

**APEX OPTO
CORP**

Side View SMD LED
AOS-S301020Y4IG4H

Features

- Package in 8mm tape on 7" diameter reel.
- Compatible with automatic placement equipment.
- Compatible with infrared and vapor phase reflow solder process.
- Mono-color type.
- Pb-free.
- The product itself will remain within ROHS complaint version.

Descriptions

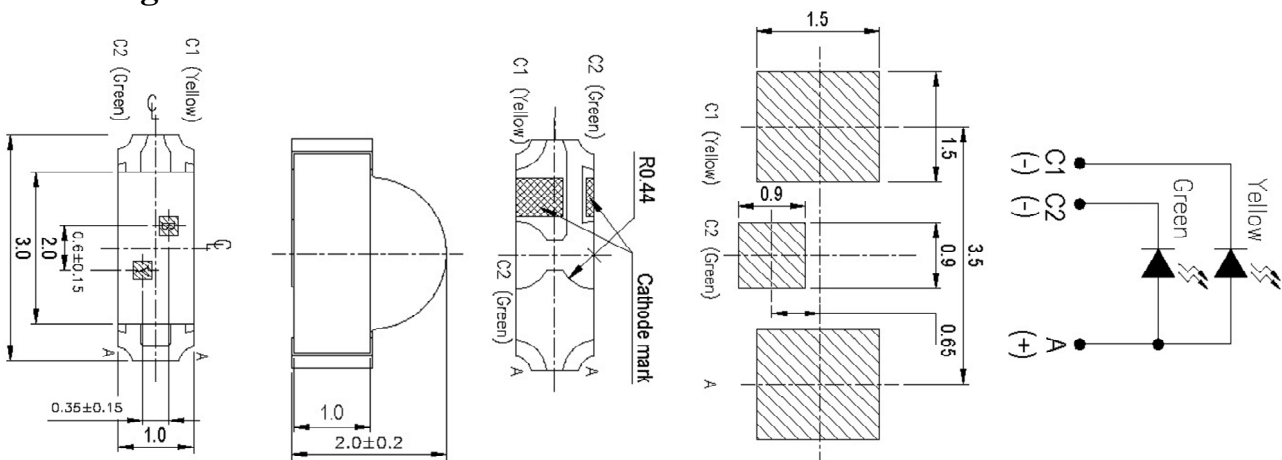
- The SMD Taping is much smaller than lead frame type components, thus enable smaller board size, higher packing density, reduced storage space and finally smaller equipment to be obtained.
- Besides, lightweight makes them ideal for miniature applications. etc.

Applications

- Automotive: backlighting in dashboard and switch.
- Telecommunication: indicator and backlighting in telephone and fax.
- Flat backlight for LCD, switch and symbol.
- General use.



Package Outline Dimensions



For reflow soldering (Propose)

Note: The tolerances unless mentioned is ± 0.1 mm, Unit = mm



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Absolute Maximum Ratings (Ta=25°C)

Parameter	Symbol	Rating	Unit
Reverse Voltage	V _R	5	V
Forward Current	I _F	Y4:25 G4:25	mA
Operating Temperature	T _{opr}	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~+90	°C
Power Dissipation	P _d	Y4:60 G4:60	mW
Peak Forward Current (Duty 1/10 @1KHz)	I _{F (PEAK)}	Y4:60 G4:60	mA

Electro-Optical Characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition
Luminous Intensity	I _v	Y4:45 G4:28	----	Y4:112 G4:72	mcd	I _F =20mA
Viewing Angle	2θ _{1/2}	----	120	----	deg	I _F =20mA
Peak Wavelength	λ _p	----	Y4:591 G4:575	----	nm	I _F =20mA
Dominant Wavelength	λ _d	----	Y4:589 G4:573	----	nm	I _F =20mA
Spectrum Radiation Bandwidth	Δλ	----	Y4:15 G4:20	----	nm	I _F =20mA
Forward Voltage	V _F	1.7	2.0	2.4	V	I _F =20mA
Reverse Current	I _R	----	----	10	μ A	V _R =5V

Notes:

- 1.Tolerance of Luminous Intensity ±10%
- 2.Tolerance of Dominant Wavelength ±1nm
- 3.Tolerance of Forward Voltage ±0.1V



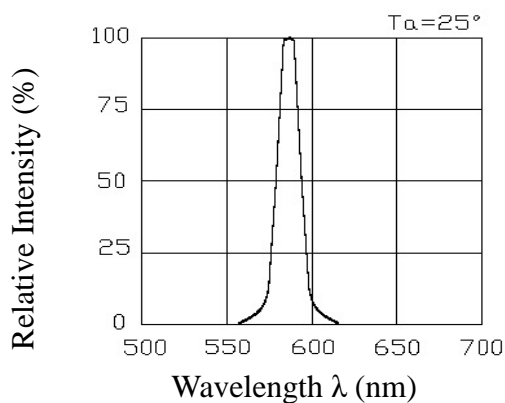
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Typical Electro-Optical Characteristics Curves

Y4

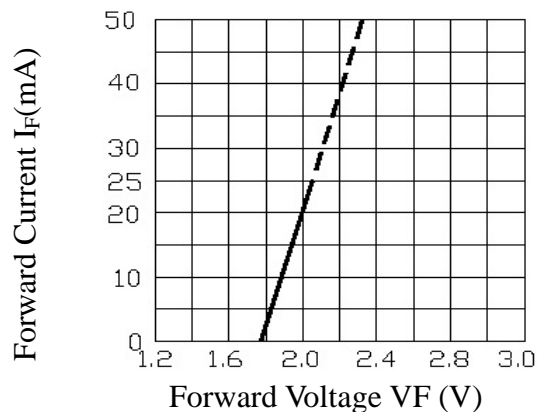
Spectrum Distribution



Forward Current V.S.

Forward Voltage

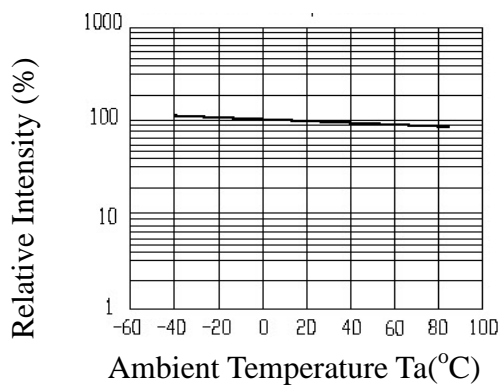
$T_a = 25^\circ$



Relative Intensity V.S.

Ambient Temperature

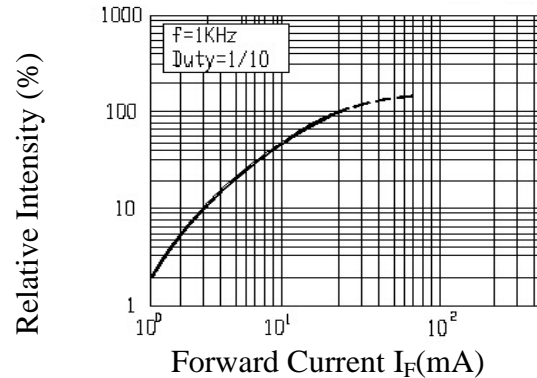
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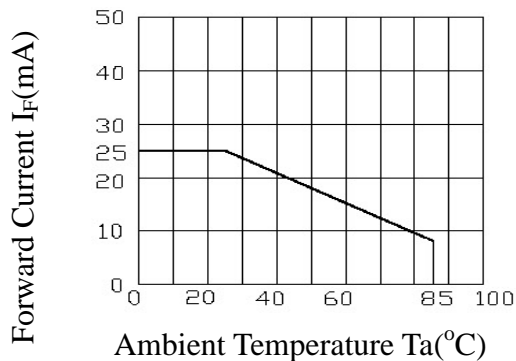
Relative Intensity V.S.

Forward Current I_F (mA)

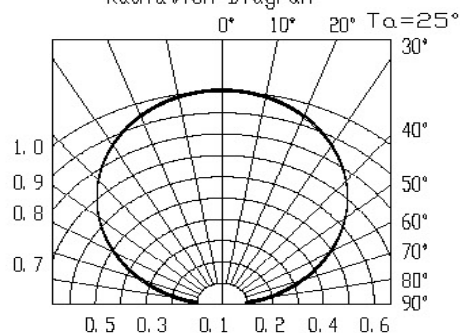
$T_a = 25^\circ$



Forward Current Derating Curve



Radiation Diagram





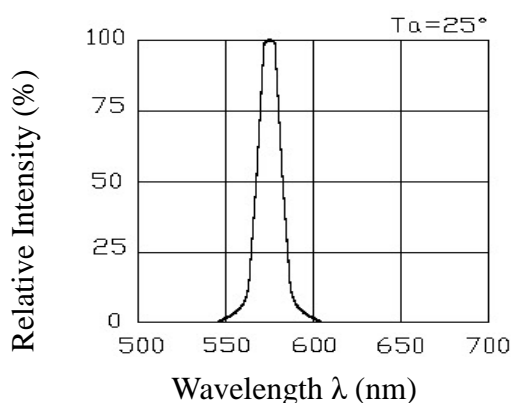
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Typical Electro-Optical Characteristics Curves

G4

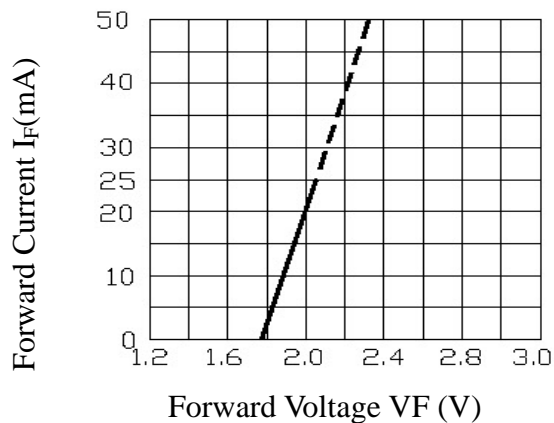
Spectrum Distribution



Forward Current V.S.

Forward Voltage

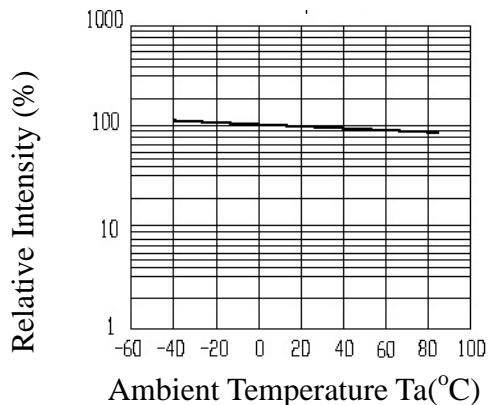
$T_a = 25^\circ$



Relative Intensity V.S.

Ambient Temperature

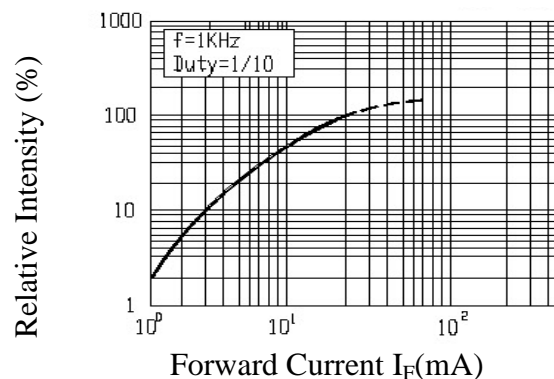
$T_a = 25^\circ$



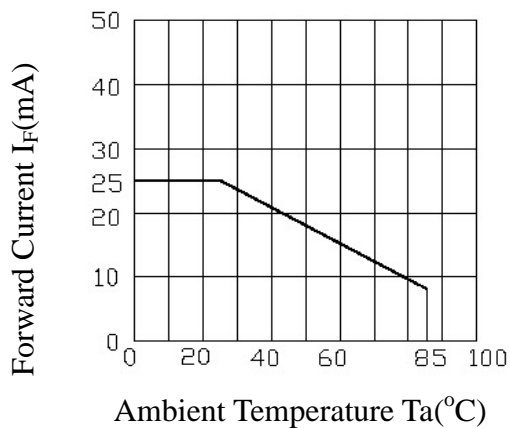
Relative Intensity V.S.

Forward Current I_F (mA)

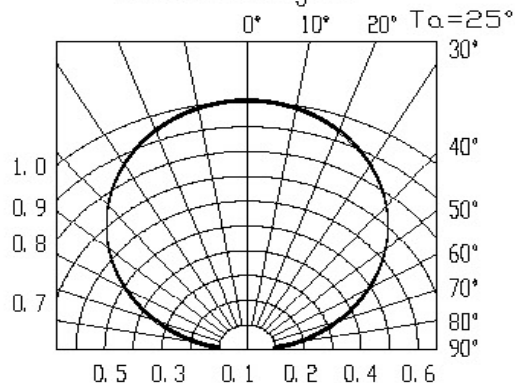
$T_a = 25^\circ$

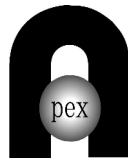


Forward Current Derating Curve



Radiation Diagram





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Label explanation

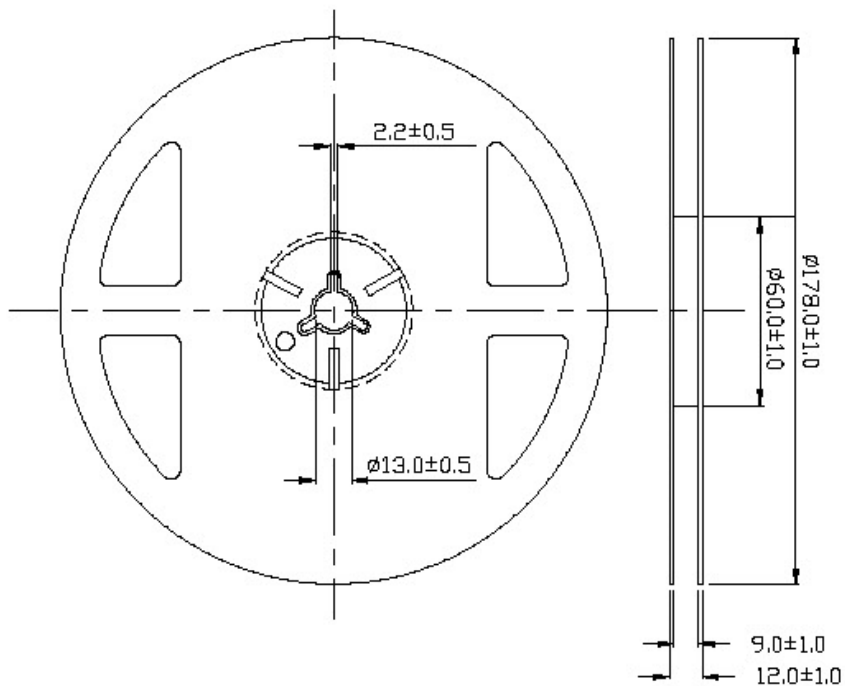
CAT: Luminous Intensity Rank

HUE: Dom. Wavelength Rank

REF: Forward Voltage Rank



Reel Dimensions



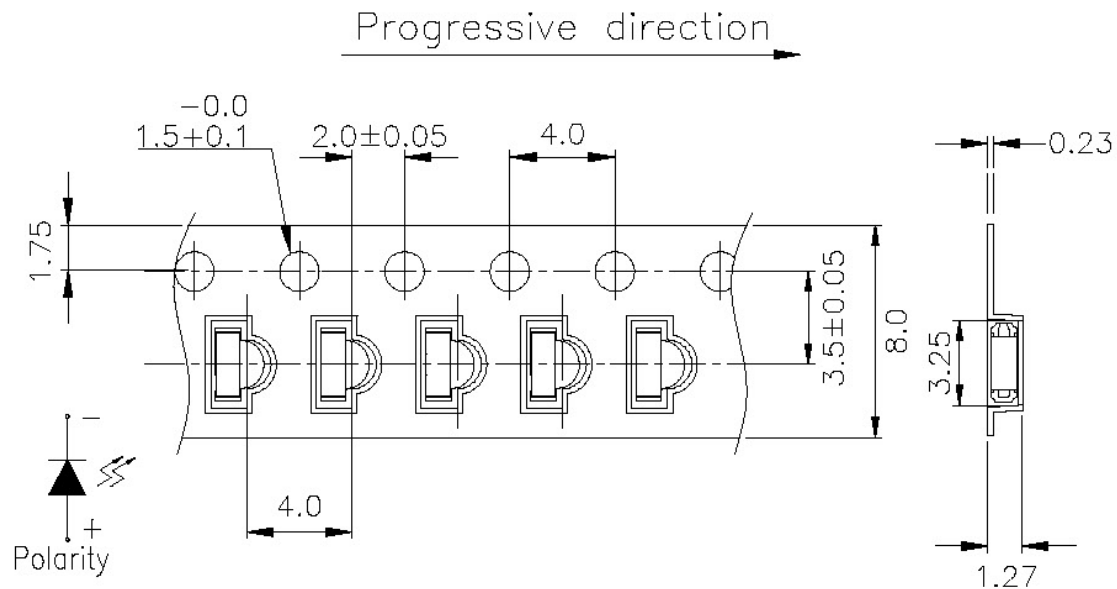
Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$,Unit = mm



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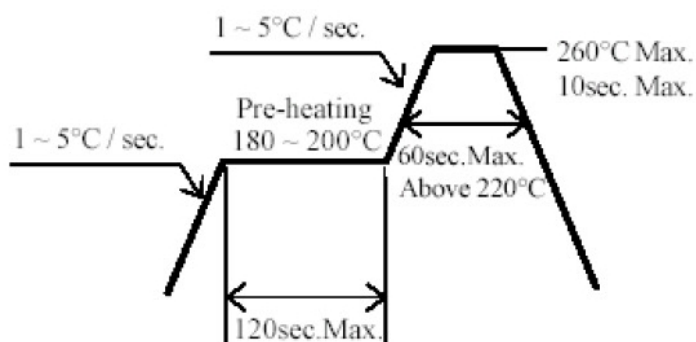
Carrier Tape Dimensions: Loaded quantity 2000 PCS per reel



Note: The tolerances unless mentioned is ± 0.1 mm ,Unit = mm

Soldering Condition

1 Pb-free solder temperature profile



- 2 Reflow soldering should not be done more than two times.
- 3 When soldering, do not put stress on the LEDs during heating.
- 4 After soldering, do not warp the circuit board.