

582 SERIES IR EMC SMD LED 3838 Package

MECHANICAL / SPECIFICATIONS

PART NUMBER:
[582-E26A5-103HPF](#)

DIMENSIONS:
3.80 x 3.80 x 2.38mm

LENS COLOR: Water Clear

STANDARD PACKAGING: 3000 pcs / reel

MSL RATING: 3

VIEWING ANGLE: 50°

CERTIFICATIONS & RATINGS

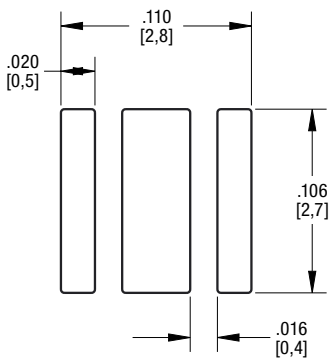
RoHS Compliant

FEATURES & BENEFITS

- This product is designed with EMC packaging technology for high performance, heat resistance and thermal conductivity at high drive currents.
- Package Size: 3.80 x 3.80 x 2.38mm with Dome Lens
- Peak Wavelength 850nm, Dual Junction, IF=1000mA

DIMENSIONS inches [mm]

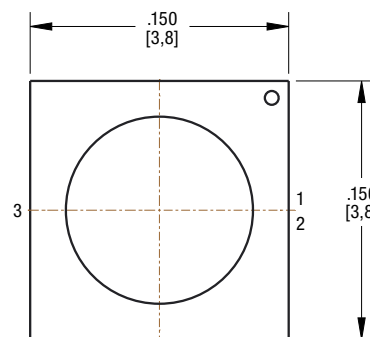
RECOMMENDED PAD LAYOUT



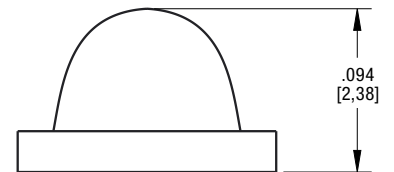
LED SCHEMATIC



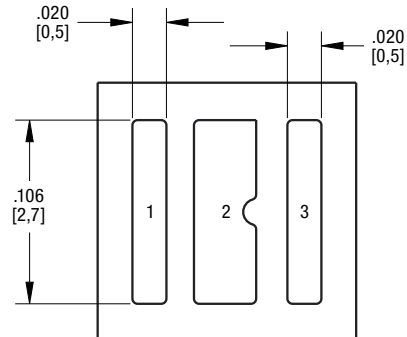
TOP VIEW



SIDE VIEW



BOTTOM VIEW



1. All dimensions are in millimeters.
2. Tolerance is ± 0.2 mm unless otherwise noted.

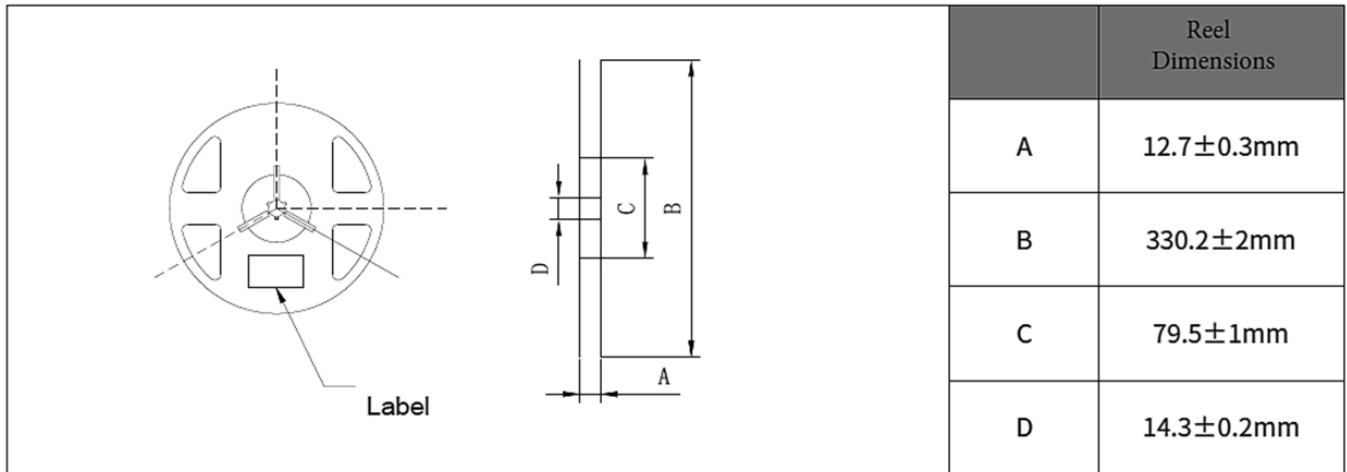
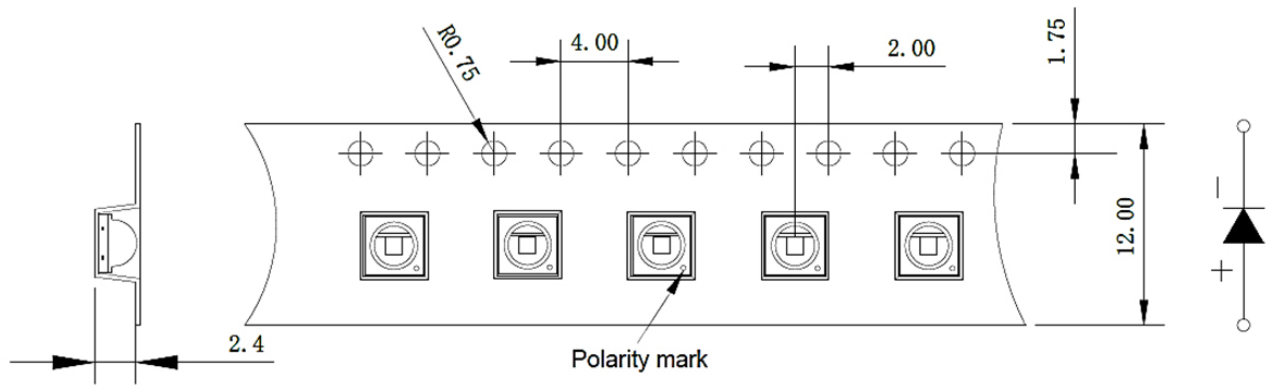
ABSOLUTE MAXIMUM RATING @ TS=25°C

| Parameter | Maximum Rating | Unit |
|--------------------------------|-----------------|------|
| | Values | |
| Power Dissipation (P_D) | 5 | W |
| Forward Current (I_F) | 1500 | mA |
| Reverse Voltage (V_R) | 5 | V |
| Electrostatic Discharge (HBM) | 2000V | |
| Operating Temperature Range | -40°C to +105°C | |
| Storage Temperature Range | -40°C to +105°C | |
| Junction Temperature (T_J) | 150°C | |

ELECTRICAL / OPTICAL CHARACTERISTICS @ TS=25°C

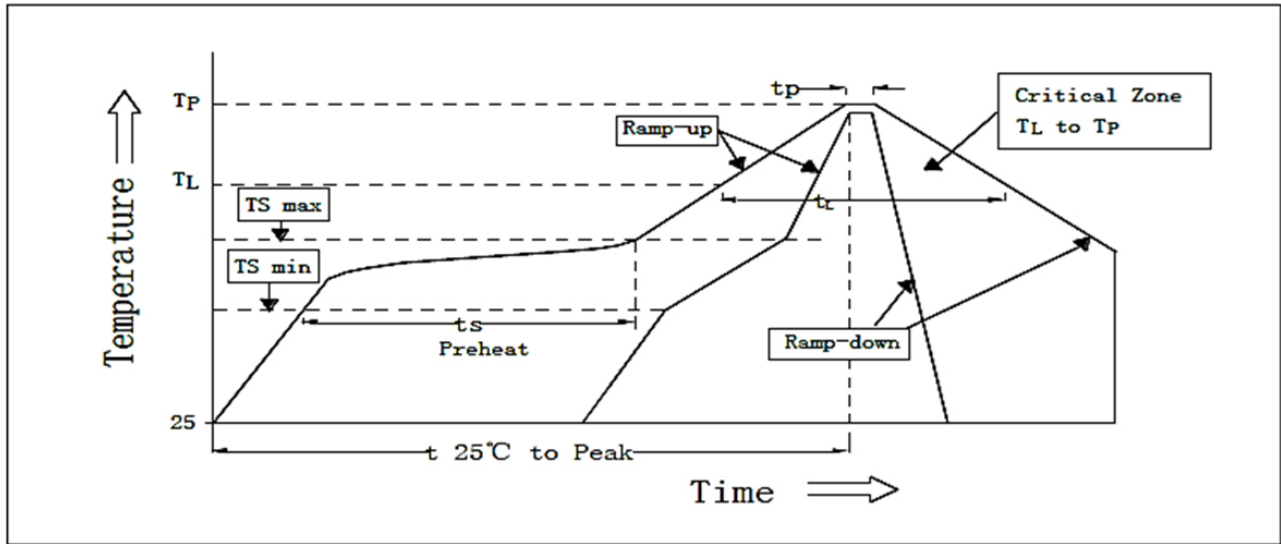
| Parameter | Symbol | Values | | | Unit | Test Condition |
|------------------------------|-----------------|--------|------|------|---------------|---------------------|
| | | Min. | Typ. | Max. | | |
| Total Radiant Flux | Φ_e | 1120 | 1400 | 1800 | mW | $I_F=1000\text{mA}$ |
| Forward Voltage | VF | 2.8 | 3.1 | 3.6 | V | $I_F=1000\text{mA}$ |
| Peak Wavelength | λ_p | 830 | 850 | 870 | nm | $I_F=1000\text{mA}$ |
| Radiation Spectral Bandwidth | $\Delta\lambda$ | | 35 | | nm | $I_F=1000\text{mA}$ |
| Viewing Angle | 2 θ 1/2 | | 50 | | deg | $I_F=1000\text{mA}$ |
| Reverse Current | IR | | | 10 | μA | $V_R=5\text{V}$ |
| Thermal Resistance | Rth J-S | | 7 | | °C/W | $I_F=1000\text{mA}$ |

TAPE AND REEL SPECIFICATION



Note: 1. Packaging is 3000 pcs per reel
2. MSL Level: 3

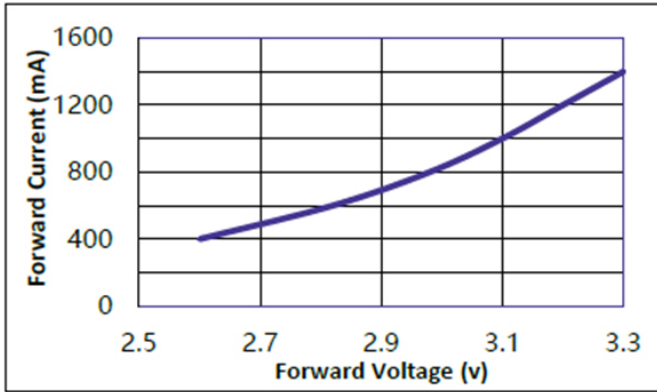
REFLOW SOLDERING PROFILE



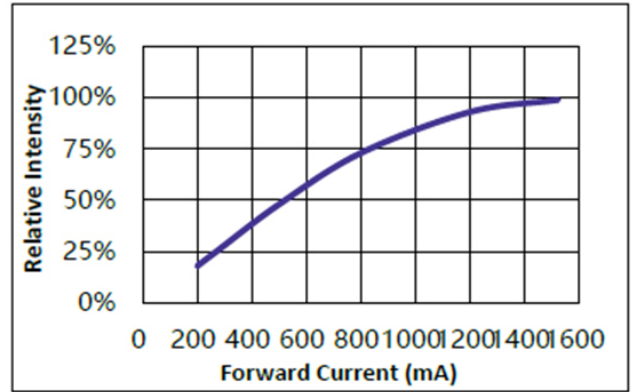
| | |
|--|---------------|
| Average temperature rise speed (T _{smax} T _p) | Max 3°C/ s |
| Preheating: minimum temperature (T _{smin}) | 150°C |
| Preheating: Max temperature (T _{smax}) | 200°C |
| Preheating: Time (T _{smin} T _{smax}) | 60s-120s |
| Time limited to maintain high temperature: the temperature (T _L) | 217 °C |
| Time limited to maintain high temperature: The Time (t _L) | 60s-150s |
| Peak / Classification of temperature: (T _p) | 260 °C |
| Time limit classification of peak temperature time (t _p) | Max 10s |
| Hold time within 5 °C with the actual peak temperature (TP) | Max 30s |
| Cooling speed | Max 6 °C/ s |
| Needed time from 25 °C to T _p | Max 8 minutes |

TYPICAL OPTO-ELECTRICAL CHARACTERISTICS CURVES

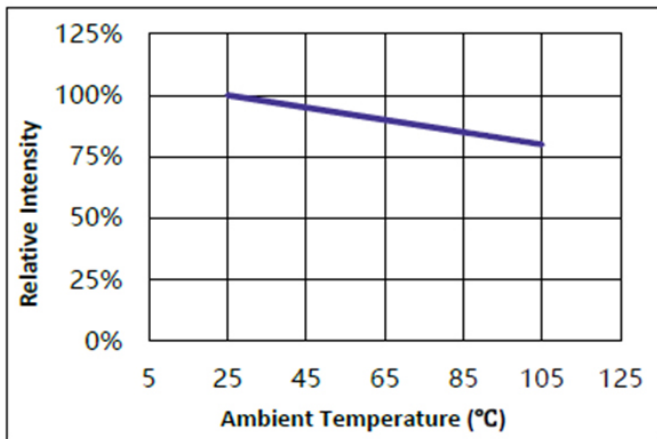
Forward Current vs. Forward Voltage
($T_s=25^{\circ}\text{C}$)



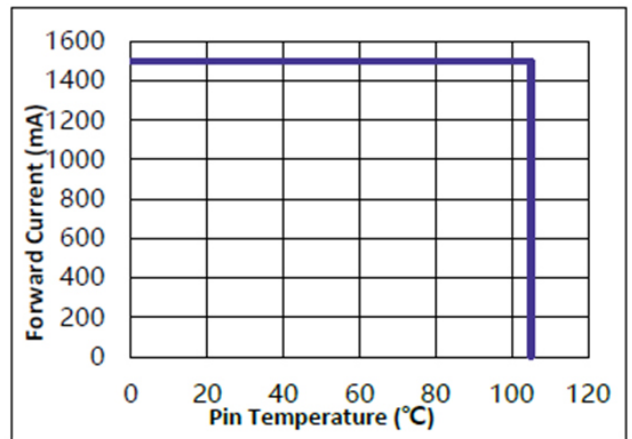
Forward Current vs. Relative Intensity
($T_s=25^{\circ}\text{C}$)



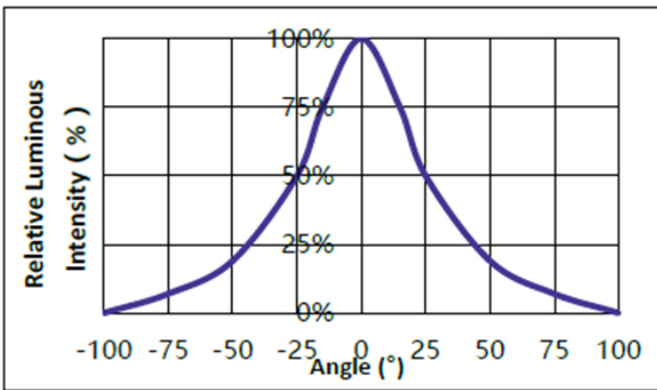
Pin Temperature vs Relative Intensity



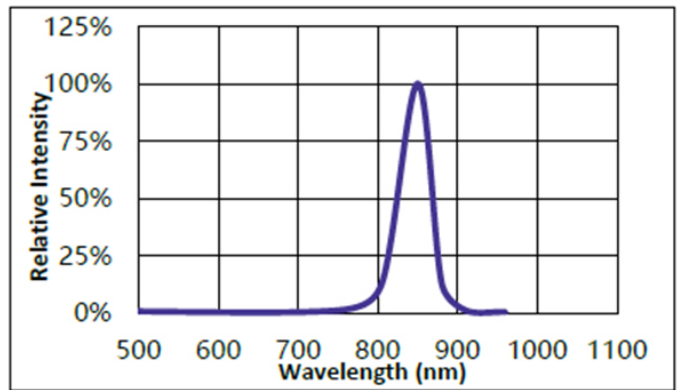
Pin Temperature vs Forward Current



Forward Current vs Dominate Wavelength ($T_a=25^{\circ}\text{C}$)



Relative Intensity vs Wavelength ($T_a=25^{\circ}\text{C}$)



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