

503XCH-X-XX

- **Chip Material:** AlGaInP or GaN
- **Construction:** Gas Phase Epitaxial
- **Application:** Traffic Signal, Automotive Exterior Lighting
- **Absolute Maximum Ranges** (Ta=25±3°C)

Power Dissipation	PD	120mW	
DC Forward Current	IF	30mA	
Pulsed Forward Current	IFP	100mA	*1
Reverse Voltage	VR	5V	
Operating Temperature	Topr	-25~+80°C	
Storage Temperature	Tstg	-30~+100°C	

● Package Dimensions

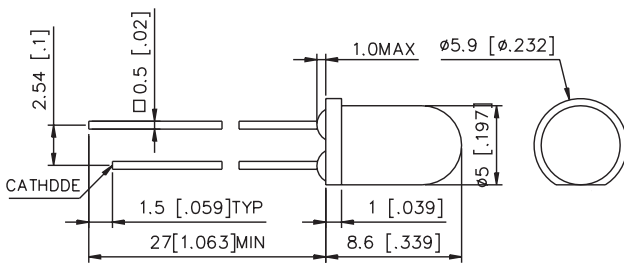


Fig. 1

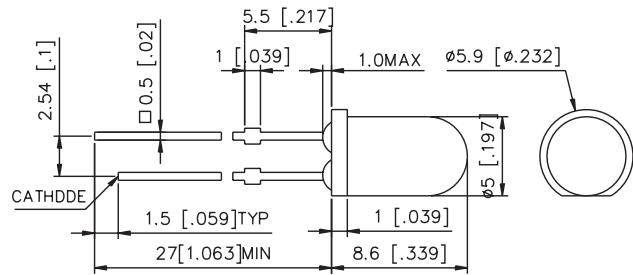


Fig. 2

Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is +/-0.1mm (0.004 inch) unless otherwise specified.
3. The products are sensitive to static electricity.
4. Fig. 2 shows the outline of LED with stopper, and this series is named as 503XCH-X-XX-S.

Electrical and Optical Characteristics (Ta=25±3°C)

Ultra Bright LED Lamp: Red

Part No.	Chip			Lens Color	Vf(V)		Luminous Intensity Iv *2				2θ (Deg.)
	Material	Emitting Color	Wavelength λp(nm) *3		Typ.	Max.	at If=mA	Min. (mcd)	Typ. (mcd)	Max. (mcd)	
503VCH-A-15	AlGaInP	Red	630	Water Clear	2.1	2.5	20	1450	1600	1930	15
503VCH-A-23	AlGaInP	Red	630	Water Clear	2.1	2.5	20	1450	1600	1930	23
503VCH-A-30	AlGaInP	Red	630	Water Clear	2.1	2.5	20	1450	1600	1930	30
503VCH-B-15	AlGaInP	Red	630	Water Clear	2.1	2.5	20	2200	2900	3300	15
503VCH-B-23	AlGaInP	Red	630	Water Clear	2.1	2.5	20	2200	2900	3300	23
503VCH-B-30	AlGaInP	Red	630	Water Clear	2.1	2.5	20	2200	2900	3300	30

Ultra Bright LED Lamp: Bluish-Green

Part No.	Chip			Lens Color	Vf(V)		Luminous Intensity Iv *2				2θ (Deg.)
	Material	Emitting Color	Wavelength λp(nm) *3		Typ.	Max.	at If=mA	Min. (mcd)	Typ. (mcd)	Max. (mcd)	
503BGCH-A-15	AlGaInP	Bluish green	505	Water Clear	2.8	3.4	20	3300	4500	4900	15
503BGCH-A-23	AlGaInP	Bluish green	505	Water Clear	2.8	3.4	20	3300	4500	4900	23
503BGCH-A-30	AlGaInP	Bluish green	505	Water Clear	2.8	3.4	20	3300	4500	4900	30
503BGCH-B-15	AlGaInP	Bluish green	505	Water Clear	2.8	3.4	20	4900	6000	7300	15
503BGCH-B-23	AlGaInP	Bluish green	505	Water Clear	2.8	3.4	20	4900	6000	7300	23
503BGCH-B-30	AlGaInP	Bluish green	505	Water Clear	2.8	3.4	20	4900	6000	7300	30

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Ultra Bright LED Lamp: Pure Green

Part No.	Chip			Lens Color	Vf(V)		Luminous Intensity Iv *2				2θ (Deg.)
	Material	Emitting Color	Wavelength λp(nm) *3		Typ.	Max.	at If=mA	Min. (mcd)	Typ. (mcd)	Max. (mcd)	
503PGCH-A-15	AlGaInP	Pure green	525	Water Clear	2.8	3.4	20	3300	4500	4900	15
503PGCH-A-23	AlGaInP	Pure green	525	Water Clear	2.8	3.4	20	3300	4500	4900	23
503PGCH-A-30	AlGaInP	Pure green	525	Water Clear	2.8	3.4	20	3300	4500	4900	30
503PGCH-B-15	AlGaInP	Pure green	525	Water Clear	2.8	3.4	20	4900	6000	7300	15
503PGCH-B-23	AlGaInP	Pure green	525	Water Clear	2.8	3.4	20	4900	6000	7300	23
503PGCH-B-30	AlGaInP	Pure green	525	Water Clear	2.8	3.4	20	4900	6000	7300	30

Ultra Bright LED Lamp: Yellow

Part No.	Chip			Lens Color	Vf(V)		Luminous Intensity Iv *2				2θ (Deg.)
	Material	Emitting Color	Wavelength λp(nm) *3		Typ.	Max.	at If=mA	Min. (mcd)	Typ. (mcd)	Max. (mcd)	
503YCH-A-15	AlGaInP	Yellow	592	Water Clear	2.1	2.5	20	1450	2000	2200	15
503YCH-A-23	AlGaInP	Yellow	592	Water Clear	2.1	2.5	20	1450	2000	2200	23
503YCH-A-30	AlGaInP	Yellow	592	Water Clear	2.1	2.5	20	1450	2000	2200	30
503YCH-B-15	AlGaInP	Yellow	592	Water Clear	2.1	2.5	20	2200	2900	3300	15
503YCH-B-23	AlGaInP	Yellow	592	Water Clear	2.1	2.5	20	2200	2900	3300	23
503YCH-B-30	AlGaInP	Yellow	592	Water Clear	2.1	2.5	20	2200	2900	3300	30

Ultra Bright LED Lamp: Blue

Part No.	Chip			Lens Color	Vf(V)		Luminous Intensity Iv *2				2θ (Deg.)
	Material	Emitting Color	Wavelength λp(nm) *3		Typ.	Max.	at If=mA	Min. (mcd)	Typ. (mcd)	Max. (mcd)	
503BCH-A-15	GaN	Blue	465	Water Clear	3.1	3.4	20	1450	2000	2200	15
503BCH-A-23	GaN	Blue	465	Water Clear	3.1	3.4	20	1450	2000	2200	23
503BCH-A-30	GaN	Blue	465	Water Clear	3.1	3.4	20	1450	2000	2200	30
503BCH-B-15	GaN	Blue	465	Water Clear	3.1	3.4	20	2200	2900	3300	15
503BCH-B-23	GaN	Blue	465	Water Clear	3.1	3.4	20	2200	2900	3300	23
503BCH-B-30	GaN	Blue	465	Water Clear	3.1	3.4	20	2200	2900	3300	30

Ultra Bright LED Lamp: White

Part No.	Chip			Lens Color	Vf(V)		Luminous Intensity Iv *2				2θ (Deg.)
	Material	Emitting Color	Wavelength λp(nm) *3		Typ.	Max.	at If=mA	Min. (mcd)	Typ. (mcd)	Max. (mcd)	
503WCH-A-15	GaN	White	X=0.28 Y=0.30	Water Clear	3.1	3.4	20	3200	3600	4200	15
503WCH-A-23	GaN	White	X=0.28 Y=0.30	Water Clear	3.1	3.4	20	3200	3600	4200	23
503WCH-B-15	GaN	White	X=0.28 Y=0.30	Water Clear	3.1	3.4	20	4200	5000	5500	15
503WCH-B-23	GaN	White	X=0.28 Y=0.30	Water Clear	3.1	3.4	20	4200	5000	5500	23
503WCH-C-15	GaN	White	X=0.28 Y=0.30	Water Clear	3.1	3.4	20	5500	6500	7200	15
503WCH-C-23	GaN	White	X=0.28 Y=0.30	Water Clear	3.1	3.4	20	5500	6500	7200	23

(*1) Duty 1/10 Pulse Width 10ms.

(*2) Guaranteed value what is include tolerance of measurement of Luminous Intensity by Toyoda Gosei's method is ±20%.

(*3) Guaranteed Value what is include tolerance of measurement of Dominant wavelength by Toyoda Gosei's method is ±2nm.