear	50	130	25	70	520	20°

Absolute Maximum Ratings at T_A=25°C

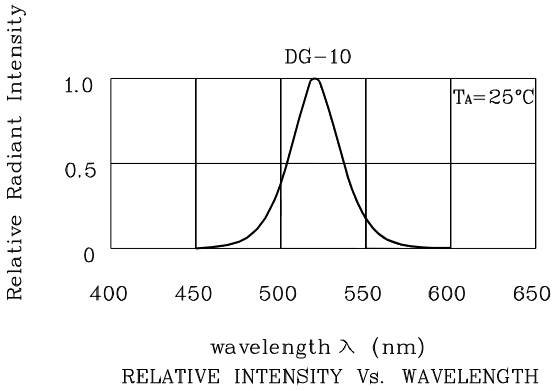
Parameter	Symbol	Value	Unit
Power dissipation	P_t	1.33	W
Junction temperature	T_J	110	°C
Operating Temperature	Top	-40 To +85	°C
Storage Temperature	Tstg	-40 To +85	°C
DC Forward Current [1]	I_F	350	mA
Peak Forward Current [3]	I_{FM}	500	mA
Thermal resistance [1]	R_{th}	47	°C/W

Notes:
1.Results from mounting on PC board FR4(pad size³100mm² per pad), mounted on pc board-metal core PCB is recommend for lowest thermal Resistance.
2.θ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.
3.1/10 Duty Cycle, 0.1ms Pulse Width.

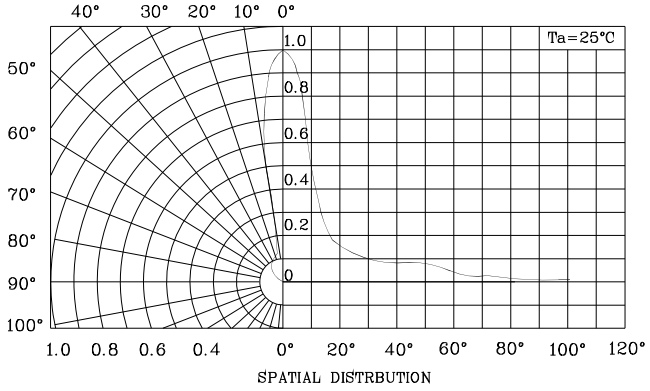
Electrical / Optical Characteristics at T_A=25°C

Parameter	Symbol	Value	Unit
Wavelength at peak emission I_F=350mA [Typ.]	λ peak	525	nm
Dominant Wavelength I_F=350mA [Typ.]	λ dom	530	nm
Spectral bandwidth at 50%Φ REL MAX I_F=350mA [Typ.]	Δλ	35	nm
Forward Voltage I_F=350mA [Min.]	V_F	2.7	V
Forward Voltage I_F=350mA [Typ.]		3.3	
Forward Voltage I_F=350mA [Max.]		3.8	
Temperature coefficient of λ peak I_F=350mA, -10°C≤ T≤100°C [Typ.]	TC λ peak	0.16	nm/°C
Temperature coefficient of λ dom I_F=350mA, -10°C≤ T≤100°C [Typ.]	TC λ dom	0.14	nm/°C
Temperature coefficient of V_F I_F=350mA, -10°C≤ T≤100°C [Typ.]	TC_V	-2.0	mV/°C

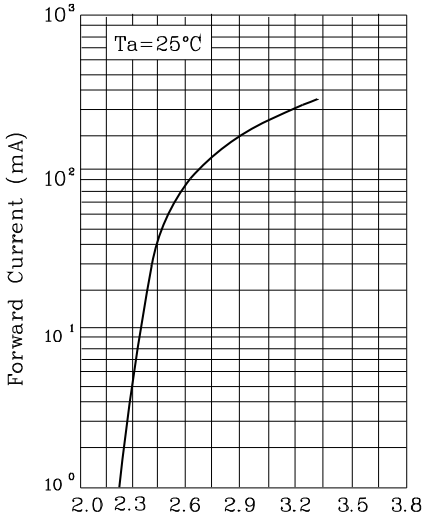
XZDG10X95W-2



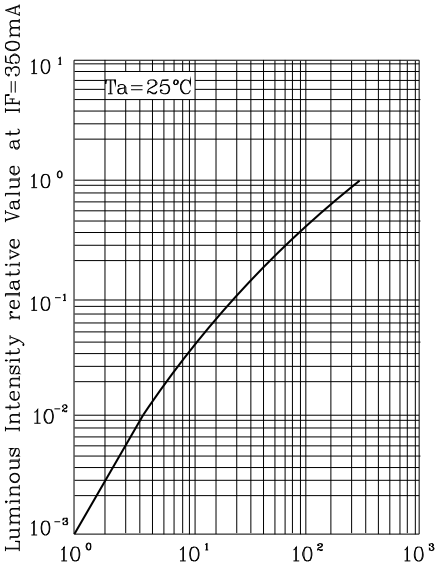
RELATIVE INTENSITY Vs. WAVELENGTH



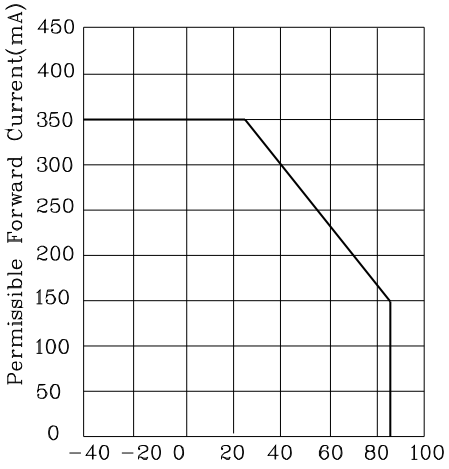
SPATIAL DISTRBUTION



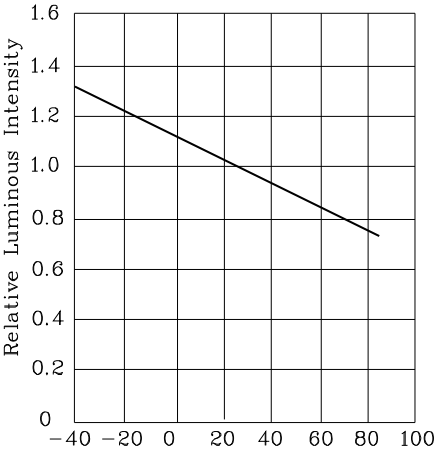
FORWARD CURRENT Vs.
FORWARD VOLTAGE



LUMINOUS INTENSITY Vs.
FORWARD CURRENT

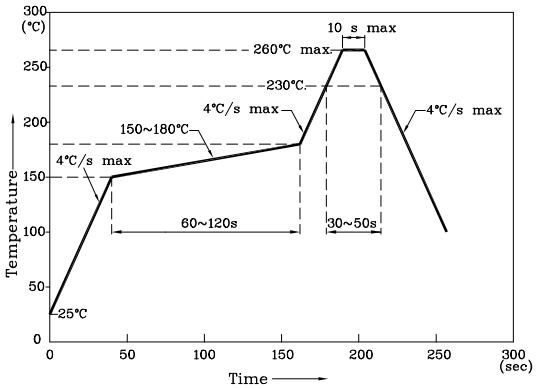


FORWARD CURRENT
DERATING CURVE



LUMINOUS INTENSITY VS.
AMBIENT TEMPERATURE

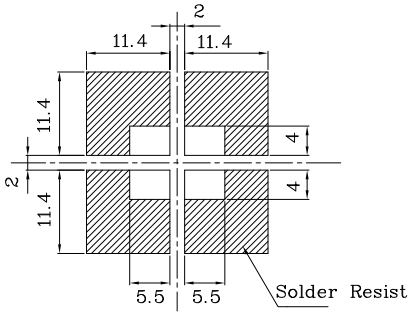
Reflow Soldering Profile For Lead-free SMT Process.



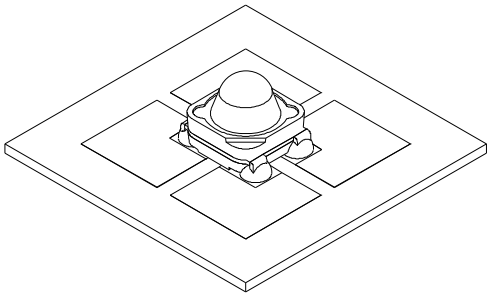
NOTES:

1. Maximum soldering temperature should not exceed 260°c.
2. Recommended reflow temperature: 145°c-260°c.
3. Do not put stress to the epoxy resin during high temperatures conditions.

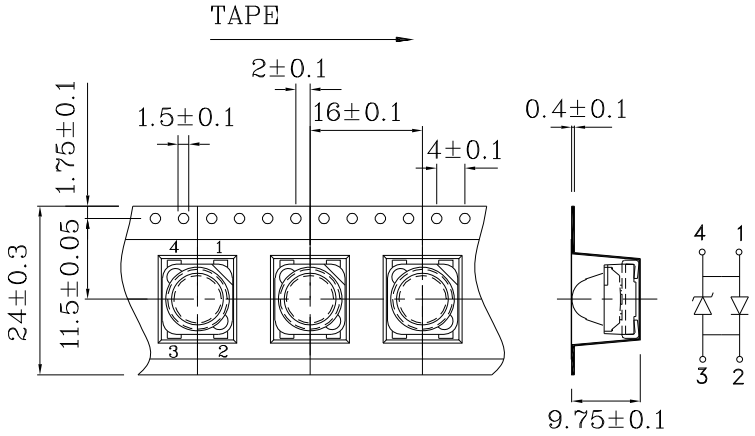
❖ **Recommended Soldering Pattern (Units: mm ; Tolerance: ±0.1)**



❖ **The device has a single mounting surface. The device must be mounted according to the specifications.**



❖ **Tape Specification (Units : mm)**



Remarks:

If special sorting is required (e.g. binning based on forward voltage, luminous intensity / luminous flux or wavelength), the typical accuracy of the sorting process is as follows:

1. Wavelength: +/-1nm
2. Luminous Intensity / Luminous Flux: +/-15%
3. Forward Voltage: +/-0.1V

Note: Accuracy may depend on the sorting parameters.