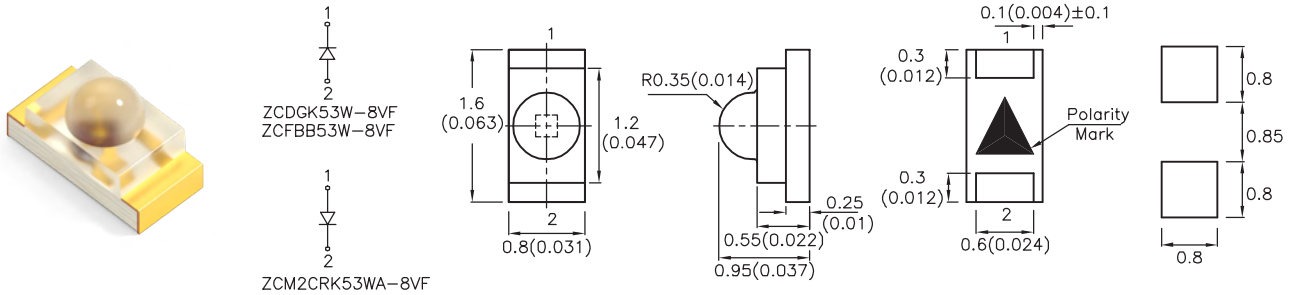


Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=2mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

1.6x0.8x0.95mm (0603 Dome Lens)

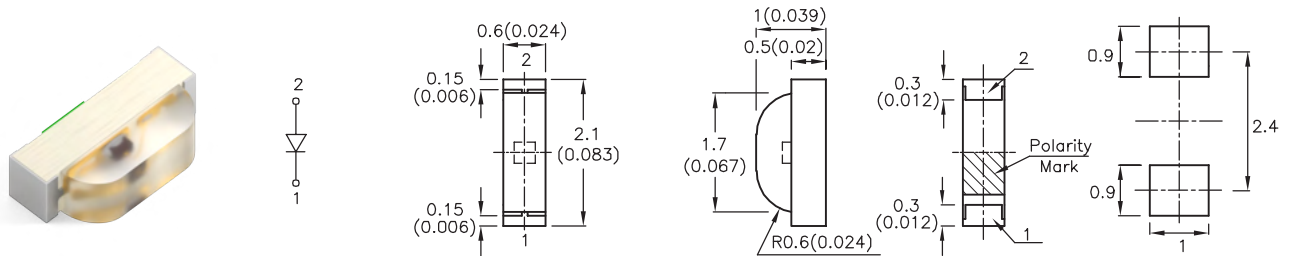


Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006^{\circ})$

Recommended Soldering Pattern

ZCM2CRK53WA-8VF	◆ AlGaInP(Red)	640	50	118	60°	Water Clear
ZCDGK53W-8VF	◆ InGaInP(Green)	515	250	417	60°	Water Clear
ZCFBB53W-8VF	◆ InGaInP(Blue)	465	30	64	40°	Water Clear

2.1x1.0x0.6mm (Right Angle)



Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004^{\circ})$

Recommended Soldering Pattern

ZCFBB74W-3VU	◆ InGaInP(Blue)	465	10	19	170°	Water Clear
--------------	-----------------	-----	----	----	------	-------------



Ultra-Low Current

PRODUCT HIGHLIGHT

SunLED proudly announces a new series to support engineering demands for ultra-low current LEDs.

A low current operation of $I_f=2mA$ paired with low forward voltages allows these LEDs to provide engineers with over 90% power reduction compared to traditional LEDs. SunLED has carefully rated this series of 9 LEDs to ensure the highest level of quality and consistency. Included in this series of 9 part numbers are options in both top emitting and right angle form factors.

Single color and RGB are available to further enhance design flexibility. Several parts are offered with ultra bright chips in a dome lens package to maintain a high intensity output while running at low currents.

PRODUCT APPLICATIONS

- Consumer devices
- Mobile and handheld products
- Safety and security
- Wearable electronics
- Battery powered devices
- Medical and healthcare
- Instrumentation

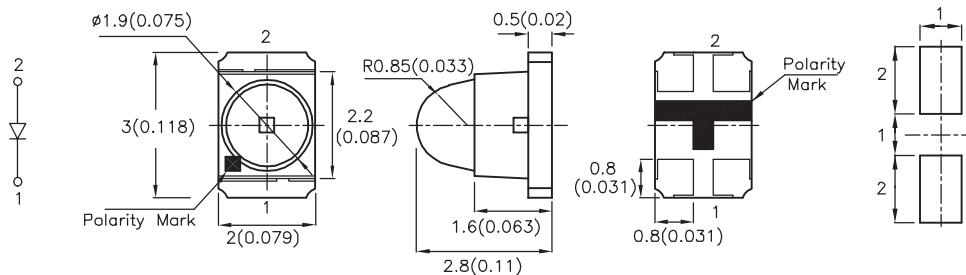
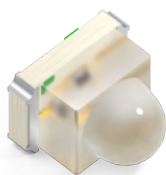
PRODUCT FEATURES

- Low current operation: $I_f=2mA$
- Dome lens packages for high intensity output
- Narrow to wide viewing angles: 10° to 170°
- Top emitting and rt. angle packages
- Low forward voltages
- High reliability and consistency
- Single color and RGB options

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=2\text{mA}$		Viewing Angle $2\theta_{1/2}$	Lens
			Min.	Typ.		

3.0x2.8x2.0 mm
(Dome Lens Right Angle)

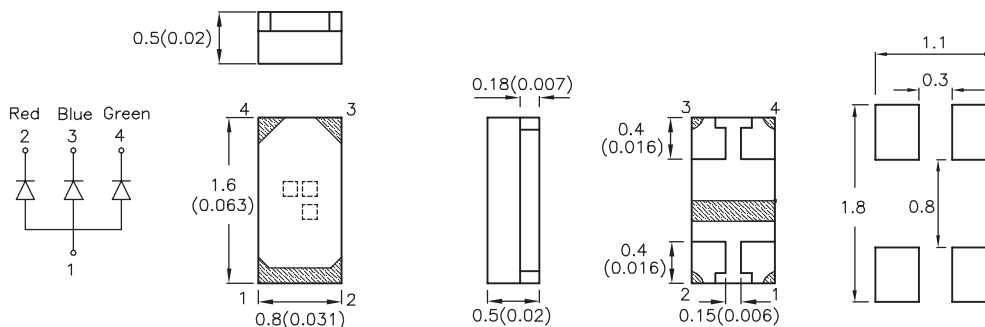
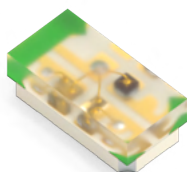


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008")$

Recommended Soldering Pattern

ZCDGK50W-2-3VU	◆ InGaN(Green)	515	700	1495	10°	Water Clear
----------------	----------------	-----	-----	------	-----	-------------

1.6x0.8x0.5mm
(Full Color)

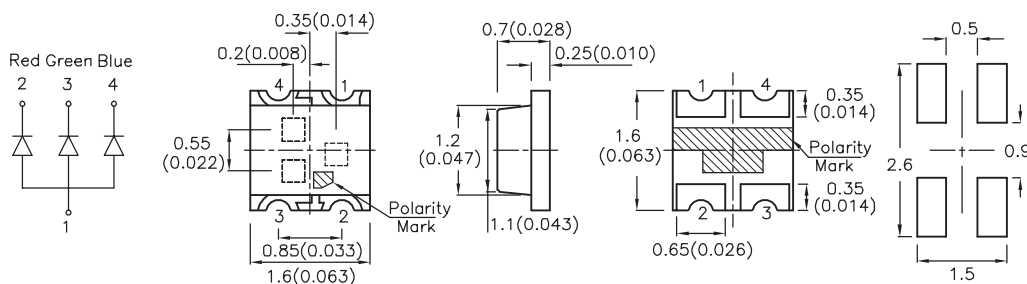


Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006")$

Recommended Soldering Pattern

Dimensions (mm) (Inches) (Reference: 1202400000)					Recommended soldering pattern	
ZCMECBDDGK53W	◆ AlGaInP (Red)	630	4	14	140°	Water Clear
	◆ InGaN (Blue)	460	4	9		
	◆ InGaN (Green)	515	20	69		

1.6x1.6x0.7mm
(Full Color)



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

Dimension Unit: mm (inches), Tolerance: ±0.2 (±0.008)					Recommended Soldering Pattern	
ZCMEDGCB110W	◆ AlGaInP (Red)	630	6	14	130°	Water Clear
	◆ InGaN (Green)	515	20	49		
	◆ InGaN (Blue)	460	6	13		

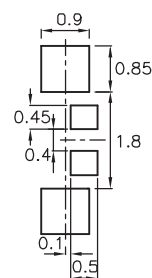
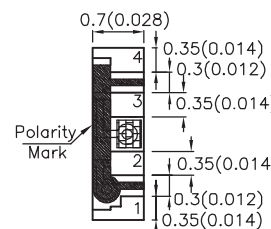
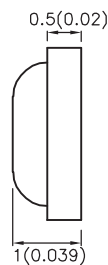
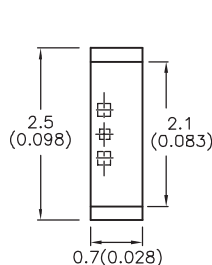
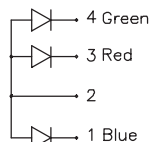
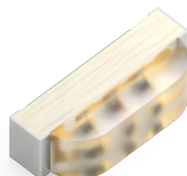
1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

PRODUCT HIGHLIGHT

2.5x1.0x0.7mm (Right Angle, Full Color)

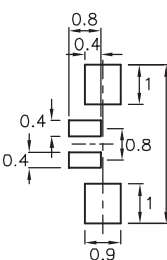
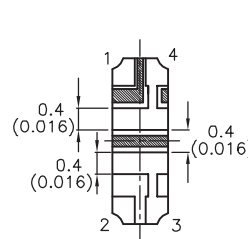
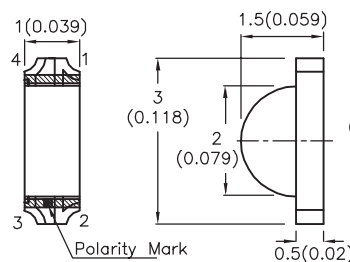
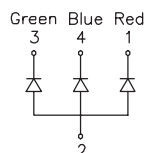
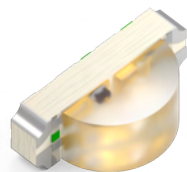


Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006^{\circ})$

Recommended Soldering Pattern

ZCCBDMEDGK161W	◆ InGaN(Blue)	460	4	9	130°	Water Clear
	◆ AlGaInP(Red)	630	6	9		
	◆ InGaN(Green)	515	20	59		

3.0x1.5x1.0mm (Right Angle, Full Color)



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008^{\circ})$

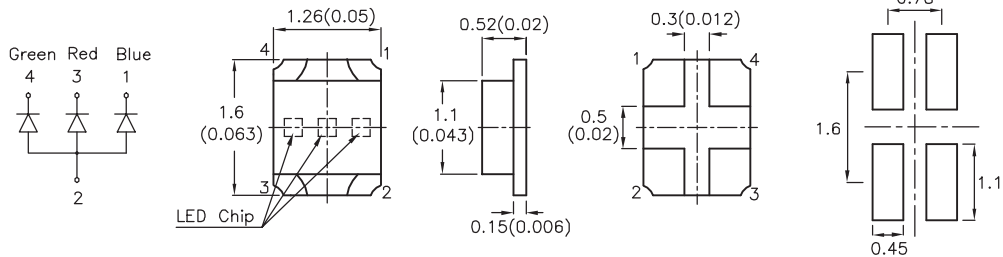
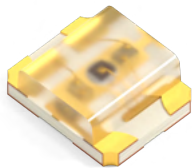
Recommended Soldering Pattern

ZCMEDGCBDS6W	◆ AlGaInP(Red)	630	6	14	150°	Water Clear
	◆ InGaN(Green)	515	20	59		
	◆ InGaN(Blue)	460	4	9		

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.
 2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
 3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

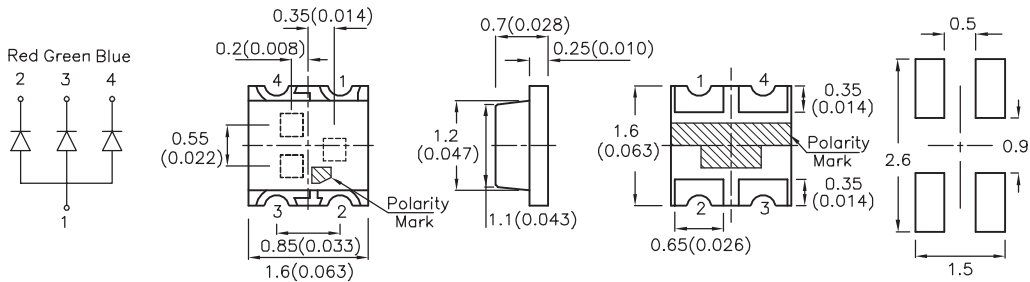
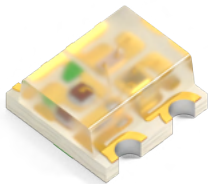
1.6x1.26x0.52mm
(Full Color)



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ Recommended Soldering Pattern

ZCBDMKDG62W-2	◆ InGaN(Blue)	460	40	69	140°	Water Clear
	◆ AlGaInP(Red)	645	40	79		
	◆ InGaN(Green)	515	400	597		

1.6x1.6x0.7mm
(Full Color)

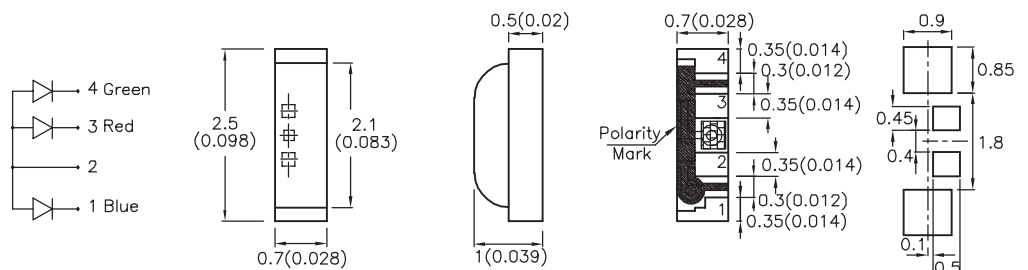
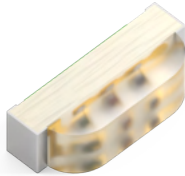


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ Recommended Soldering Pattern

ZMDKDGCB110W	◆ AlGaInP(Red)	645	40	79	130°	Water Clear
	◆ InGaN(Green)	515	120	278		
	◆ InGaN(Blue)	460	40	69		

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.
2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

2.5x1.0x0.7mm
(Right Angle, Full Color)

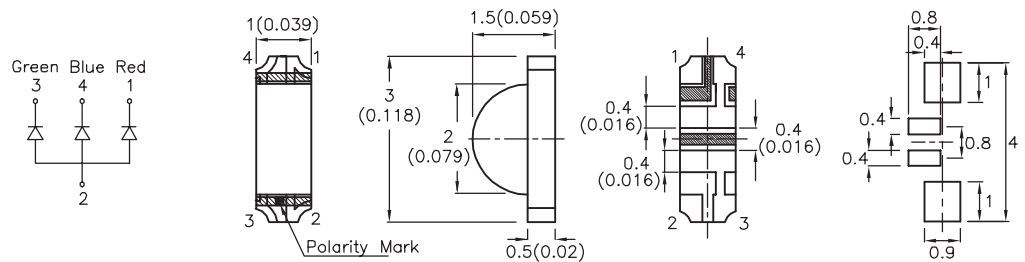
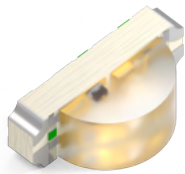


Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006")$

Recommended Soldering Pattern

ZCBDMEDGK161W	◆ InGaN(Blue)	460	40	64	130°	Water Clear
	◆ AlGaInP(Red)	630	80	108		
	◆ InGaN(Green)	515	300	497		

3.0x1.5x1.0mm
(Right Angle, Full Color)

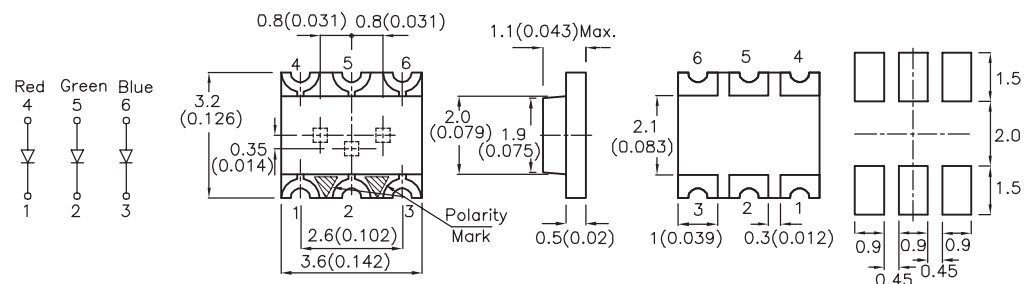
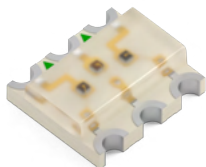


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008")$

Recommended Soldering Pattern

Dimensions (mm) (Inches) (Distance 12mm (0.4724"))				Recommended Viewing Pattern		
ZMEDGCBDS6W	◆ AlGaInP (Red)	630	80	138	150°	Water Clear
	◆ InGaN (Green)	515	300	497		
	◆ InGaN (Blue)	460	40	69		

3.2x3.6x1.1mm
(Full Color)



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008")$

Recommended Soldering Pattern

Dimension Unit: mm(Inches), Tolerance: ±0.2(0.008)					Recommended Soldering Pattern	
ZMEDGKCB061W	◆ AlGaInP(Red)	630	80	138	150°	Water Clear
	◆ InGaN(Green)	515	200	327		
	◆ InGaN(Blue)	460	40	69		

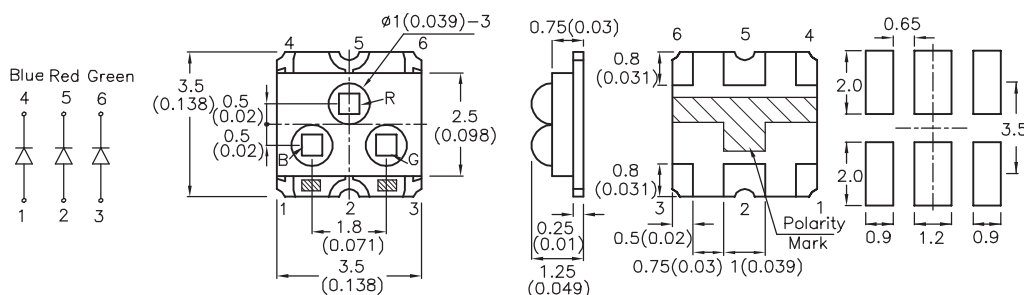
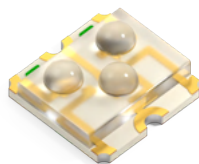
1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) I _f =20mA		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**3.5x3.5x1.25mm
(3-Dome RGB SMD)**

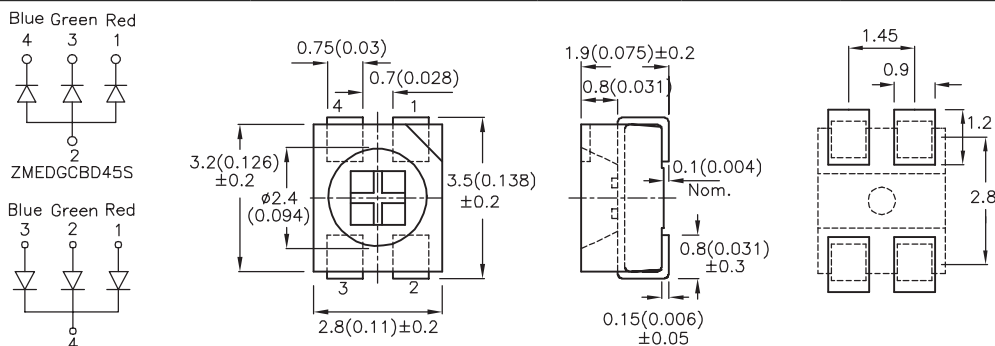


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004")$

Recommended Soldering Pattern

Dimension Unit: mm (Inch); Tolerance: ±0.2 (±0.007)					Recommended Soldering Pattern	
ZFBBM2ACRDG92W-3	◆ InGaN(Blue)	465	300	497	50°	Water Clear
	◆ AlGaInP(Red)	640	1000	1590		
	◆ InGaN(Green)	520	1300	1890		

**3.5x2.8x1.9mm
(PLCC4 Full Color)**



ZM2CRKM2DGFBB45SCCB

Dimension Unit: mm(inches). Tolerance: $\pm 0.25\text{mm}$ (0.01")

Recommended Soldering Pattern

		Dimension Unit: mm (inches); Tolerance: ±0.25mm (0.01")			Recommended Soldering Pattern	
ZMEDGCB45S	◆ AlGaInP (Red)	630	120	218	120°	Water Clear
	◆ InGaN (Green)	515	400	497		
	◆ InGaN (Blue)	460	55	98		
ZM2CRKM2DGFBB45SCCB	◆ AlGaInP (Red)	640	400	497	120°	Water Clear
	◆ InGaN (Green)	520	1000	1590		
	◆ InGaN (Blue)	465	200	327		

3-Dome RGB SMD LED



ZFBBM2ACRDG92W-3

ZFBBM2ACRDG92W-3 – 3-Dome RGB SMD

At the forefront of innovation, SunLED introduces a state-of-the-art LED: the 3-Dome RGB SMD LED, a single package with optics that focuses the light output from all 3 dies - individually - in an RGB LED.

This LED package leverages domed optical technology to concentrate light for each of the red, green, and blue chips to optimize intensity in a narrow viewing angle. SunLED, one of the world's leading manufacturers of optoelectronics, specializes in performance-driven, robust LED packages. With an extensive product offering of LED packages, SunLED manufactures with careful attention to detail and rigorous quality control. SunLED is committed to supporting new engineering designs with the first true RGB-domed package, the 3-Dome RGB LED.

PRODUCT APPLICATIONS

- Light pipe applications
- Handheld products
- White goods
- Icon and text backlighting
- Home automation
- Audio and video
- Consumer electronics
- Safety and security
- Medical and healthcare

PRODUCT FEATURES

- Full color 3-dome optics in a single RGB package
- Higher intensity and narrow viewing angle
- Prevents light bleeding
- 3.5x3.5mm footprint
- Low current: 20 mA operation
- Moisture sensitivity level (MSL): 3

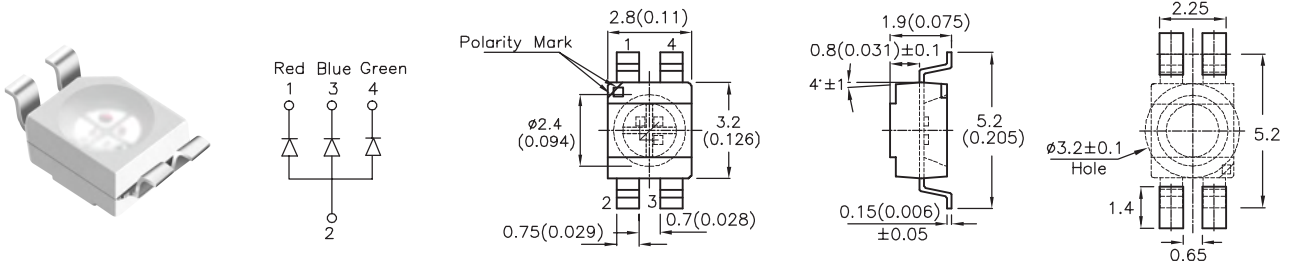
1. Soldering Pattern Dimension Unit : mm. Tolerance : $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**3.2x2.8x1.9mm
(Reverse Mount, Full Color)**



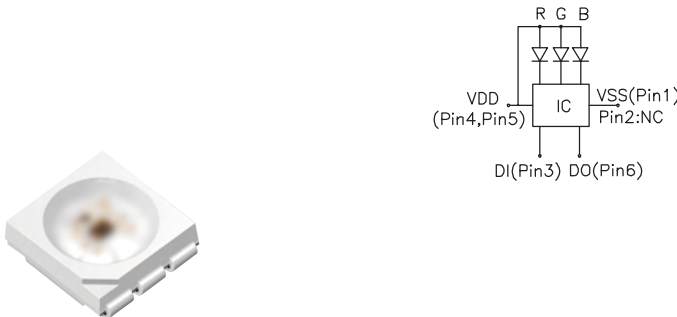
Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDKCBDDG45S-9	◆ AlGaInP(Red)	645	55	108	120°	Water Clear
	◆ InGaN(Blue)	460	55	98		
	◆ InGaN(Green)	515	400	497		

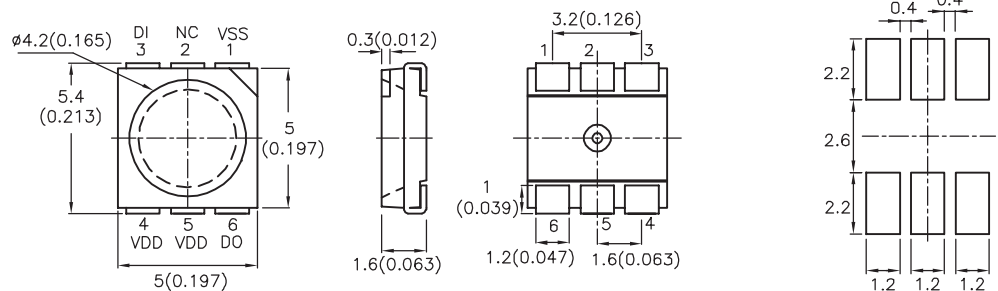
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Iv (mcd) @ VDD = 5V, Gray Scale Level = 255		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**5.0x5.0x1.6mm
(Full Color)**



PIN FUNCTION

No.	Symbol	Function Description
1	VSS	Ground
2	NC	/
3	DI	Control data signal input
4	VDD	Power supply LED
5	VDD	Power supply LED
6	DO	Control data signal output



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

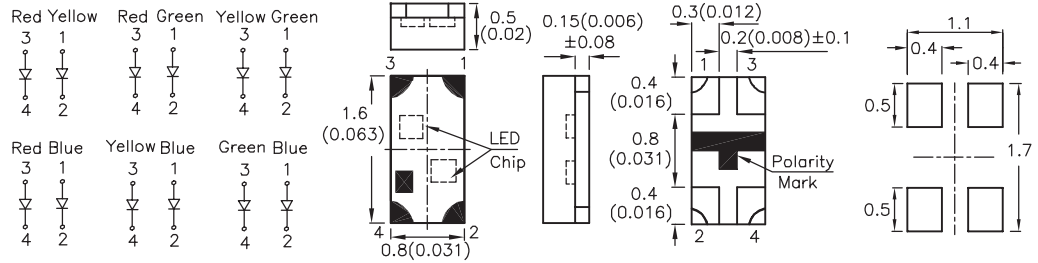
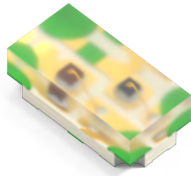
Recommended Soldering Pattern

ZM2CRKDGKCB107S-IC	◆ AlGaInP(Red)	640	200	357	120°	Water Clear
	◆ InGaN(Green)	515	400	597		
	◆ InGaN(Blue)	460	80	148		

- Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
- Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
- We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mod) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**1.6x0.8x0.5mm
(0603 Bi-Color)**

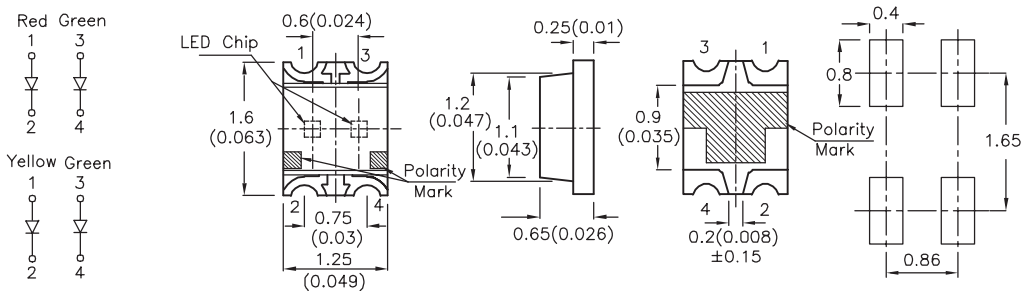
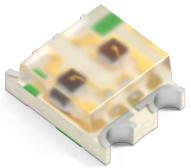


Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006)$

Recommended Soldering Pattern

ZMYKMDK53W-9	AlGaInP(Yellow)	590	80	148	130°	Water Clear
	AlGaInP(Red)	645	40	89		
ZDGKMDK53W-9	InGaIn(Green)	515	200	347	130°	Water Clear
	AlGaInP(Red)	645	40	89		
ZVGMKYK53W-9	AlGaInP(Green)	574	20	49	130°	Water Clear
	AlGaInP(Yellow)	590	80	148		
ZVGMDK53W-9	AlGaInP(Green)	574	20	49	130°	Water Clear
	AlGaInP(Red)	645	40	89		
ZCBDMK53W-9	InGaIn(Blue)	460	40	69	130°	Water Clear
	AlGaInP(Red)	645	40	89		
ZCBDMYK53W-9	InGaIn(Blue)	460	40	69	130°	Water Clear
	AlGaInP(Yellow)	590	80	148		
ZCBVDG53W-9	InGaIn(Blue)	460	40	69	130°	Water Clear
	AlGaInP(Green)	574	20	49		

**1.6x1.25x0.65mm
(Bi-Color)**

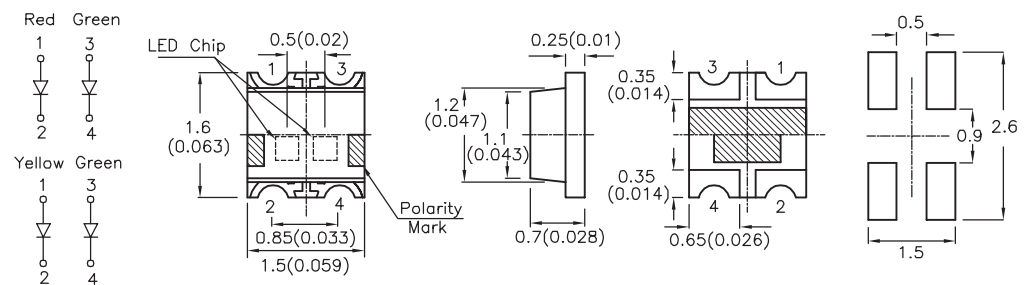


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$

Recommended Soldering Pattern

ZMDKVG62W-1	AlGaInP(Red)	645	40	79	150°	Water Clear
	AlGaInP(Green)	574	20	49		
ZMYKVG62W-1	AlGaInP(Yellow)	590	80	118	150°	Water Clear
	AlGaInP(Green)	574	20	49		

**1.6x1.5x0.7mm
(Bi-Color)**



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$

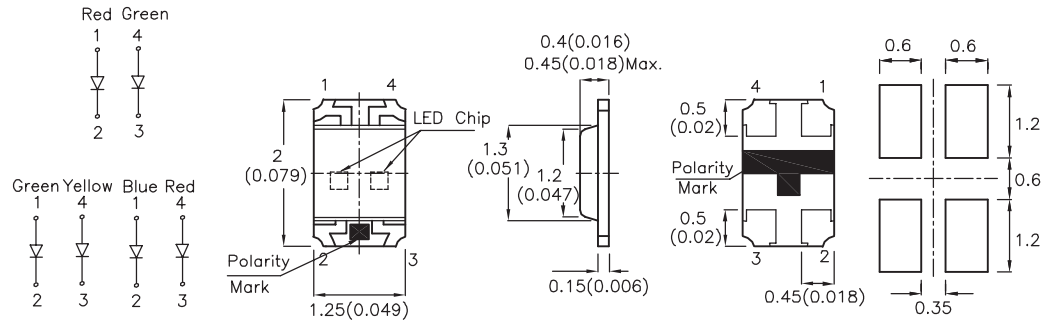
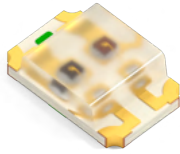
Recommended Soldering Pattern

ZMDKVG59W-1	AlGaInP(Red)	645	40	79	150°	Water Clear
	AlGaInP(Green)	574	20	49		
ZMYKVG59W-1	AlGaInP(Yellow)	590	80	118	150°	Water Clear
	AlGaInP(Green)	574	20	49		

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
 2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
 3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**2.0x1.25x0.45mm
(0805 Bi-Color)**

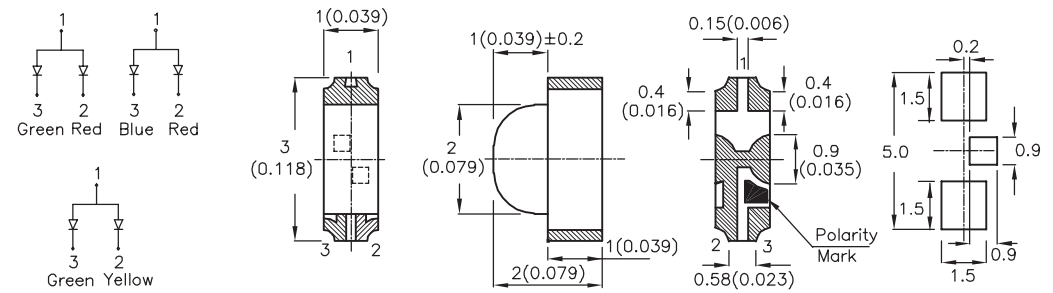
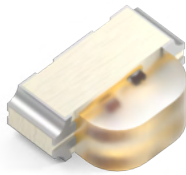


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$

Recommended Soldering Pattern

ZMDKVG54W-4	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
	◆ AlGaInP(Green)	574	20	49		
ZMDKDGK54W-4	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
	◆ InGaN(Green)	515	200	278		
ZVGMYK54W-4	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
	◆ AlGaInP(Yellow)	590	80	118		
ZCBDMK54W-4	◆ InGaN(Blue)	460	40	79	120°	Water Clear
	◆ AlGaInP(Red)	645	40	79		

**3.0x2.0x1.0mm
(Right Angle, Bi-Color)**

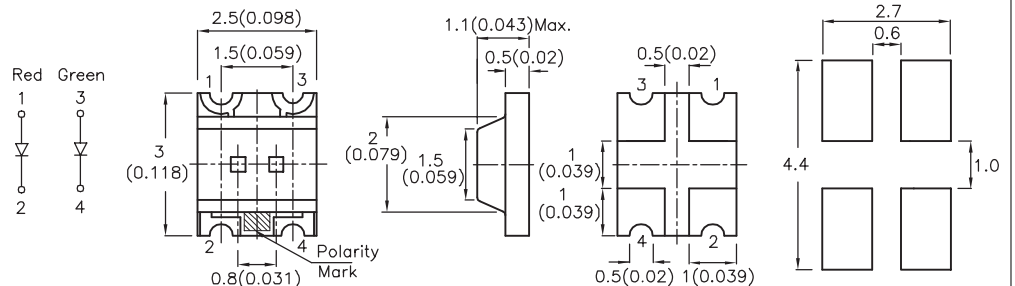
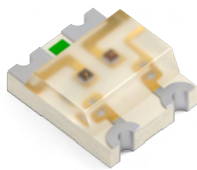


Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006)$

Recommended Soldering Pattern

ZMDKVG56W	◆ AlGaInP(Red)	645	40	79	140°	Water Clear
	◆ AlGaInP(Green)	574	40	69		
ZMDKCB56W	◆ AlGaInP(Red)	645	40	79	140°	Water Clear
	◆ InGaN(Blue)	460	40	89		
ZMYKVG56W	◆ AlGaInP(Yellow)	590	80	118	140°	Water Clear
	◆ AlGaInP(Green)	574	40	69		

**3.0x2.5x1.1mm
(Bi-Color)**



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$

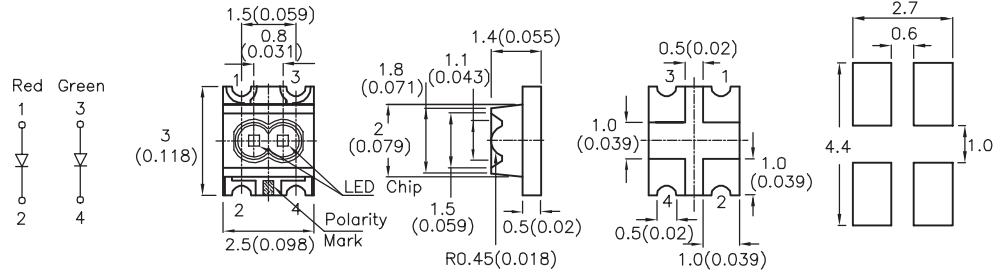
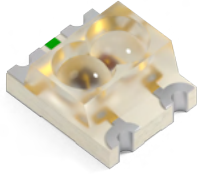
Recommended Soldering Pattern

ZMDKVG57W	◆ AlGaInP(Red)	645	40	69	160°	Water Clear
	◆ AlGaInP(Green)	574	20	59		

- Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
- Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
- We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**3.0x2.5x1.4mm
(Bi-Color)**

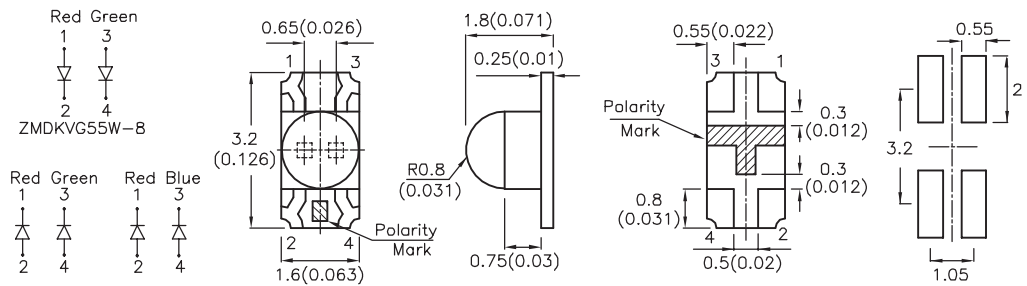
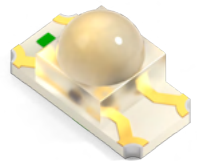


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDKVG57W-1	AlGaInP(Red)	645	120	297	50°	Water Clear
	AlGaInP(Green)	574	80	148		

**3.2x1.6x1.8mm
(1206 Dome Lens Bi-Color)**

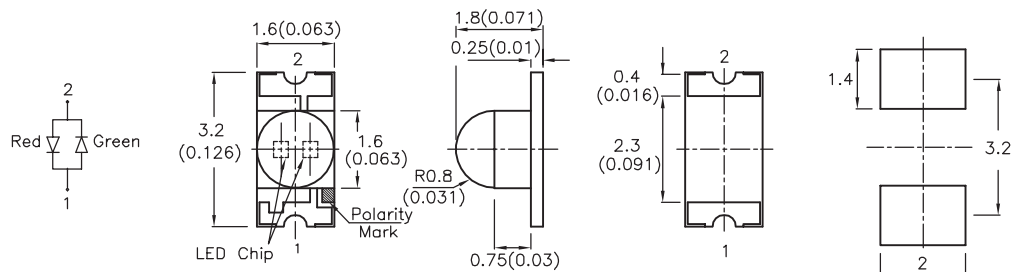
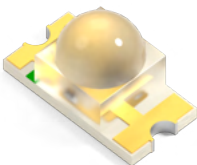


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDKVG55W-8	AlGaInP(Red)	645	300	597	30°	Water Clear
	AlGaInP(Green)	574	120	248		
ZM2CRKM2DG55W-8	AlGaInP(Red)	640	700	1295	30°	Water Clear
	InGaInP(Green)	520	700	1295		
ZM2CRKFB55W-8	AlGaInP(Red)	640	700	1295	30°	Water Clear
	InGaInP(Blue)	465	120	278		

**3.2x1.6x1.8mm
(1206 Dome Lens Bi-Color)**



Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$ "

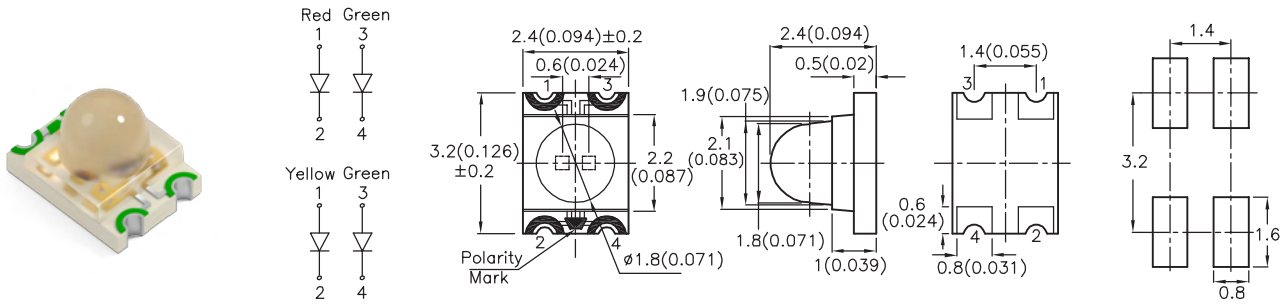
Recommended Soldering Pattern

ZMDKVG55W-7	AlGaInP(Red)	645	300	597	30°	Water Clear
	AlGaInP(Green)	574	120	248		

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.
 2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
 3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**3.2x2.4x2.4mm
(Dome Lens Bi-Color)**

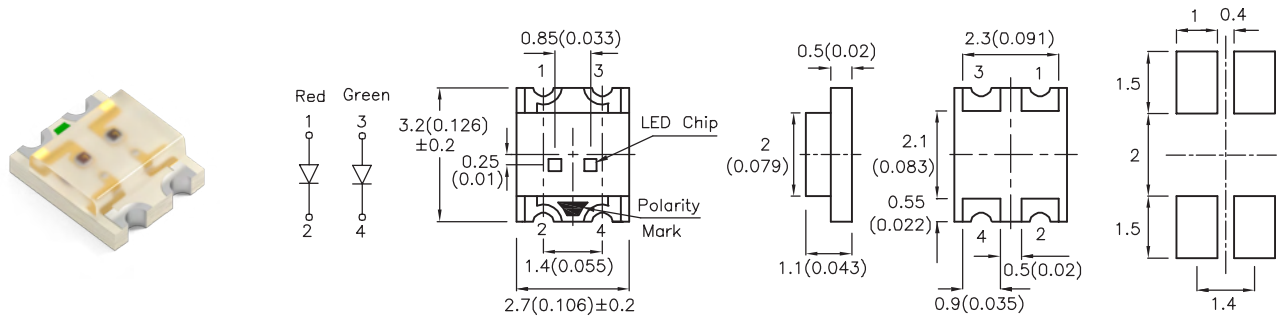


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$ "

Recommended Soldering Pattern

ZMDKVG78W	◆ AlGaInP(Red)	645	120	397	20°	Water Clear
	◆ AlGaInP(Green)	574	80	278		
ZMYKVG78W	◆ AlGaInP(Yellow)	590	400	795	20°	Water Clear
	◆ AlGaInP(Green)	574	80	278		

**3.2x2.7x1.1mm
(Bi-Color)**

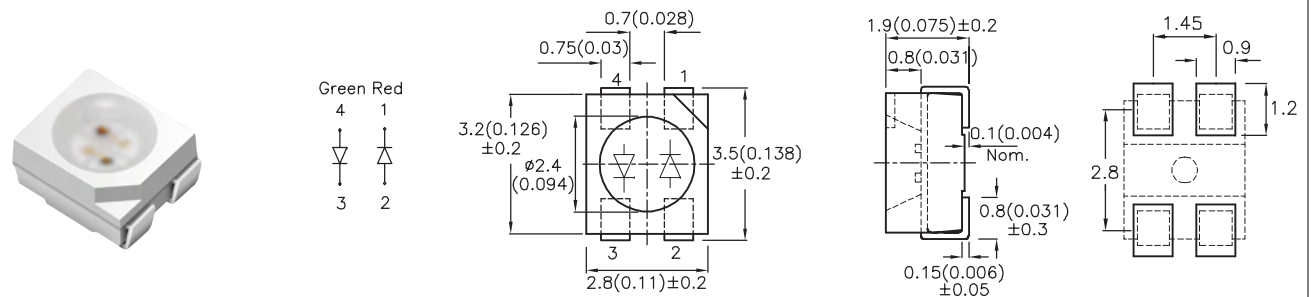


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$ "

Recommended Soldering Pattern

ZMDKVG98W	◆ AlGaInP(Red)	645	40	79	140°	Water Clear
	◆ AlGaInP(Green)	574	20	54		

**3.5x2.8x1.9mm
(PLCC4 Bi-Color)**



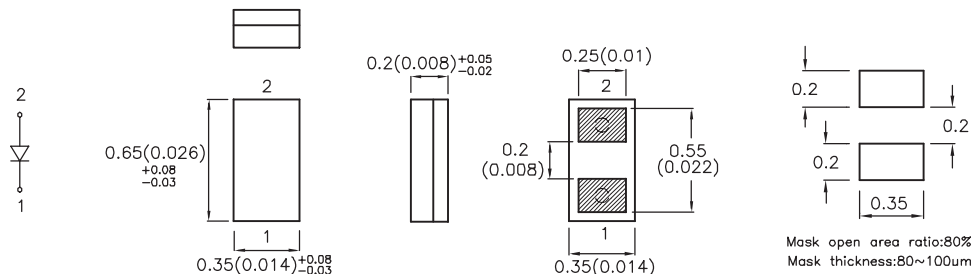
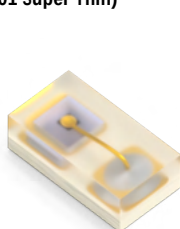
Dimension Unit: mm(inches), Tolerance: $\pm 0.25mm(0.01")$

Recommended Soldering Pattern

ZMDKVG45WT	◆ AlGaInP(Red)	645	55	98	120°	Water Clear
	◆ AlGaInP(Green)	574	40	79		

- Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
- Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
- We reserve the right to make changes at any time to enhance the design and / or performance of the product.

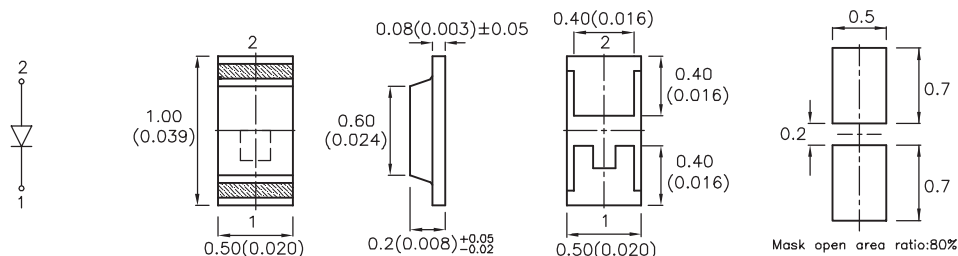
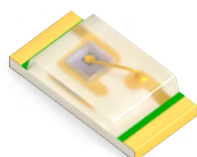
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=10\text{mA}, 5\text{mA}^*$		Viewing Angle $2\theta_{1/2}$	Lens
			Min.	Typ.		

0.65x0.35x0.2mm
(2021 Super Thin)
Dimension Unit: mm(inches), Tolerance: $\pm 0.1(0.004)''$

Recommended Soldering Pattern

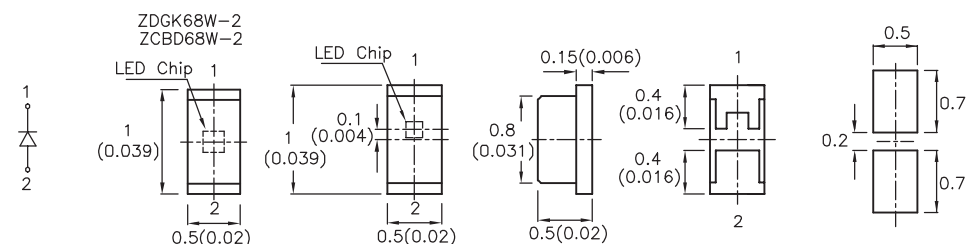
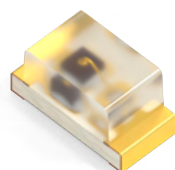
ZMDR155W	AlGaInP(Red)	639	10	34	140°	Water Clear
ZMER155W	AlGaInP(Red)	632	15	39	140°	Water Clear
ZMYR155W	AlGaInP(Yellow)	591	10	29	140°	Water Clear
ZVGR155W	AlGaInP(Green)	572	6	14	140°	Water Clear
ZDG155W5MAV	InGaN(Green)	515	*180	*278	140°	Water Clear
ZFBA155W5MAV	InGaN(Blue)	463	*30	*59	140°	Water Clear

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle $2\theta_{1/2}$	Lens
			Min.	Typ.		

1.0x0.5x0.2mm
(0402 Super Thin)
Dimension Unit: mm(inches), Tolerance: $\pm 0.1(0.004)''$

Recommended Soldering Pattern

ZMER68W-3	AlGaInP(Red)	632	40	79	120°	Water Clear
ZMYR68W-3	AlGaInP(Yellow)	591	55	98	120°	Water Clear
ZVGR68W-3	AlGaInP(Green)	572	12	34	120°	Water Clear

1.0x0.5x0.5mm
(0402)
Dimension Unit: mm(inches), Tolerance: $\pm 0.1(0.004)''$

Recommended Soldering Pattern

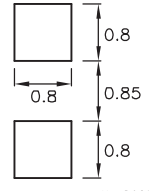
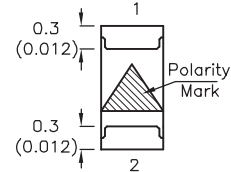
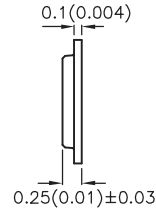
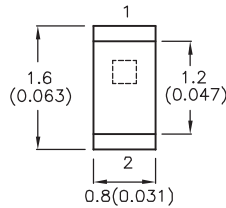
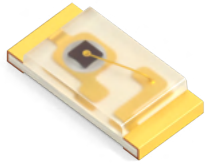
ZMDK68W-2	AlGaInP(Red)	645	40	69	120°	Water Clear
ZMOK68W-2	AlGaInP(Orange)	610	80	148	120°	Water Clear
ZMYK68W-2	AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZVG68W-2	AlGaInP(Green)	574	20	49	120°	Water Clear
ZDGK68W-2	InGaN(Green)	515	400	547	140°	Water Clear
ZCBD68W-2	InGaN(Blue)	460	40	59	140°	Water Clear

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

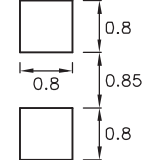
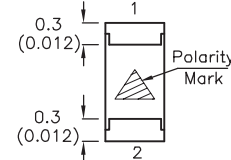
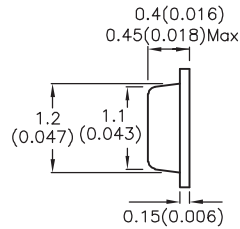
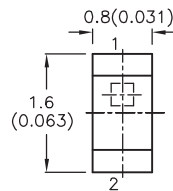
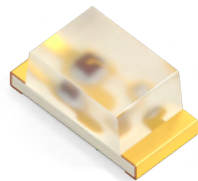
1.6x0.8x0.25mm
(0603 Super Thin)


Mask open area ratio:80%
Mask thickness:80~100um

Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$ "

Recommended Soldering Pattern

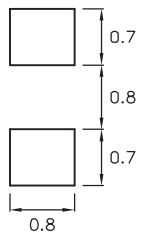
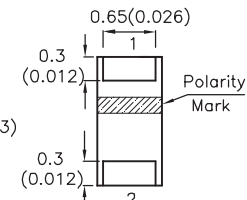
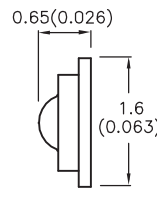
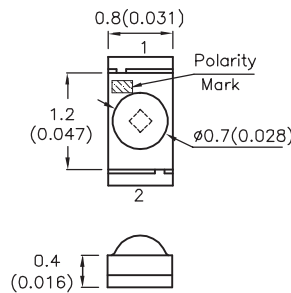
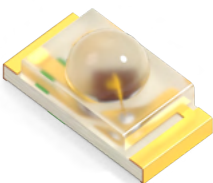
ZMDKT53W-6	◆ AlGaInP(Red)	645	55	108	120°	Water Clear
ZMOKT53W-6	◆ AlGaInP(Orange)	610	55	98	120°	Water Clear
ZMYKT53W-6	◆ AlGaInP(Yellow)	590	55	118	120°	Water Clear
ZVGT53W-6	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZDGK53W-6	◆ InGaN(Green)	515	300	397	130°	Water Clear
ZCBD53W-6	◆ InGaN(Blue)	460	40	98	130°	Water Clear

1.6x0.8x0.45mm
(0603)


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$ "

Recommended Soldering Pattern

ZMDK53W-3	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
ZMOK53W-3	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZMYK53W-3	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZVG53W-3	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZCBD53W-3	◆ InGaN(Blue)	460	40	98	130°	Water Clear

1.6x0.8x0.65mm
(0603)


Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006)$ "

Recommended Soldering Pattern

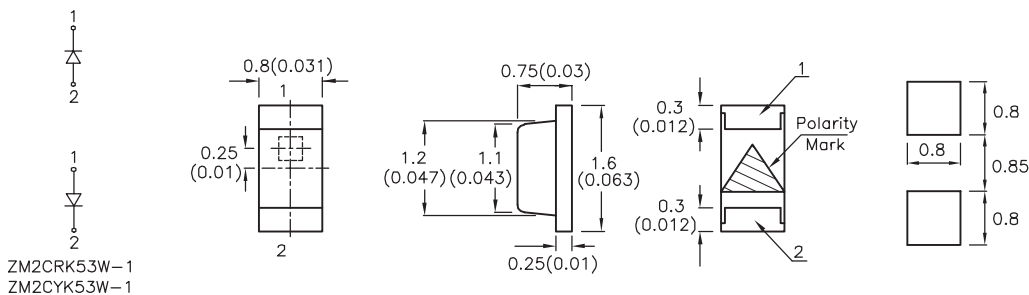
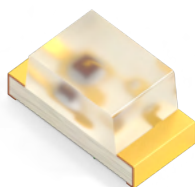
ZM2CRK53WA-8ST	◆ AlGaInP(Red)	640	300	597	100°	Water Clear
ZDGK53W-8ST	◆ InGaN(Green)	515	400	935	100°	Water Clear

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

**1.6x0.8x0.75mm
(0603)**

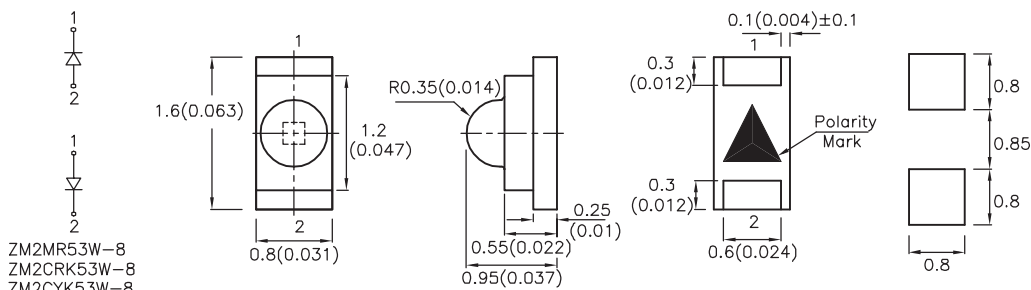
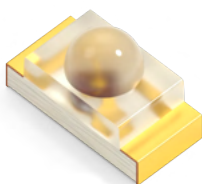


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$ "

Recommended Soldering Pattern

	Dimension Unit (mm(Inch)), Tolerance : ±0.2(±0.007)				Recommended Viewing Pattern	
ZMDK53W-1	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
ZM2CRK53W-1	◆ AlGaInP(Red)	640	200	347	120°	Water Clear
ZMOK53W-1	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZMYK53W-1	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZM2CYK53W-1	◆ AlGaInP(Yellow)	590	200	317	120°	Water Clear
ZVG53W-1	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZM2DG53W-1	◆ InGaN(Green)	520	500	795	130°	Water Clear
ZDGK53W-1	◆ InGaN(Green)	515	300	547	130°	Water Clear
ZFBB53W-1	◆ InGaN(Blue)	465	120	178	130°	Water Clear
ZCBD53W-1	◆ InGaN(Blue)	460	40	98	130°	Water Clear

**1.6x0.8x0.95mm
(0603 Dome Lens)**

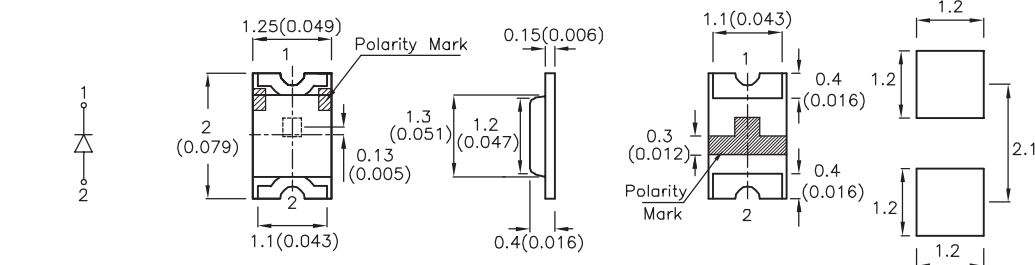


Dimension Unit: mm(inches). Tolerance : $\pm 0.15(0.006")$

Recommended Soldering Pattern

	Dimension Unit: mm(Inches), Tolerance : ±0.25(0.009")	Recommended Soldering Pattern				
ZM2MR53W-8	◆ AlGaInP(Red)	660	200	317	60°	Water Clear
ZMDK53W-8	◆ AlGaInP(Red)	645	80	248	60°	Water Clear
ZM2CRK53W-8	◆ AlGaInP(Red)	640	500	895	60°	Water Clear
ZMOK53W-8	◆ AlGaInP(Orange)	610	200	497	60°	Water Clear
ZMYK53W-8	◆ AlGaInP(Yellow)	590	300	597	60°	Water Clear
ZM2CYK53W-8	◆ AlGaInP(Yellow)	590	500	845	60°	Water Clear
ZVG53W-8	◆ AlGaInP(Green)	574	80	188	60°	Water Clear
ZM2DG53W-8	◆ InGaN(Green)	520	1000	1495	60°	Water Clear
ZDGK53W-8	◆ InGaN(Green)	515	700	1195	60°	Water Clear
ZFBB53W-8	◆ InGaN(Blue)	465	200	347	40°	Water Clear
ZCBD53W-8	◆ InGaN(Blue)	460	80	198	40°	Water Clear

**2.0x1.25x0.4mm
(0805)**



Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$

Recommended Soldering Pattern

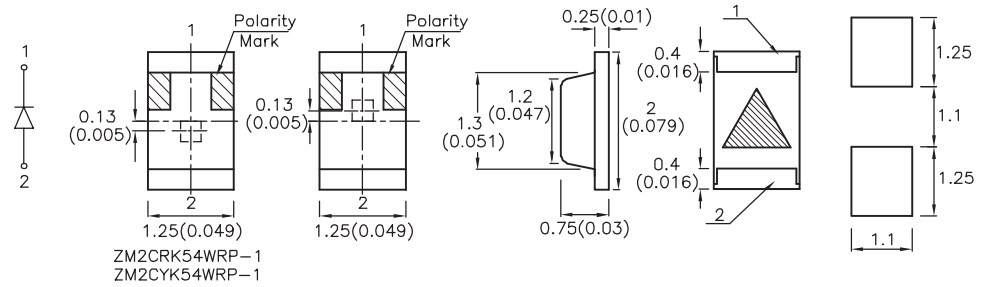
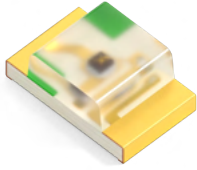
	Dimensional Tolerance (mm (inches), tolerance : ±0.25 (0.010))				Recommended Soldering Pattern
ZMDK54W-4	◆ AlGalnP (Red)	645	40	79	140° Water Clear
ZMOK54W-4	◆ AlGalnP (Orange)	610	80	178	140° Water Clear
ZMYK54W-4	◆ AlGalnP (Yellow)	590	80	148	140° Water Clear
ZVG54W-4	◆ AlGalnP (Green)	574	20	49	140° Water Clear
ZCBD54W-4	◆ InGaN (Blue)	460	40	98	140° Water Clear

1. Soldering Pattern Dimension Unit : mm. Tolerance : $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

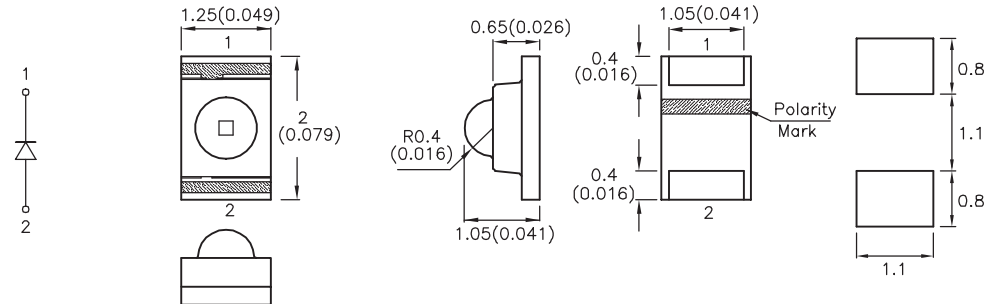
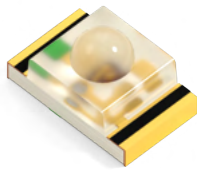
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**2.0x1.25x0.75mm
(0805)**Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$

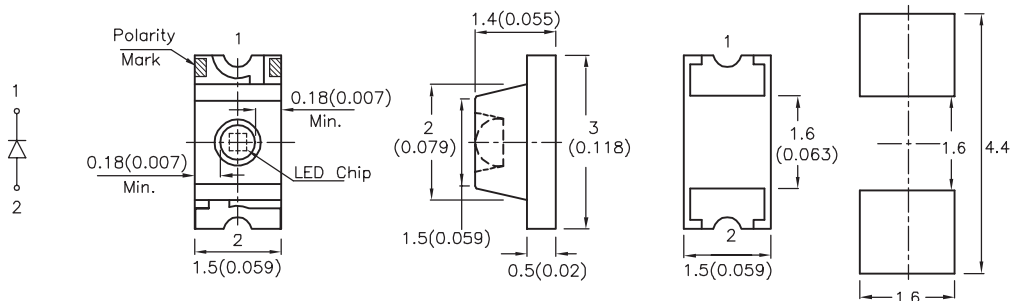
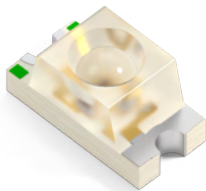
Recommended Soldering Pattern

ZMDK54W-1	◆ AlGaInP(Red)	645	40	79	140°	Water Clear
ZM2CRK54WRP-1	◆ AlGaInP(Red)	640	200	347	140°	Water Clear
ZMOK54W-1	◆ AlGaInP(Orange)	610	80	178	140°	Water Clear
ZMYK54W-1	◆ AlGaInP(Yellow)	590	80	148	140°	Water Clear
ZM2CYK54W-1	◆ AlGaInP(Yellow)	590	200	317	140°	Water Clear
ZM2CYK54WRP-1	◆ AlGaInP(Yellow)	590	200	317	140°	Water Clear
ZVG54W-1	◆ AlGaInP(Green)	574	20	49	140°	Water Clear
ZDGK54W-1	◆ InGaN(Green)	515	300	547	140°	Water Clear
ZFBB54W-1	◆ InGaN(Blue)	465	120	178	140°	Water Clear
ZCBD54W-1	◆ InGaN(Blue)	460	40	98	140°	Water Clear

**2.0x1.25x1.05mm
(0805)**Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006)$

Recommended Soldering Pattern

ZMDK54W-8	◆ AlGaInP(Red)	645	300	547	40°	Water Clear
ZM2CRK54WA-8	◆ AlGaInP(Red)	640	1000	1990	40°	Water Clear
ZDGK54W-8	◆ InGaN(Green)	515	1600	2490	30°	Water Clear

**3.0x1.5x1.4mm
(Inner Dome Lens)**Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$

Recommended Soldering Pattern

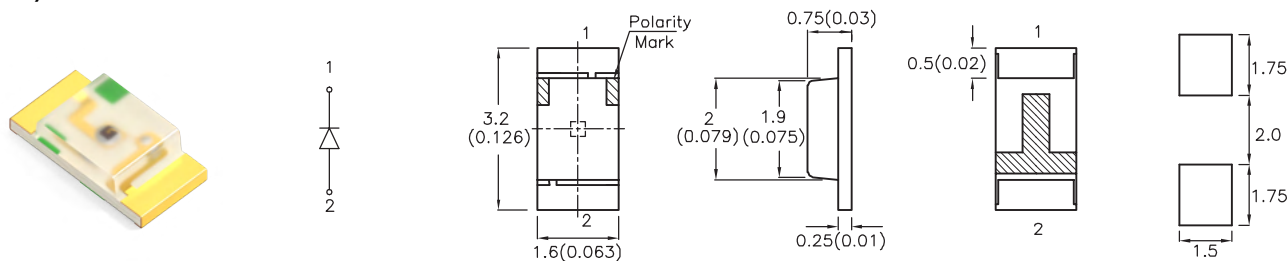
ZMDK60W	◆ AlGaInP(Red)	645	120	178	70°	Water Clear
ZMYK60W	◆ AlGaInP(Yellow)	590	200	347	70°	Water Clear
ZVG60W	◆ AlGaInP(Green)	574	55	118	70°	Water Clear

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.

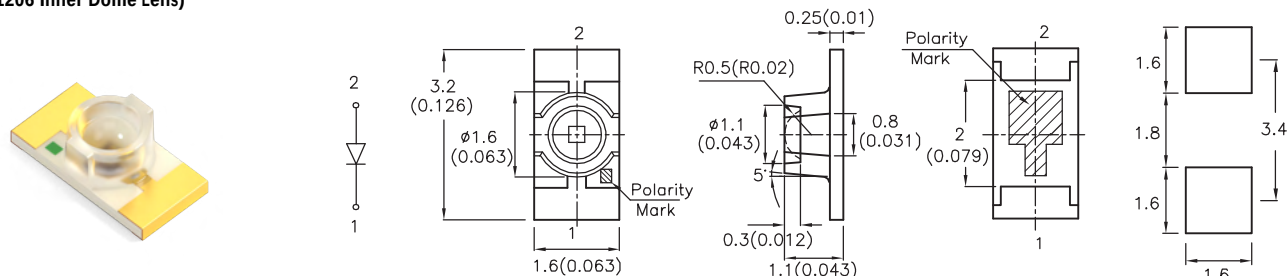
2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

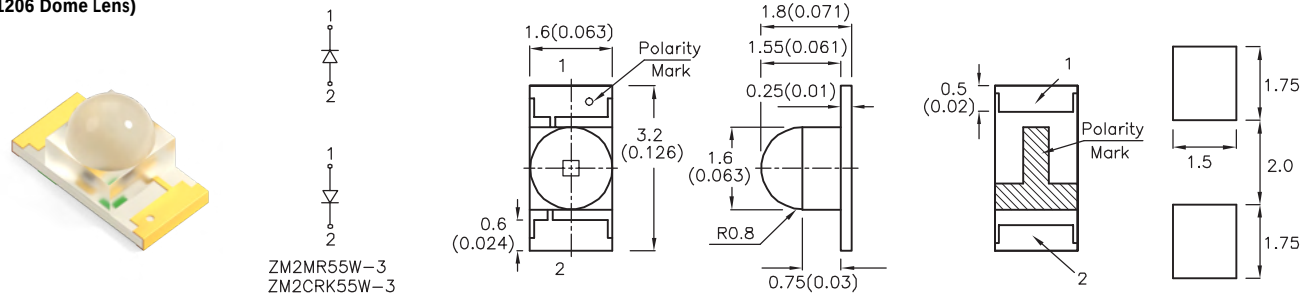
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mod) $I_f=20\text{mA}$		Viewing Angle $2\theta_{1/2}$	Lens
			Min.	Typ.		

**3.2x1.6x0.75mm
(1206)**

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Min. Intensity	Typ. Intensity	Viewing Angle	Lens
ZMDK55W-1	AlGaInP (Red)	645	40	79	140°	Water Clear
ZMOK55W-1	AlGaInP (Orange)	610	80	178	140°	Water Clear
ZMYK55W-1	AlGaInP (Yellow)	590	80	148	140°	Water Clear
ZVG55W-1	AlGaInP (Green)	574	20	49	140°	Water Clear
ZCBD55W-1	InGaIn (Blue)	460	40	98	150°	Water Clear

**3.2x1.6x1.1mm
(1206 Inner Dome Lens)**

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Min. Intensity	Typ. Intensity	Viewing Angle	Lens
ZMDK55W-A2	AlGaInP (Red)	645	120	228	80°	Water Clear
ZMOK55W-A2	AlGaInP (Orange)	610	200	347	80°	Water Clear
ZMYK55W-A2	AlGaInP (Yellow)	590	200	347	80°	Water Clear
ZVG55W-A2	AlGaInP (Green)	574	55	98	80°	Water Clear
ZCBD55W-A2	InGaIn (Blue)	460	120	248	80°	Water Clear

**3.2x1.6x1.8mm
(1206 Dome Lens)**

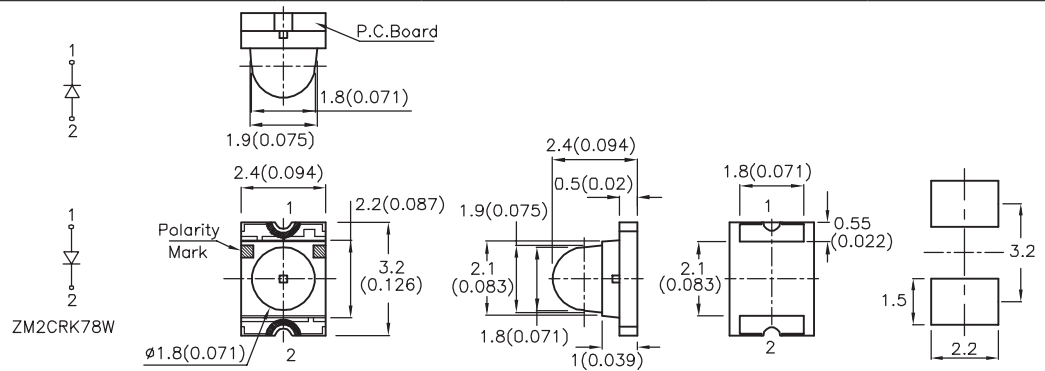
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Min. Intensity	Typ. Intensity	Viewing Angle	Lens
ZM2MR55W-3	AlGaInP (Red)	660	700	1095	40°	Water Clear
ZMDK55W-3	AlGaInP (Red)	645	300	795	40°	Water Clear
ZM2CRK55W-3	AlGaInP (Red)	640	1600	2490	40°	Water Clear
ZMOK55W-3	AlGaInP (Orange)	610	500	995	40°	Water Clear
ZMYK55W-3	AlGaInP (Yellow)	590	700	795	40°	Water Clear
ZVG55W-3	AlGaInP (Green)	574	120	297	40°	Water Clear
ZM2DG55W-3	InGaIn (Green)	520	3600	5990	30°	Water Clear
ZDGK55W-3	InGaIn (Green)	515	2700	3990	30°	Water Clear
ZFBB55W-3	InGaIn (Blue)	465	700	1195	30°	Water Clear
ZCBD55W-3	InGaIn (Blue)	460	300	695	30°	Water Clear

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

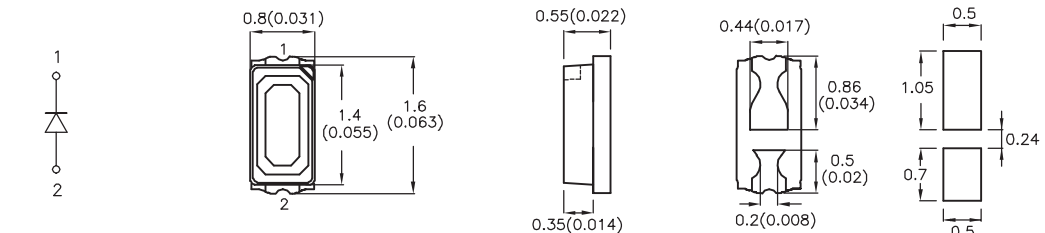
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}, 10\text{mA}^*$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**3.2x2.4x2.4mm
(Dome Lens)**Dimension Unit: mm(inches), Tolerance: $\pm 0.1(0.004)$ "

Recommended Soldering Pattern

ZMDK78W	◆ AlGaInP(Red)	645	700	1495	20°	Water Clear
ZM2CRK78W	◆ AlGaInP(Red)	640	3100	4990	20°	Water Clear
ZMOK78W	◆ AlGaInP(Orange)	610	1000	1590	20°	Water Clear
ZMYK78W	◆ AlGaInP(Yellow)	590	1000	1295	20°	Water Clear
ZVG78W	◆ AlGaInP(Green)	574	500	895	20°	Water Clear
ZDGK78W	◆ InGaN(Green)	515	3600	6790	20°	Water Clear
ZFBB78W	◆ InGaN(Blue)	465	1600	1990	20°	Water Clear
ZCBD78W	◆ InGaN(Blue)	460	500	895	20°	Water Clear

**1.6x0.8x0.55mm
(0603 PLCC SMD)**Dimension Unit: mm(inches), Tolerance: $\pm 0.15(0.006)$ "

Recommended Soldering Pattern

ZMDK53S-4	◆ AlGaInP(Red)	645	40	158	120°	Water Clear
ZMYK53S-4	◆ AlGaInP(Yellow)	590	55	238	120°	Water Clear
ZVG53S-4	◆ AlGaInP(Green)	574	12	74	120°	Water Clear
ZFBA53S10MAV-4	◆ InGaN(Blue)	463	*50	*158	120°	Water Clear

PRODUCT HIGHLIGHT

**0603 PLCC2
SMD LED**

Zxx53S-4

Zxx53S-4 – 0603 PLCC2 SMD LED**PRODUCT HIGHLIGHT**

SunLED, a leader in optoelectronics and discrete LEDs, releases the 0603 PLCC2 SMD LED series. Plastic-leaded chip carrier (PLCC) packages have been a popular choice among engineering designs requiring a higher brightness output. However, compared to smaller PCB type LEDs, the larger footprints of PLCC LEDs also create challenges in mechanical fitment. SunLED combines the best of both worlds in this new PLCC2 package - a compact and miniature version with an industry standard 0603 (1.6x0.8mm) footprint.

Super bright chip offerings paired with a wide Lambertian emission angle of 120° make this series a versatile solution for various applications. By utilizing a reflector type package, SunLED's 0603 PLCC2 SMD LEDs are able to achieve nearly twice (2x) the intensity of standard 0603 chip type LEDs. Color options of red, yellow, green, and blue are readily available. Please contact SunLED if additional color options are needed.

PRODUCT APPLICATIONS

- Icon and text backlighting
- Smart products and IOT devices
- Video conferencing equipment
- White goods
- Medical and healthcare products
- Consumer electronics
- Safety and security

PRODUCT FEATURES

- Plastic-leaded chip carrier (PLCC) package
- Industry standard 0603 (1.6x0.8mm) footprint
- MSL (Moisture Sensitivity Level): 3
- Higher luminous intensity
- Wide viewing angle

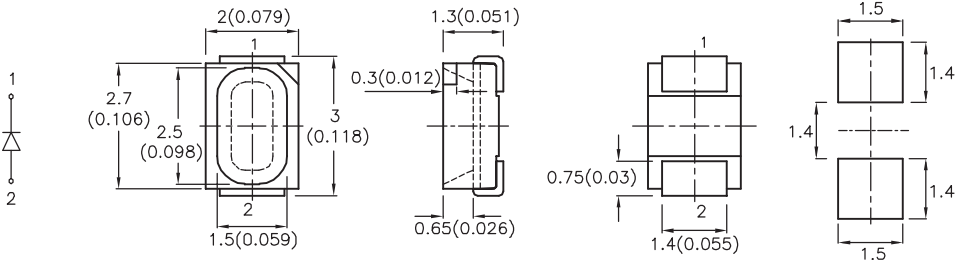
1. Soldering Pattern Dimension Unit: mm, Tolerance: $\pm 0.1\text{mm}$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

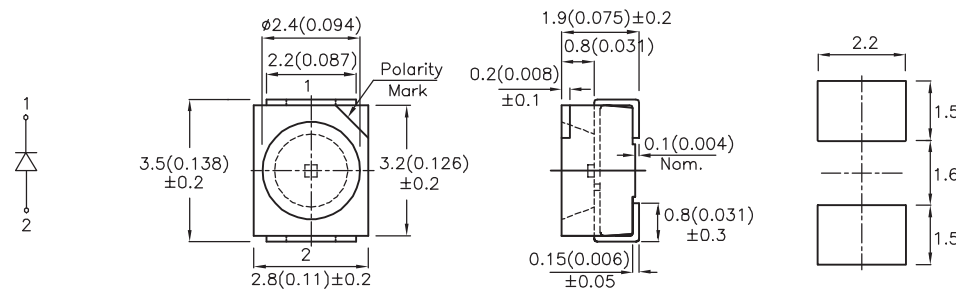
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle $2\theta_{1/2}$	Lens
			Min.	Typ.		

**3.0x2.0x1.3mm
(PLCC2)**

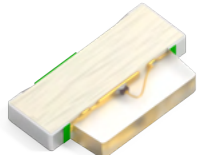
Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$

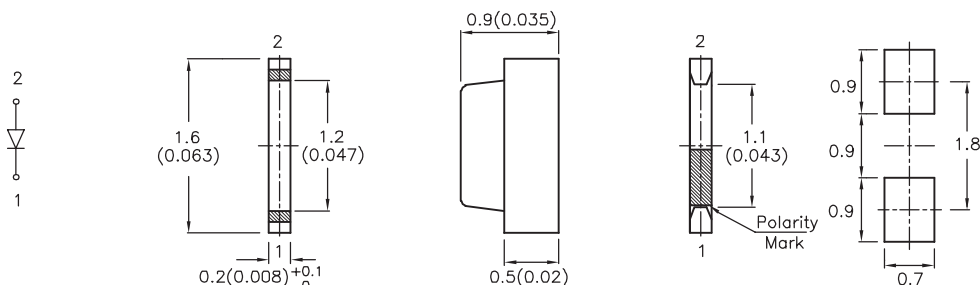
ZMDK105S	AlGaInP(Red)	645	40	89	120°	Water Clear
ZMYK105S	AlGaInP(Yellow)	590	120	198	120°	Water Clear
ZVG105S	AlGaInP(Green)	574	40	79	120°	Water Clear
ZCBD105S	InGaN(Blue)	460	80	118	120°	Water Clear

3.5x2.8x1.9mm (PLCC2) 						
						
Dimension Unit: mm(inches), Tolerance : $\pm 0.25mm (0.01)$						
ZMDK45WT	AlGaInP(Red)	645	55	98	120°	Water Clear
ZMOK45WT	AlGaInP(Orange)	610	120	228	120°	Water Clear
ZMYK45WT	AlGaInP(Yellow)	590	120	248	120°	Water Clear
ZVG45WT	AlGaInP(Green)	574	40	98	120°	Water Clear
ZDGK45WT	InGaN(Green)	515	500	995	120°	Water Clear
ZFBB45S	InGaN(Blue)	465	300	447	120°	Water Clear
ZCBD45S	InGaN(Blue)	460	80	148	120°	Water Clear

SIDE EMITTING

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle $2\theta_{1/2}$	Lens
			Min.	Typ.		

**1.6x0.9x0.2mm
(Super Thin Right Angle)**




Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$

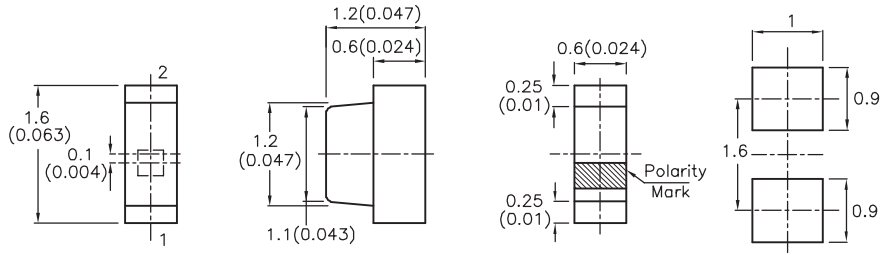
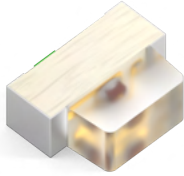
ZVGF151W	AlGaInP(Green)	573	12	29	150°	Water Clear
----------	----------------	-----	----	----	------	-------------

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.

2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

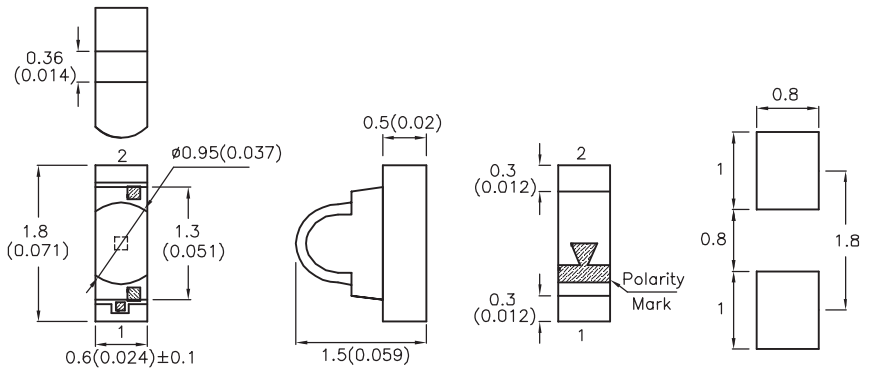
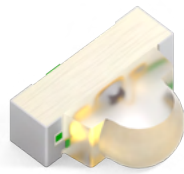
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle 2 θ /2	Lens
			Min.	Typ.		

**1.6x1.2x0.6mm
(Right Angle)**Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)''$

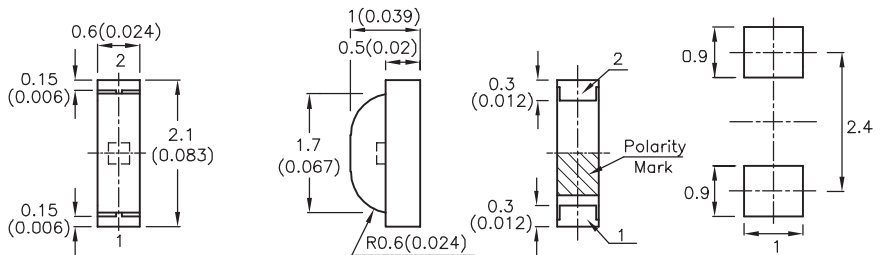
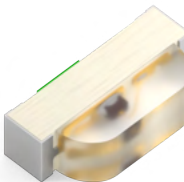
Recommended Soldering Pattern

ZMDK87W	◆ AlGaInP(Red)	645	40	79	110°	Water Clear
ZMOK87W	◆ AlGaInP(Orange)	610	80	178	110°	Water Clear
ZMYK87W	◆ AlGaInP(Yellow)	590	80	148	110°	Water Clear
ZVG87W	◆ AlGaInP(Green)	574	20	49	110°	Water Clear
ZFBB87W	◆ InGaN(Blue)	465	120	198	110°	Water Clear
ZCBD87W	◆ InGaN(Blue)	460	40	79	110°	Water Clear

**1.8x1.5x0.6mm
(Dome Lens Right Angle)**Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006)''$

Recommended Soldering Pattern

ZMDK168W	◆ AlGaInP(Red)	645	500	1195	25°	Water Clear
ZM2CRK168WA	◆ AlGaInP(Red)	640	1300	2590	25°	Water Clear
ZMOK168W	◆ AlGaInP(Orange)	610	500	1095	25°	Water Clear
ZMYK168W	◆ AlGaInP(Yellow)	590	500	1095	25°	Water Clear
ZM2CYK168WA	◆ AlGaInP(Yellow)	590	700	1790	25°	Water Clear
ZVG168W	◆ AlGaInP(Green)	574	120	397	25°	Water Clear
ZDGK168W	◆ InGaN(Green)	515	1900	3190	25°	Water Clear
ZFBB168W	◆ InGaN(Blue)	465	400	795	25°	Water Clear

**2.1x1.0x0.6mm
(Right Angle)**Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)''$

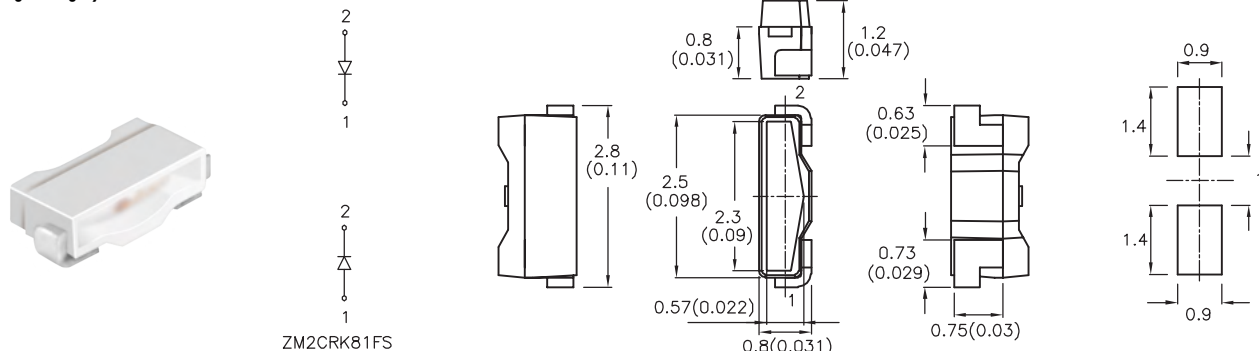
Recommended Soldering Pattern

ZMDK74W	◆ AlGaInP(Red)	645	40	79	140°	Water Clear
ZM2CRK74WA	◆ AlGaInP(Red)	640	200	377	140°	Water Clear
ZMYK74W	◆ AlGaInP(Yellow)	590	80	148	140°	Water Clear
ZVG74W	◆ AlGaInP(Green)	574	20	49	140°	Water Clear

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.

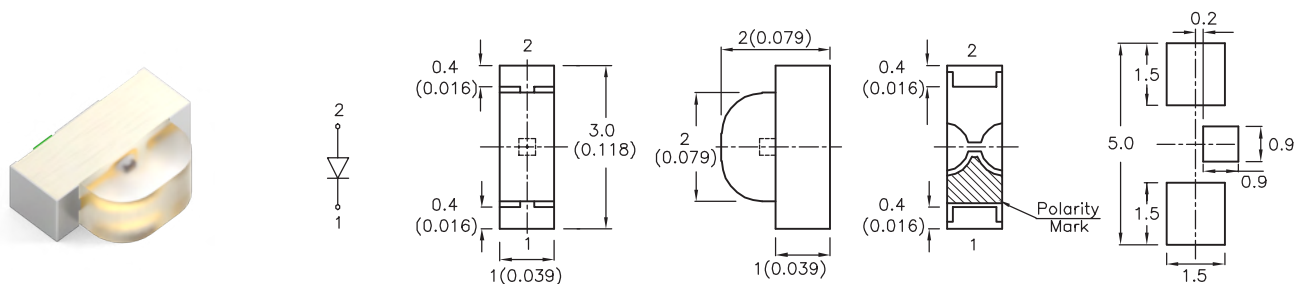
2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.

3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

**2.8x1.2x0.8mm
(Right Angle)**Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$

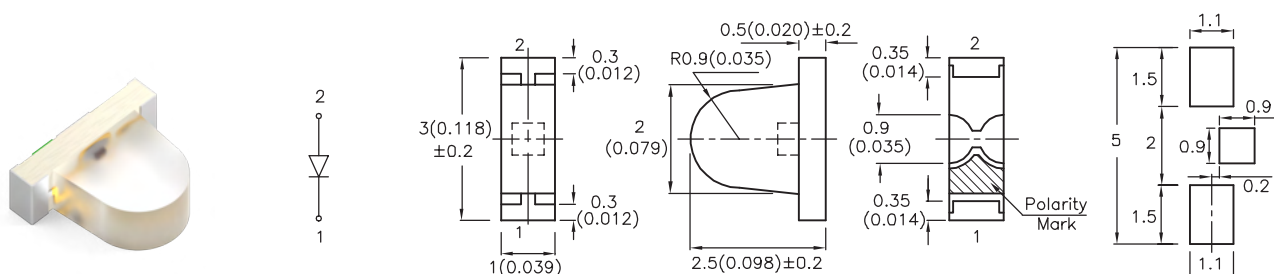
Recommended Soldering Pattern

ZMDK81FS	◆ AlGaInP(Red)	645	40	98	110°	Water Clear
ZM2CRK81FS	◆ AlGaInP(Red)	640	300	497	110°	Water Clear
ZMYK81FS	◆ AlGaInP(Yellow)	590	120	198	110°	Water Clear
ZVG81FS	◆ AlGaInP(Green)	574	40	69	110°	Water Clear
ZM2DG81FS	◆ InGaN(Green)	520	1000	1395	110°	Water Clear
ZFBB81FS	◆ InGaN(Blue)	465	200	347	110°	Water Clear

**3.0x2.0x1.0mm
(Right Angle)**Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006)$

Recommended Soldering Pattern

ZMOK56W	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZMYK56W	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZVG56W	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZCBD56W	◆ InGaN(Blue)	460	40	79	120°	Water Clear

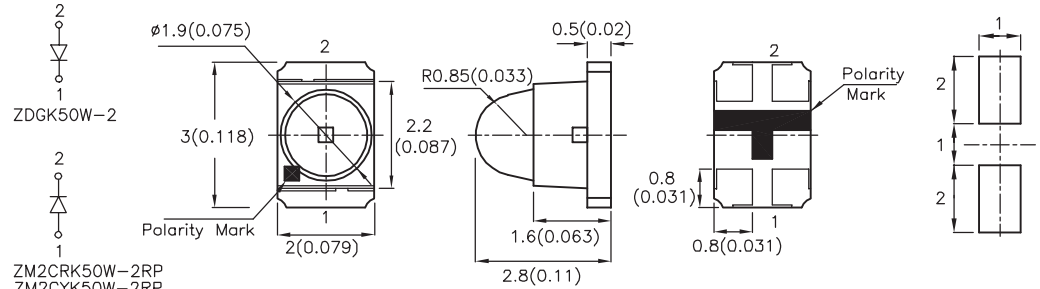
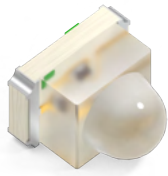
**3.0x2.5x1.0mm
(Right Angle)**Dimension Unit: mm(inches), Tolerance : $\pm 0.15(0.006)$

Recommended Soldering Pattern

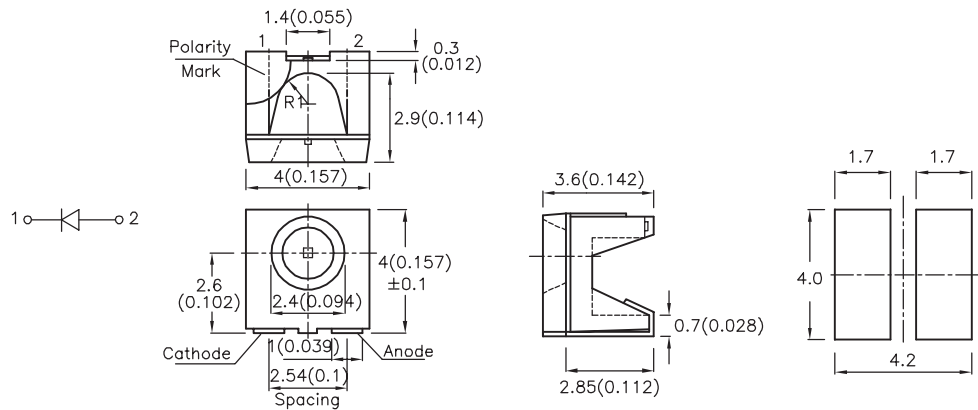
ZVG56W-1	◆ AlGaInP(Green)	574	80	148	30°	Water Clear
----------	------------------	-----	----	-----	-----	-------------

- Soldering Pattern Dimension Unit : mm, Tolerance : ± 0.1 mm.
- Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
- We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**3.0x2.8x2.0 mm
(Dome Lens Right Angle)**


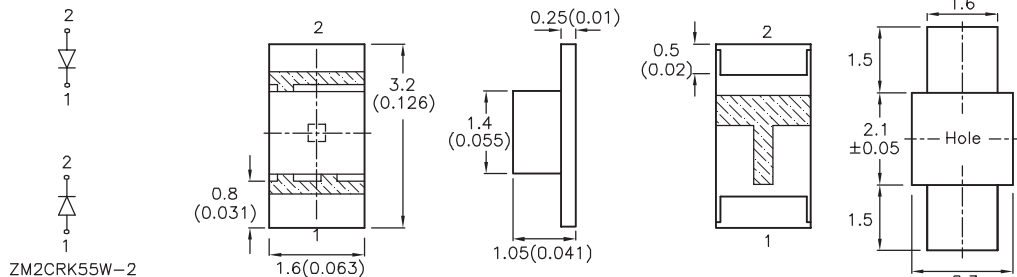
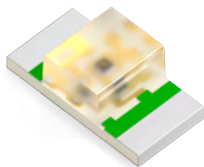
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$ Min.	Intensity(mcd) $I_f=20\text{mA}$ Typ.	Viewing Angle 2 θ 1/2	Lens
ZM2CRK50W-2RP	AlGaInP(Red)	640	2300	3790	10°	Water Clear
ZM2CYK50W-2RP	AlGaInP(Yellow)	590	3600	6990	10°	Water Clear
ZDGK50W-2	InGaN(Green)	515	3100	5790	10°	Water Clear

**4.0x4.0x3.6mm
(PLCC2 Right Angle)**


Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$ Min.	Intensity(mcd) $I_f=20\text{mA}$ Typ.	Viewing Angle 2 θ 1/2	Lens
ZVG67WT	AlGaInP(Green)	574	40	89	120°	Water Clear
ZCBD67S	InGaN(Blue)	460	80	218	120°	Water Clear

REVERSE MOUNT

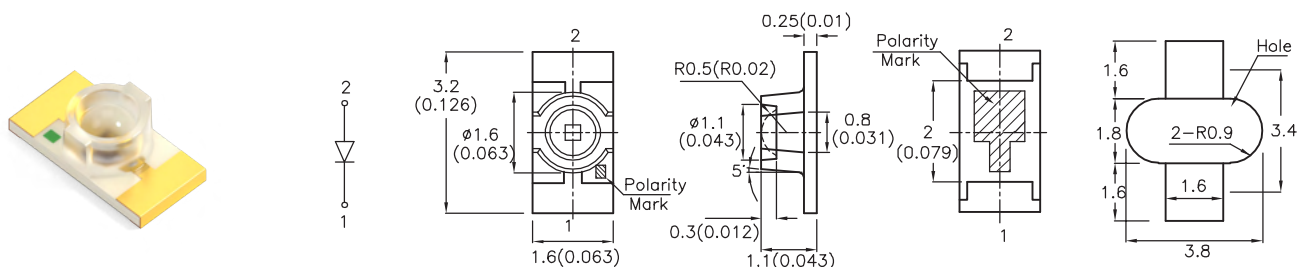
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

**3.2x1.6x1.05mm
(1206 Reverse Mount)**


Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20\text{mA}$ Min.	Intensity(mcd) $I_f=20\text{mA}$ Typ.	Viewing Angle 2 θ 1/2	Lens
ZMDK55W-2	AlGaInP(Red)	645	40	79	140°	Water Clear
ZM2CRK55W-2	AlGaInP(Red)	640	200	347	140°	Water Clear
ZMOK55W-2	AlGaInP(Orange)	610	80	178	140°	Water Clear
ZMYK55W-2	AlGaInP(Yellow)	590	80	148	140°	Water Clear
ZVG55W-2	AlGaInP(Green)	574	20	49	140°	Water Clear
ZM2DG55W-2	InGaN(Green)	520	500	795	140°	Water Clear
ZDGK55W-2	InGaN(Green)	515	300	547	140°	Water Clear
ZCBD55W-2	InGaN(Blue)	460	40	98	140°	Water Clear

- Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1\text{mm}$.
- Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
- We reserve the right to make changes at any time to enhance the design and / or performance of the product.

3.2x1.6x1.1mm (1206 Inner Dome Lens Reverse Mount)

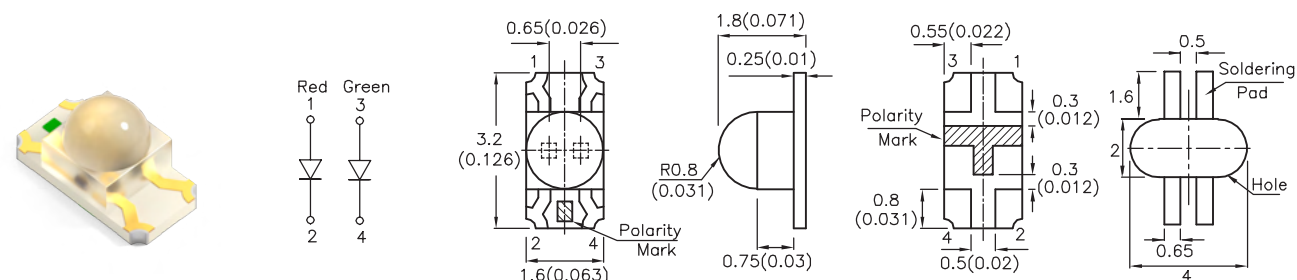


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)$ "

Recommended Soldering Pattern

ZMDK55W-A2RT	AlGaInP(Red)	645	120	228	80°	Water Clear
ZMYK55W-A2RT	AlGaInP(Yellow)	590	200	347	80°	Water Clear
ZVG55W-A2RT	AlGaInP(Green)	574	55	98	80°	Water Clear
ZCBD55W-A2RT	InGaIn(Blue)	460	120	248	80°	Water Clear

3.2x1.6x1.8mm (1206 Dome Lens Reverse-Mount Bi-Color)

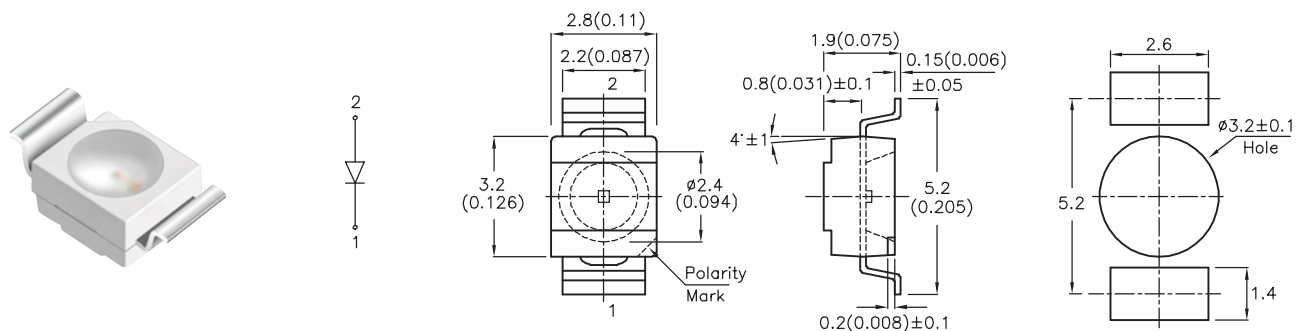


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDKDGK55W-8RT	AlGaInP(Red)	645	300	597	30°	Water Clear
	InGaIn(Green)	515	400	647		

3.2x2.8x1.9mm (PLCC2 Reverse Mount)



Dimension Unit: mm(inches), Tolerance: $\pm 0.25mm(0.01)$ "

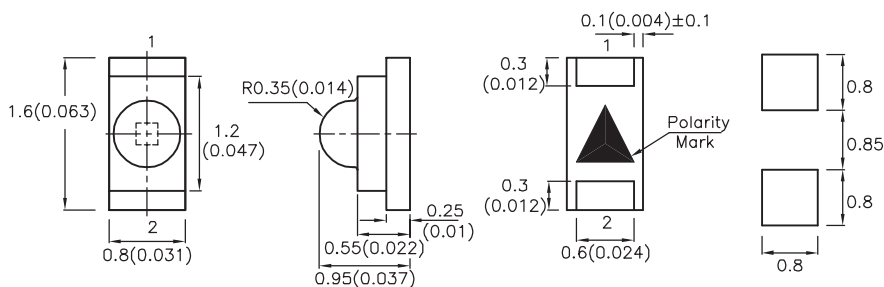
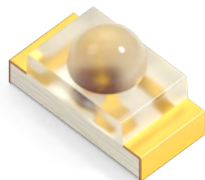
Recommended Soldering Pattern

ZMDK45WT-9	AlGaInP(Red)	645	55	98	120°	Water Clear
ZMYK45WT-9	AlGaInP(Yellow)	590	120	248	120°	Water Clear
ZDGK45WT-9	InGaIn(Green)	515	500	995	120°	Water Clear
ZFBB45S-9	InGaIn(Blue)	465	300	447	120°	Water Clear

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Max.		

**1.6x0.8x0.95mm
(0603 Dome Lens)**

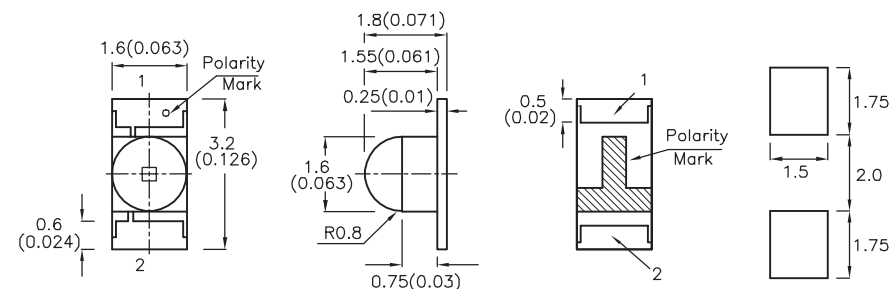
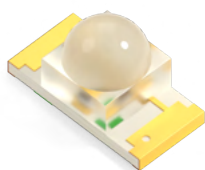


Dimension Unit: mm(inches), Tolerance: $\pm 0.15(0.006)$ "

Recommended Soldering Pattern

ZMDK53W-8HTA	◆ AlGaInP(Red)	645	200	700	60°	Water Clear
--------------	----------------	-----	-----	-----	-----	-------------

**3.2x1.6x1.8mm
(1206 Dome Lens)**

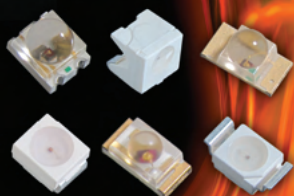


Dimension Unit: mm(inches), Tolerance: $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDK55W-3HTA	◆ AlGaInP(Red)	645	300	1300	40°	Water Clear
--------------	----------------	-----	-----	------	-----	-------------

High Temperature SMD LED Series



High Temperature Series

SunLED launches the High Temperature Series, a line of high performance LEDs that are designed to withstand temperatures higher than industry standard.

Products in all industries experience temperature fluctuations and may be subject to high ambient temperatures. These conditions require a performance-driven LED that can withstand harsh environments. While these LEDs can be operated at a higher temperature, there is increased performance throughout the temperature range. The High Temperature Series LEDs have improved current derating curves, which results in higher brightness and overall efficiency. SunLED proudly supports engineering designs with the High Temperature Series LEDs.

PRODUCT APPLICATIONS

- Appliances
- Automotive
- Industrial Controls
- Marine
- Medical

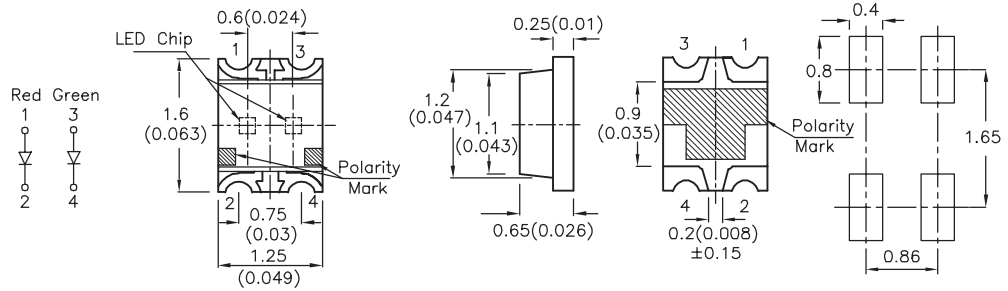
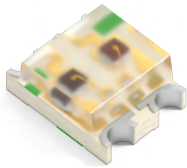
PRODUCT FEATURES

- High temperature operation
- Longer lifetime and reduced die degradation
- Eliminate failures in harsh environments due to excessive heat
- Higher outputs and energy efficiency
- Prevent shifts in color due to heat
- Robust packages with superior quality

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA, 5mA^*$		Viewing Angle 2 θ 1/2	Lens
			Min.	Max.		

1.6x1.25x0.65mm (Bi-Color)

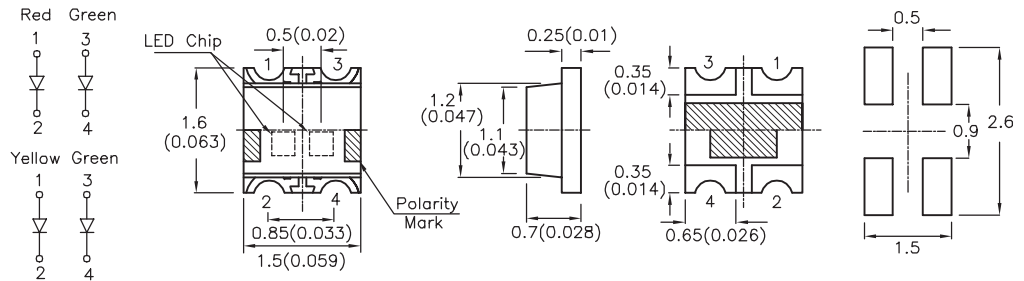
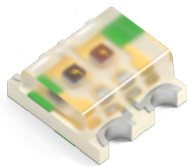


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDKVG62W5MAV-1HTA	◆ AlGaInP(Red)	645	*15	*30	150°	Water Clear
	◆ AlGaInP(Green)	574	*6	*20		

1.6x1.5x0.7mm (Bi-Color)

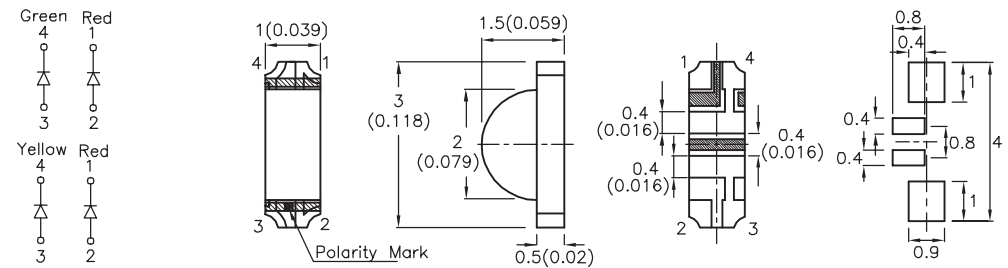
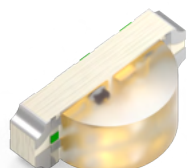


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDKVG59W-1HTA	◆ AlGaInP(Red)	645	40	120	150°	Water Clear
	◆ AlGaInP(Green)	574	20	120		
ZMYKVG59W-1HTA	◆ AlGaInP(Yellow)	590	80	300	150°	Water Clear
	◆ AlGaInP(Green)	574	20	120		

3.0x1.5x1.0mm (Right Angle, Bi-Color)



Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDKVGX56W-HTA	◆ AlGaInP(Red)	645	55	200	150°	Water Clear
	◆ AlGaInP(Green)	574	20	80		
ZMDKMYKX56W-HTA	◆ AlGaInP(Red)	645	55	200	150°	Water Clear
	◆ AlGaInP(Yellow)	590	120	400		

1. Soldering Pattern Dimension Unit : mm, Tolerance : $\pm 0.1mm$.
 2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
 3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.

PRODUCT HIGHLIGHT

PRODUCT HIGHLIGHT

PRODUCT HIGHLIGHT