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LED430/565-04A

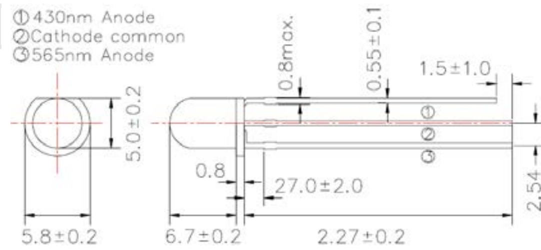
TECHNICAL DATA

Dual LED, 5 mm package GaN, GaP

LED430/565-04A is a bi-color LED, containing a GaN (430 nm) and GaP (565 nm) LED chip die, which are mounted on a lead frame with a clear epoxy lens.
On forward bias, it emits a power radiation of typical 0.4 mW and 0.2 mW at peak wavelengths of 430 nm and 565 nm.

Specifications

- Structure: GaN and GaP
- Peak Wavelength: 430 and 565 nm
- Optical Output Power: 0.4 and 0.2 mW
- Package: Ø 5 mm clear molding
- Resin Material: clear epoxy resin
- Lead Frame: soldered



(Unit: mm)

Absolute Maximum Ratings (T_A=25°C)

Item	Symbol	Value		Unit
		430 nm	565 nm	
Power Dissipation	P_D	250	130	mW
Forward Current	I_F	50		mA
Reverse Voltage	V_R	10		V
Operating Temperature	T_{opr}	-30 … +85		°C
Storage Temperature	T_{stg}	-30 … +100		°C
Soldering Temperature *	T_{sol}	240		°C

* must be completed within 3 seconds at 260°C

Electro-Optical Characteristics

Item	Symbol	Condition	Min.		Typ.		Max.		Unit
			430nm	565nm	430nm	565nm	430nm	565nm	
Peak Wavelength	λ_P	I_F = 20 mA	418	562	425	565	432	568	nm
Half Width	Δλ	I_F = 20 mA	-		50	35	-		nm
Total Radiated Power *	P_O	I_F = 20 mA	0.2	0.1	0.4	0.2	0.5	0.3	mW
Forward Voltage	V_F	I_F = 20 mA	-	-	4.0	2.2	5.0	2.4	V
Reverse Current	I_R	V_R = 5 V	-		-		-	10	µA
Reverse Current	I_R	V_R = 10 V	-		-		100	-	µA
Viewing Half Angle	$\Theta_{1/2}$	I_F = 20 mA	-		±20		-		deg.

*[1] measured by Photodyne #500

Note: The above specifications are for reference purpose only and subjected to change without prior notice.

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Precaution for Use

1. Cautions

- DO NOT look directly into the emitting area of the LED or through the optical system during operation! To prevent in adequate exposure of the radiation, wear protective glasses.

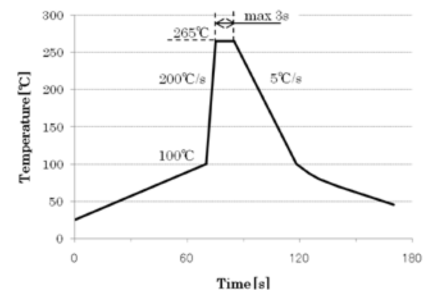
2. Lead Forming

- Lead forming should be done before soldering.
- When forming leads, the leads should be bent at a point at least 3 mm from the base of the lead. DO NOT use the base of the lead frame as a fulcrum during lead forming!
- DO NOT apply any bending stress to the base of the lead. The stress to the base may damage the LED’s characteristics or it may break the LEDs.
- When mounted the LEDs onto the printed circuit board, the holes on the circuit board should be exactly aligned with the leads of LEDs. If the LEDs are mounted with stress at the leads, it causes deterioration of the lead and it will degrade the LEDs.

3. Soldering Conditions

- Solder the LEDs no closer than 3 mm from the base of the lead.
- DO NOT apply any stress to the lead particularly when heat.
- After soldering the LEDs, the lead should be protected from mechanical shock or vibration until the LEDs return to room temperature.
- The LEDs must not be reposition after soldering.
- When it is necessary to clamp the LEDs to prevent soldering failure, it is important to minimize the mechanical stress on the LEDs.
- Cut the LED leads at room temperature. Cutting the leads at high temperature may cause the failure of the LEDs.

Soldering Conditions



4. Static Electricity

- The LEDs are very sensitive to Static Electricity and surge voltage. So it is recommended that a wrist band and/or an anti-electrostatic glove be used when handling the LEDs.
- All devices, equipment and machinery must be grounded properly. It is recommended that precautions should be taken against surge voltage to the equipment that mounts the LEDs.