



582 SERIES

**Ceramic IR SMD LED  
With Domed Lens**

3535 Package

MECHANICAL / SPECIFICATIONS

PART NUMBER:  
[582-A24A16-137HPE](#)

DIMENSIONS:  
3.50 x 3.50 x 1.90mm

LENS COLOR: Water Clear

STANDARD PACKAGING: 500 pcs / reel

MOISTURE SENSITIVITY LEVEL: 3

MATERIAL: AlGaAs

VIEWING ANGLE: 160°

CERTIFICATIONS & RATINGS

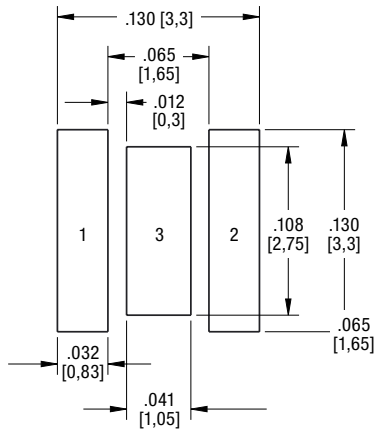
RoHS Compliant

FEATURES & BENEFITS

- This product is designed with Ceramic Aluminum Nitride technology for high thermal conductivity to efficiently manage heat in high drive currents
- Dual Junction Chip, Peak Wavelength 850nm, 3.5W series / IF=1000mA

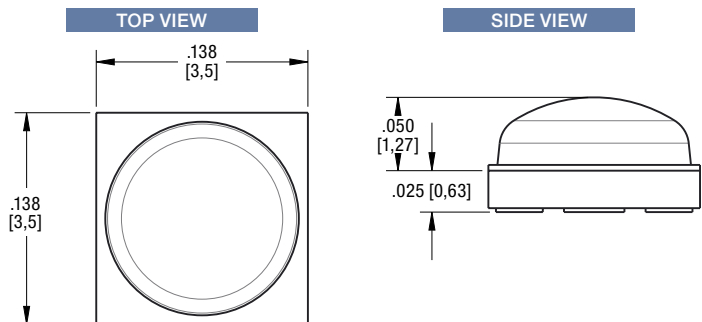
DIMENSIONS inches [mm]

RECOMMENDED PAD LAYOUT

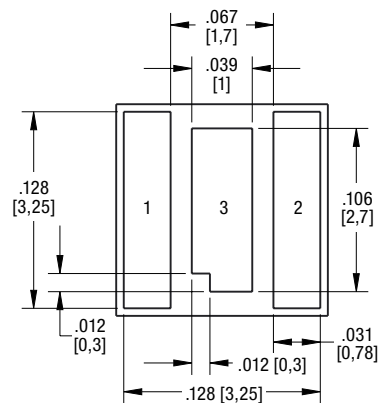


Pad 1 is Cathode  
Pad 2 is Anode  
Pad 3 is Non-polar

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



BOTTOM VIEW



ABSOLUTE MAXIMUM RATINGS @ TA=25°C

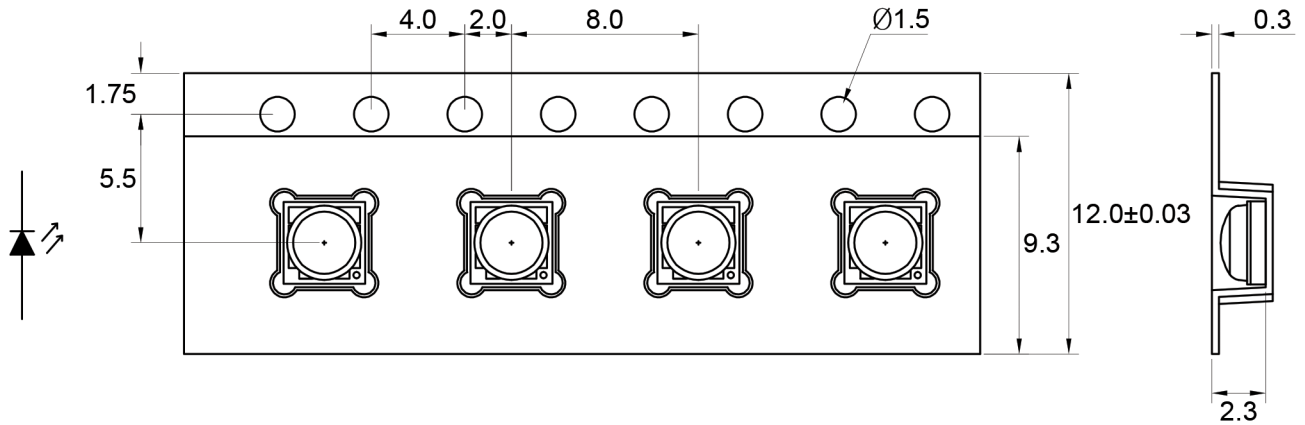
Parameter	Symbol	Maximum Rating	Unit
		Values	
Power Consumption	$P_{tot}$	3.6	W
DC Forward Current	$I_F$	1000	mA
Reverse Current (VR=5V)	$I_r$	10	uA
Peak Pulse Current (D≤1/10; f≤10KHz)	$I_{FP}$	2000	mA
ESD Sensitivity	HMB 100pf/1.5KΩ	2000	V
	MM 200pf/0Ω	150	V
LED Junction Temperature	$T_j$	145	°C
Thermal Resistance	$R_{th\ j-s}$	8	°C/W
Operating Temperature Range	$T_{opr}$	-40 to +125	°C
Storage Temperature Range	$T_{stg}$	-40 to +125	°C
Soldering Temperature	$T_p$	260	°C

ELECTRICAL / OPTICAL CHARACTERISTICS @ TA=25°C

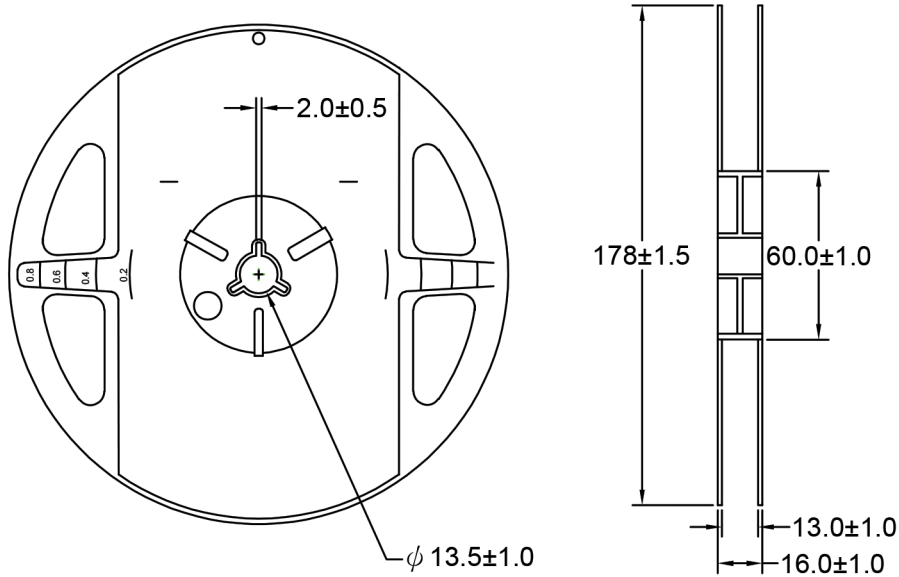
Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Radiant Intensity	$I_e$	170	270		mW/sr	$I_F=1A$
Radiant Flux	$\Phi_e$		1400		mW	$I_F=1A$
Peak Emission Wavelength	$\lambda_p$		850		nm	$I_F=1A$
Spectral Bandwidth at 50% $I_{max}$	$\Delta\lambda$		40		nm	$I_F=1A$
Forward Voltage	$V_F$	2.7		3.6	V	$I_F=1A$
Viewing Angle	$2\theta_{1/2}$		160		deg	$I_F=1A$

Note: 1.The forward voltage data did not including ±0.1V testing tolerance.  
 2.The radiant Intensity data did not including ±15% testing tolerance.

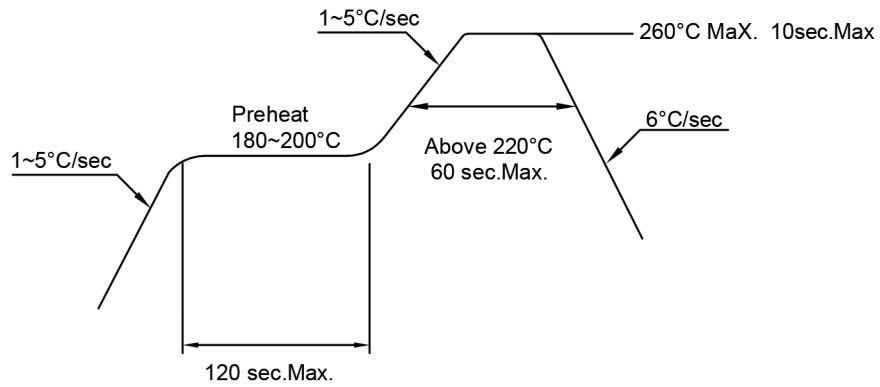
TAPE AND REEL SPECIFICATION



Note : The tolerances unless mentioned is  $\pm 0.1\text{mm}$ , Angle  $\pm 0.5$ . Unit=mm.



REFLOW SOLDERING PROFILE



Note: Reflow soldering should not be done more than two times.

TYPICAL ELECTRO-OPTICAL CHARACTERISTICS CURVES

Fig.1 Relative Intensity VS. Forward Current

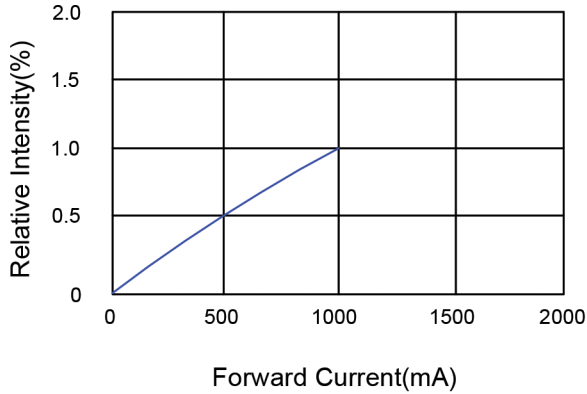


Fig.2 Forward Current VS. Ambient Temperature

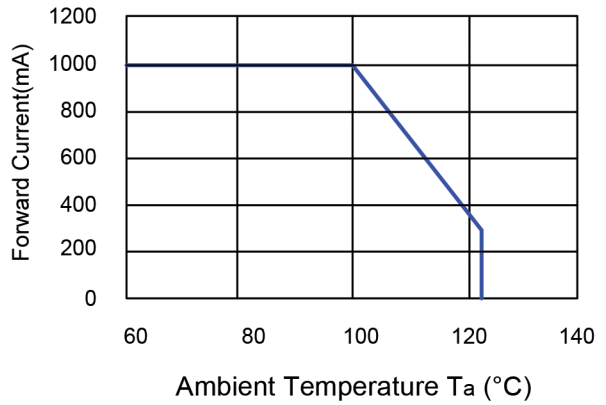


Fig.3 Relative Radiant Power VS. Wavelength

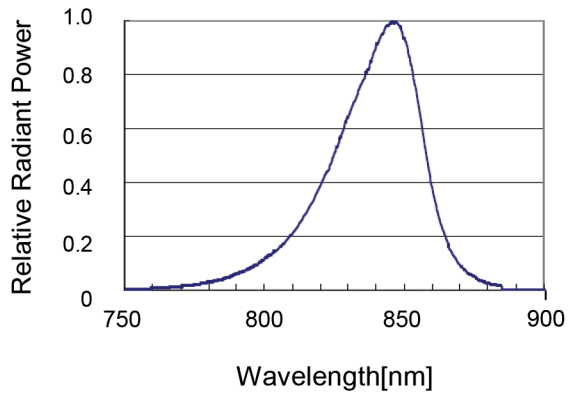


Fig.4 Forward Voltage VS. Forward Current

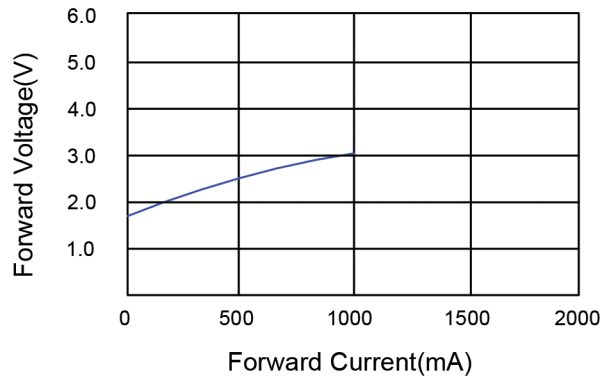
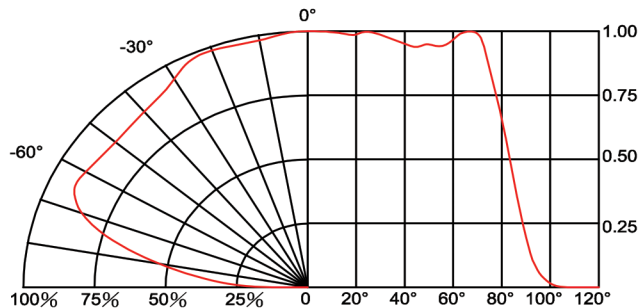


Fig.5 Directive Radiation



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