

Optoelectronic Components Catalogue

2014-2016



SMD LEDs

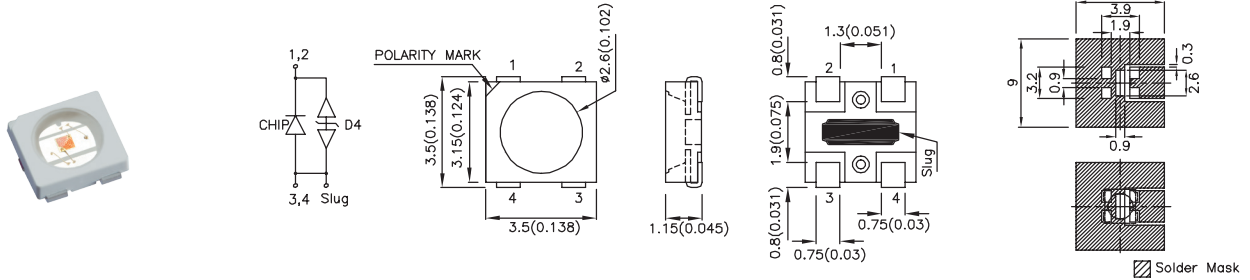
- 2 HIGH POWER
- 3 MULTI-COLOR
- 7 CHIP TYPE
- 12 SIDE EMITTING
- 15 PLCC
- 17 SOT-23

GUARANTEED TO SHINE

TS16949 Automotive • ISO9001 Quality • ISO14001 Environmental

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity (lm) $I_f=150mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

3.5x3.5x1.15mm

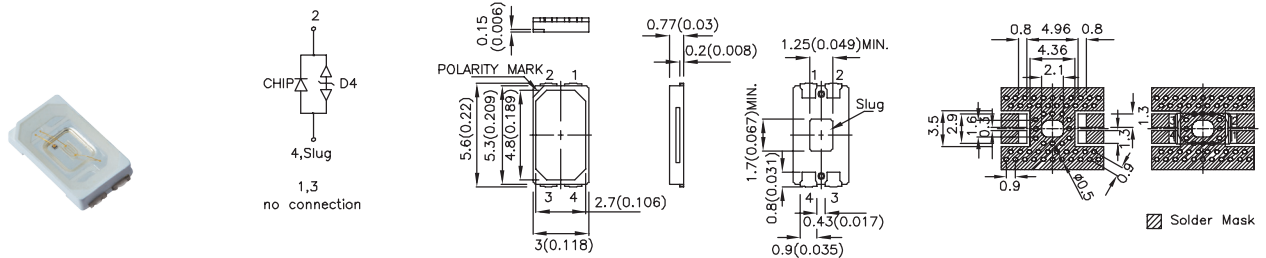


Dimension Unit: mm(inches), Tolerance: $\pm 0.25mm$ (0.01")

Recommended Soldering Pattern

ZMD20X92S-4	◆ AlGaInP(Red)	660	5	6.3	120°	Water Clear
ZMOLA92S-4	◆ AlGaInP(Red)	640	10	12.7	120°	Water Clear
ZMYLA92S-4	◆ AlGaInP(Yellow)	590	10	13.7	120°	Water Clear
ZDG25X92S-4	◆ InGaN(Green)	515	14	19.7	120°	Water Clear
ZCB25X92S-4	◆ InGaN(Blue)	452	2.4	3.3	120°	Water Clear

5.6x3.0x0.77mm



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

Recommended Soldering Pattern

ZMOLA143S	◆ AlGaInP(Red)	640	12	13.7	120°	Water Clear
ZMYLA143S	◆ AlGaInP(Yellow)	590	12	14.7	120°	Water Clear
ZDG25X143S	◆ InGaN(Green)	515	20	26.7	120°	Water Clear
ZCB25X143S	◆ InGaN(Blue)	452	6	8.4	120°	Water Clear

Unique Wavelength 1/2W SMD LED

ZMD20X92S-4 (Red) & ZCB25X92S-4 (Blue)



Unique Wavelength 1/2W LED - Zxx92S-4 Series

PRODUCT HIGHLIGHT

SunLED has taken a step forward towards supporting unique applications beyond basic indication that will broaden the spectrum of infinite design possibilities. With the introduction of our new mid-power series with 660nm Red LED and 450nm Blue LED, we are opening doors to fill a void in markets that traditionally used other light sources such as laser diodes, fluorescent tubes, or HPS bulbs.

PRODUCT APPLICATIONS

- Medical
- Accent Lighting
- Aquarium Lighting
- Horticulture
- Entertainment / Gaming

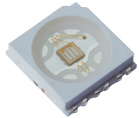
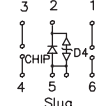
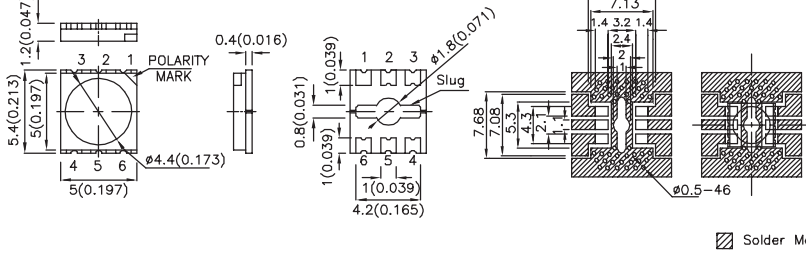
PRODUCT FEATURES

- 3.5x3.5mm Compact Footprint
- Moisture Sensitivity Level (MSL): 2a
- ESD Protected with embedded Zener diode
- Low profile height: 1.15mm
- Operating Current: $I_f=150mA$

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 (lm) $I_f=350mA*150mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

5.0x5.0x1.2mm


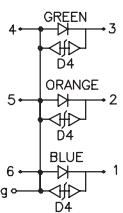
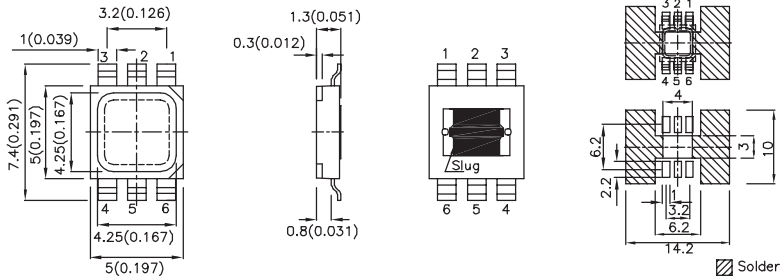




Dimension Unit: mm(inches), Tolerance: $\pm 0.25mm$ (0.01")

Recommended Soldering Pattern

ZMDH146S	◆ AlGaInP(Red)	640	29	39.7	120°	Water Clear
ZMYH146S	◆ AlGaInP(Yellow)	594	24	34.7	120°	Water Clear
ZDG10X146S	◆ AlGaInN(Green)	520	35	47.7	120°	Water Clear
ZCB14X146S	◆ InGaN(Blue)	455	14	19.7	120°	Water Clear

5.0x5.0x1.3mm (Full Color)

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

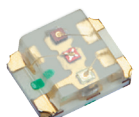
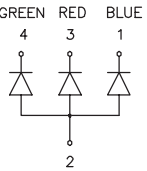
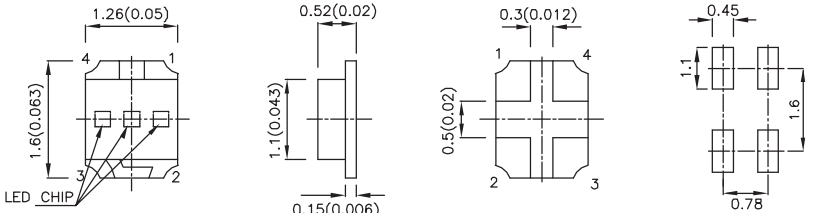
Recommended Soldering Pattern

ZCB25MO24DG25X111S	◆ InGaN(Blue)	452	2.9*	4*	120°	Water Clear
	◆ AlGaInP(Red)	635	8.6*	10.7*		
	◆ InGaN(Green)	515	12*	16.7*		

MULTI-COLOR

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

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


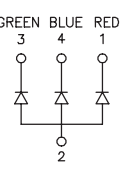
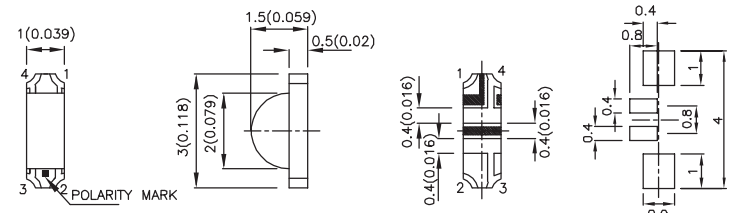




Dimension Unit: mm(inches), Tolerance: $\pm 0.2(0.008")$

Recommended Soldering Pattern

ZCBDMKDG62W-2	◆ InGaN(Blue)	460	40	69	120°	Water Clear
	◆ AlGaInP(Red)	645	40	79		
	◆ InGaN(Green)	515	120	278		

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

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

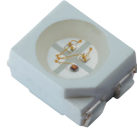
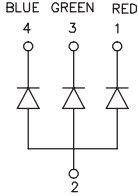
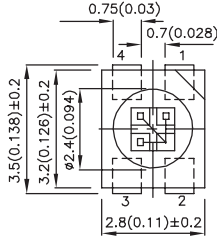
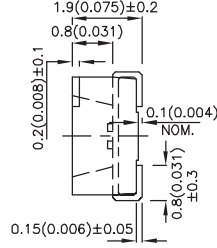
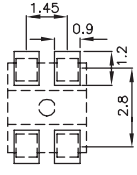
Recommended Soldering Pattern

ZMEDGCBDS6W	◆ AlGaInP(Red)	630	80	138	120°	Water Clear
	◆ InGaN(Green)	515	200	297		
	◆ InGaN(Blue)	460	40	69		

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.		

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

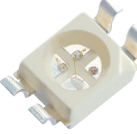
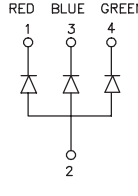
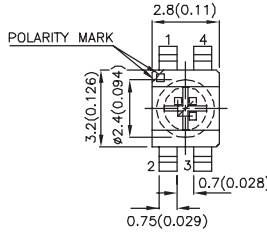
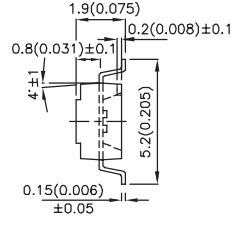
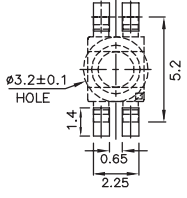






Dimension Unit: mm(inches), Tolerance: $\pm 0.25mm$ (0.01")

ZMEDGCB45S	◆ AlGaInP(Red)	630	120	218	120°	Water Clear
	◆ InGaN(Green)	515	400	497		
	◆ InGaN(Blue)	460	55	98		

Recommended Soldering Pattern

3.2x2.8x1.9mm (Full Color)


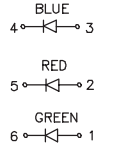
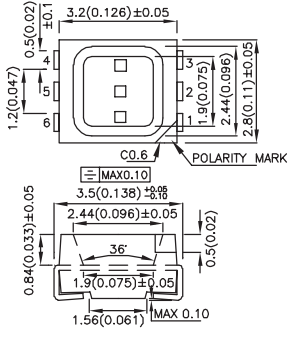
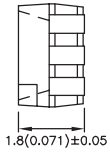
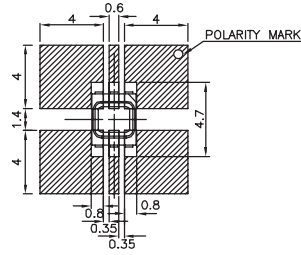






Dimension Unit: mm(inches), Tolerance: $\pm 0.2(0.008")$

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

Recommended Soldering Pattern

3.5x2.8x1.8mm (Full Color)


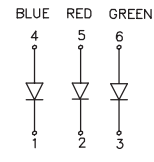
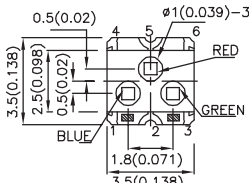
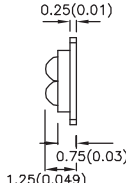
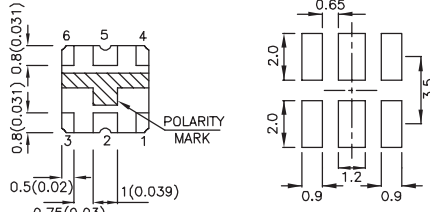






Dimension Unit: mm(inches), Tolerance: $\pm 0.2(0.008")$

ZDGMECB45S-B	◆ InGaN(Green)	515	400	577	130°	Water Clear
	◆ AlGaInP(Red)	630	80	178		
	◆ InGaN(Blue)	460	80	128		

Recommended Soldering Pattern

3.5x3.5x1.25mm (Full Color)

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


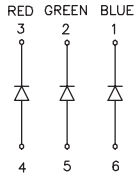
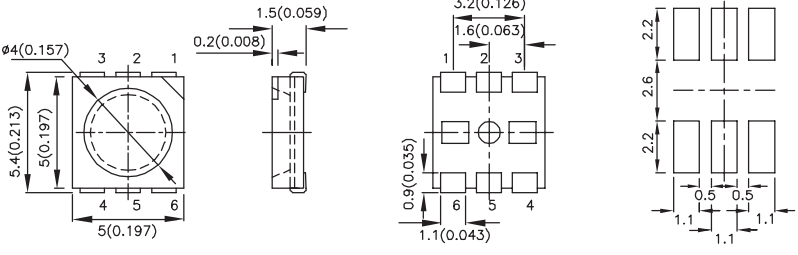
ZFBBMDKDG92W-3	◆ InGaN(Blue)	465	300	497	45°	Water Clear
	◆ AlGaInP(Red)	645	300	497	60°	
	◆ InGaN(Green)	515	700	1195	40°	

Recommended Soldering Pattern

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) $I_f=20mA \sim 30mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

5.0x5.0x1.5mm (Full Color)

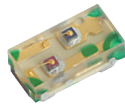
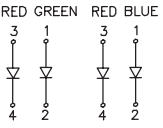
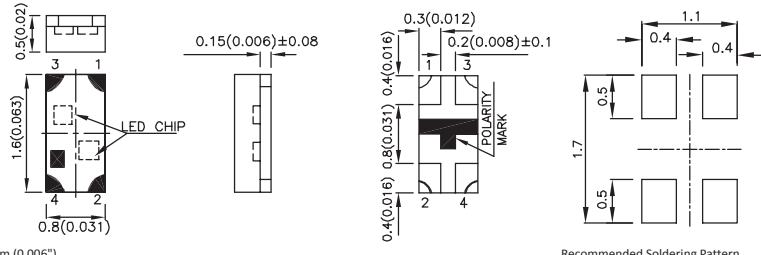




Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)^*$

ZCBDDGKME107SC2	◆ InGaN(Blue)	460	120*	198*	120°	Water Clear
	◆ InGaN(Green)	515	500*	695*		
◆ AlGaInP(Red)	630	200*	317*			

Recommended Soldering Pattern

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


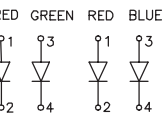
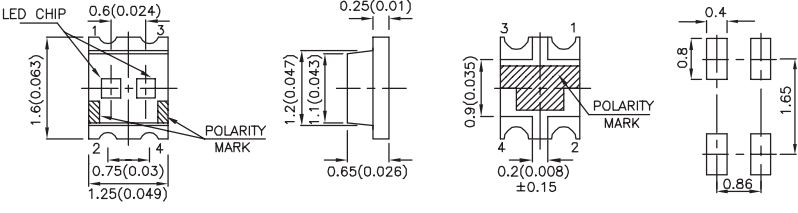




Dimension Unit: mm(inches), Tolerance: $\pm 0.15mm(0.006)^*$

ZMGUR53W-9	◆ GaP(Green)	565	5	14	130°	Water Clear
	◆ GaAsP/GaP(Red) <td>627</td> <td>5</td> <td>11</td>	627	5	11		
ZVGMK53W-9	◆ AlGaInP(Green)	574	20	49	130°	Water Clear
	◆ AlGaInP(Red)	645	40	89		
ZCBDMK53W-9	◆ InGaN(Blue)	460	40	69	130°	Water Clear
	◆ AlGaInP(Red)	645	40	89		

Recommended Soldering Pattern

1.6x1.25x0.65mm (0605 Bi-Color)


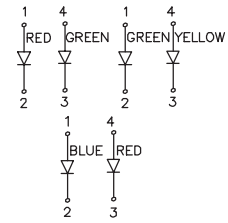
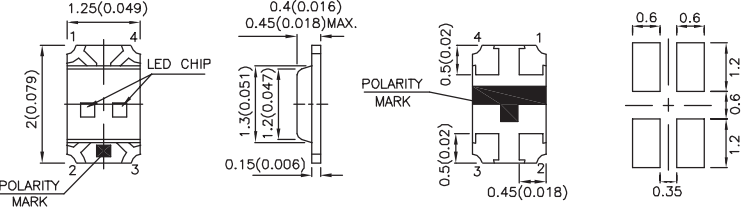




Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)^*$

ZURMG62W-1	◆ GaAsP/GaP(Red)	627	3	6	120°	Water Clear
	◆ GaP(Green)	565	5	11		
ZMDKVG62W-1	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
	◆ AlGaInP(Green)	574	20	49		
ZMDKBD62W-1	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
	◆ InGaN(Blue)	460	40	79		

Recommended Soldering Pattern

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

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

ZMDKVG54W-4	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
	◆ AlGaInP(Green)	574	20	49		
ZMDKDG54W-4	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
	◆ InGaN(Green)	515	200	278		
ZVGMK54W-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		

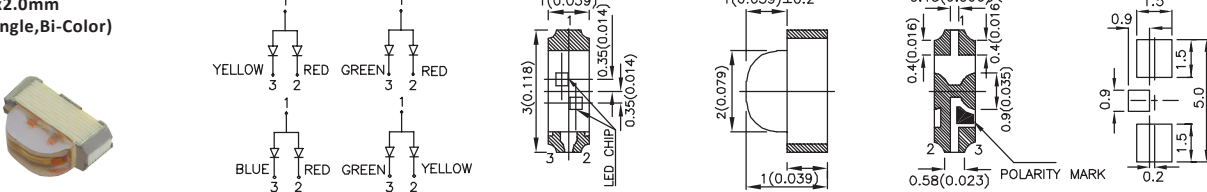
Recommended Soldering Pattern

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

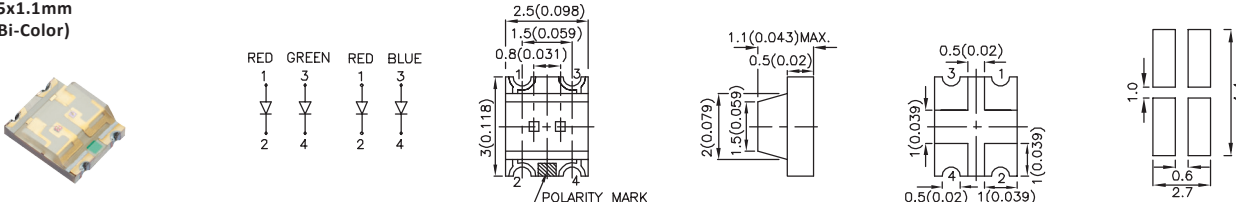
3.0x1.0x2.0mm (Right Angle, Bi-Color)



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

ZURUY56W	<ul style="list-style-type: none"> GaAsP/GaP(Red) GaAsP/GaP(Yellow) 	627 590	3 5	7 7	140°	Water Clear
ZURMG56W	<ul style="list-style-type: none"> GaAsP/GaP(Red) GaP(Green) 	627 565	3 5	7 14		
ZMDKVG56W	<ul style="list-style-type: none"> AlGaInP(Red) AlGaInP(Green) 	645 574	40 40	79 69	140°	Water Clear
ZMDKCB56W	<ul style="list-style-type: none"> AlGaInP(Red) InGaN(Blue) 	645 460	40 40	79 89		
ZUYMG56W	<ul style="list-style-type: none"> GaAsP/GaP(Yellow) GaP(Green) 	590 565	5 5	7 14	140°	Water Clear
ZMYKV56W	<ul style="list-style-type: none"> AlGaInP(Yellow) AlGaInP(Green) 	590 574	80 40	118 69		

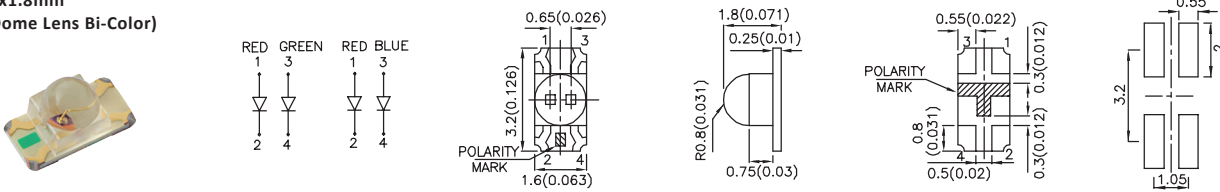
3.0x2.5x1.1mm (1109 Bi-Color)



Dimension Unit: mm(inches), Tolerance: ± 0.2 (0.008")

ZURMG57W	<ul style="list-style-type: none"> GaAsP/GaP(Red) GaP(Green) 	627 565	3 8	7 14	120°	Water Clear
ZMDKVG57W	<ul style="list-style-type: none"> AlGaInP(Red) AlGaInP(Green) 	645 574	40 20	69 59		
ZMDKCB57W	<ul style="list-style-type: none"> AlGaInP(Red) InGaN(Blue) 	645 460	40 55	69 79	120°	Water Clear

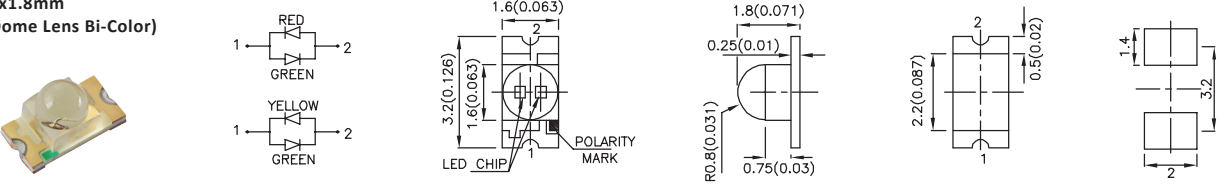
3.2x1.6x1.8mm (1206 Dome Lens Bi-Color)



Dimension Unit: mm(inches), Tolerance: ± 0.2 (0.008")

ZMDKVG55W-8	<ul style="list-style-type: none"> AlGaInP(Red) AlGaInP(Green) 	645 574	200 120	397 248	30°	Water Clear
ZMDKDG55W-8	<ul style="list-style-type: none"> AlGaInP(Red) InGaN(Green) 	645 515	200 400	397 647		
ZMDKCB55W-8	<ul style="list-style-type: none"> AlGaInP(Red) InGaN(Blue) 	645 460	200 120	397 248	30°	Water Clear

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



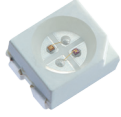
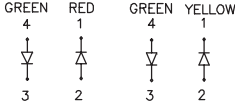
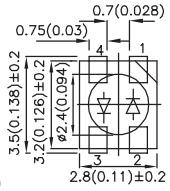
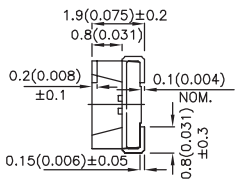
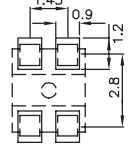
Dimension Unit: mm(inches), Tolerance: ± 0.1 (0.004")

ZMDKVG55W-7	<ul style="list-style-type: none"> AlGaInP(Red) AlGaInP(Green) 	645 574	200 120	397 248	40°	Water Clear
ZMYKV55W-7	<ul style="list-style-type: none"> AlGaInP(Yellow) AlGaInP(Green) 	590 574	200 120	397 248		



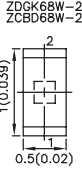
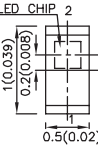
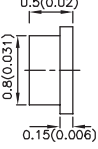
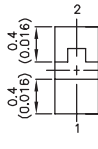
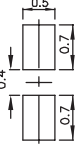
1. Soldering Pattern Dimension Unit : mm Tolerance : $\pm 0.1mm$.
 2. Luminous intensity value and wavelength are in accordance with CIE127-2007 standards.
 3. We reserve the right to make changes at any time to enhance the design and / or performance of the product.


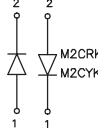
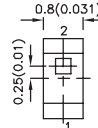
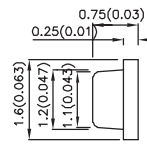
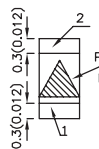
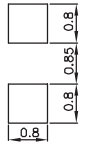




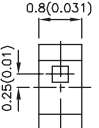
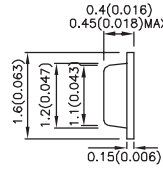
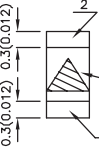
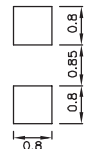


Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		
3.5x2.8x1.9mm (PLCC4 Bi-Color)  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>GREEN 4 RED 1 GREEN 4 YELLOW 1</p>  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p style="font-size: small;">Dimension Unit: mm(inches), Tolerance: $\pm 0.25mm$ (0.01")</p>						
ZMDKVG45S	<ul style="list-style-type: none"> ◆ AlGaInP(Red) ◆ AlGaInP(Green) 	645	55	98	120°	Water Clear
ZMYKVG45S	<ul style="list-style-type: none"> ◆ AlGaInP(Yellow) ◆ AlGaInP(Green) 	590	120	238	120°	Water Clear

CHIP TYPE

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		
1.0x0.5x0.5mm (0402)  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>2</p>  </div> <div style="text-align: center;"> <p>ZDGK68W-2 ZCBD68W-2</p>  </div> <div style="text-align: center;"> <p>LED CHIP 2</p>  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p style="font-size: small;">Dimension Unit: mm(inches), Tolerance: $\pm 0.1(0.004)$"</p>						
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	200	397	120°	Water Clear
ZCBD68W-2	◆ InGaN(Blue)	460	40	59	120°	Water Clear



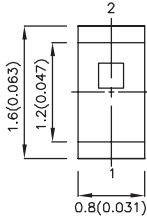
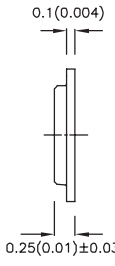
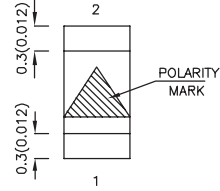
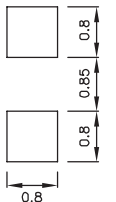
1.6x0.8x0.75mm (0603)  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>2 2</p>  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p style="font-size: small;">Dimension Unit: mm(inches), Tolerance: $\pm 0.1(0.004)$"</p>						
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
ZDGK53W-1	◆ InGaN(Green)	515	200	347	120°	Water Clear
ZM2DG53W-1	◆ InGaN(Green)	520	400	745	120°	Water Clear
ZCBD53W-1	◆ InGaN(Blue)	460	40	98	120°	Water Clear

1.6x0.8x0.45mm (0603)  <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>2</p>  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <p style="font-size: small;">Dimension Unit: mm(inches), Tolerance: $\pm 0.1(0.004)$"</p>						
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
ZDGK53W-3	◆ InGaN(Green)	515	200	347	120°	Water Clear
ZCBD53W-3	◆ InGaN(Blue)	460	40	98	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.	Typ.		


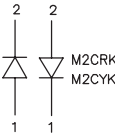
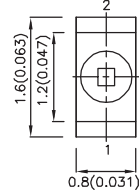
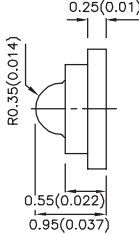
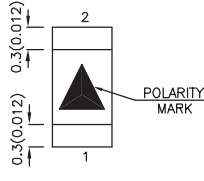
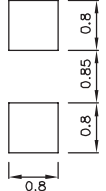
1.6x0.8x0.25mm (0603 Super Thin)

Dimension Unit: mm(inches), Tolerance : ±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	200	347	120°	Water Clear
ZCBD53W-6	◆ InGaN(Blue)	460	40	98	120°	Water Clear

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

Dimension Unit: mm(inches), Tolerance : ±0.15mm (0.006")

						Recommended Soldering Pattern
ZMDK53W-8	◆ AlGaInP(Red)	645	80	248	60°	Water Clear
ZM2CRK53W-8	◆ AlGaInP(Red)	640	500	795	60°	Water Clear
ZMOK53W-8	◆ AlGaInP(Orange)	610	200	497	60°	Water Clear
ZMYK53W-8	◆ AlGaInP(Yellow)	590	200	447	60°	Water Clear
ZM2CYK53W-8	◆ AlGaInP(Yellow)	590	400	795	60°	Water Clear
ZVG53W-8	◆ AlGaInP(Green)	574	80	188	60°	Water Clear
ZDGK53W-8	◆ InGaN(Green)	515	500	895	60°	Water Clear
ZM2DG53W-8	◆ InGaN(Green)	520	700	1295	60°	Water Clear
ZCBD53W-8	◆ InGaN(Blue)	460	80	198	40°	Water Clear



Zxx53W-8 Series
PixsoLED
0603 SMD with dome lens
1.6mm x 0.8mm x 0.95mm

PixsoLED - Zxx53W-8 Series

Great things come in small packages. If you haven't heard that saying before, you better believe it now. SunLED welcomes you to prepare your eyes for a look at our 0603 SMD with a dome lens. With its 1.6mm x 0.8mm footprint and 0.95mm height, the PixsoLED is a bright source of directed light from a package small enough to lose if you just blink too hard.

Its 60° narrow viewing angle allows for greater intensity output. On limited real estate, the PixsoLED is an excellent choice for those wanting a high-visibility indicator. Its pixel-like qualities make it an ideal LED for a wide range of applications such as signs and indoor displays to hand held device indication and membrane switches on appliances.

PRODUCT APPLICATIONS

- Appliances
- Hand Held Indication
- Buttons/Switches
- Peripheral Indication
- Light Pipe Indication
- Backlighting

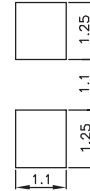
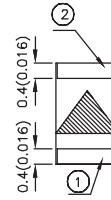
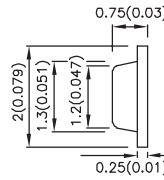
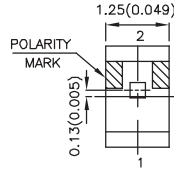
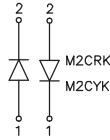
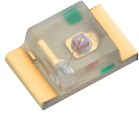
PRODUCT FEATURES

- Small form factor: 1.6X0.8mm, 0.95mm height
- Narrow angle of emission: 60°
- Low Current/High Output: Up to 1295mcd @ 20mA
- Available colors: Red, Yellow, Orange, True Green, Yellow-Green, and Blue

1. Soldering Pattern Dimension Unit : mm Tolerance : ±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.		

**2.0x1.25x0.75mm
(0805)**

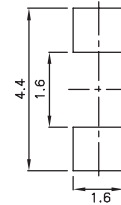
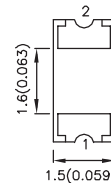
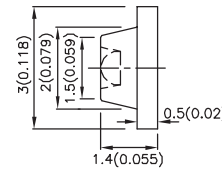
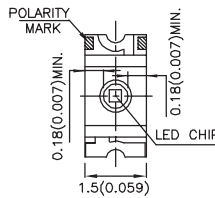
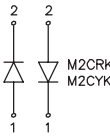
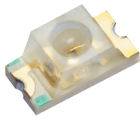


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)^\circ$

Recommended Soldering Pattern

ZMDK54W-1	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
ZM2CRK54W-1	◆ AlGaInP(Red)	640	200	347	120°	Water Clear
ZMOK54W-1	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZMYK54W-1	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZM2CYK54W-1	◆ AlGaInP(Yellow)	590	200	317	120°	Water Clear
ZVG54W-1	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZDGK54W-1	◆ InGaN(Green)	515	200	347	120°	Water Clear
ZM2DG54W-1	◆ InGaN(Green)	520	400	745	120°	Water Clear
ZCBD54W-1	◆ InGaN(Blue)	460	40	98	120°	Water Clear
ZFBB54W-1	◆ InGaN(Blue)	465	120	178	120°	Water Clear

**3.0x1.5x1.4mm
(1106 Inner Lens)**

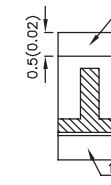
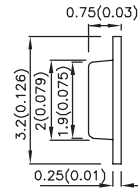
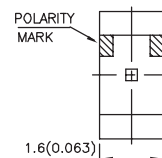
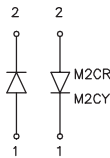
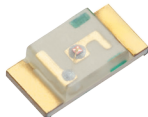


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)^\circ$

Recommended Soldering Pattern

ZMDK60W	◆ AlGaInP(Red)	645	120	178	70°	Water Clear
ZM2CRK60W	◆ AlGaInP(Red)	640	500	795	70°	Water Clear
ZMOK60W	◆ AlGaInP(Orange)	610	120	347	70°	Water Clear
ZMYK60W	◆ AlGaInP(Yellow)	590	200	347	70°	Water Clear
ZM2CYK60W	◆ AlGaInP(Yellow)	590	500	845	70°	Water Clear
ZVG60W	◆ AlGaInP(Green)	574	55	118	70°	Water Clear
ZDGK60W	◆ InGaN(Green)	515	500	695	70°	Water Clear
ZCBD60W	◆ InGaN(Blue)	460	120	198	70°	Water Clear
ZFBB60W	◆ InGaN(Blue)	465	300	397	70°	Water Clear

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



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

Recommended Soldering Pattern

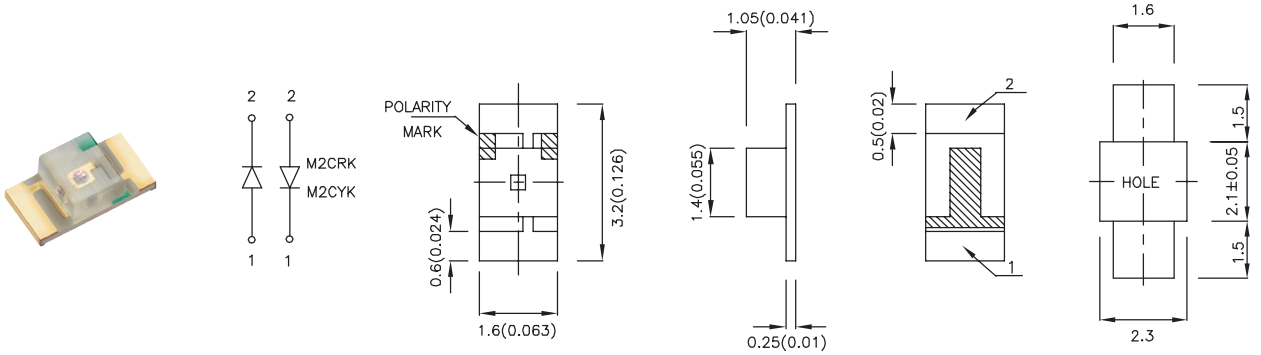
ZMDK55W-1	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
ZM2CRK55W-1	◆ AlGaInP(Red)	640	200	347	120°	Water Clear
ZMOK55W-1	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZMYK55W-1	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZM2CYK55W-1	◆ AlGaInP(Yellow)	590	200	317	120°	Water Clear
ZVG55W-1	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZDGK55W-1	◆ InGaN(Green)	515	200	347	120°	Water Clear
ZM2DG55W-1	◆ InGaN(Green)	520	400	745	120°	Water Clear
ZCBD55W-1	◆ InGaN(Blue)	460	40	98	120°	Water Clear
ZFBB55W-1	◆ InGaN(Blue)	465	120	178	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.	Typ.		

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

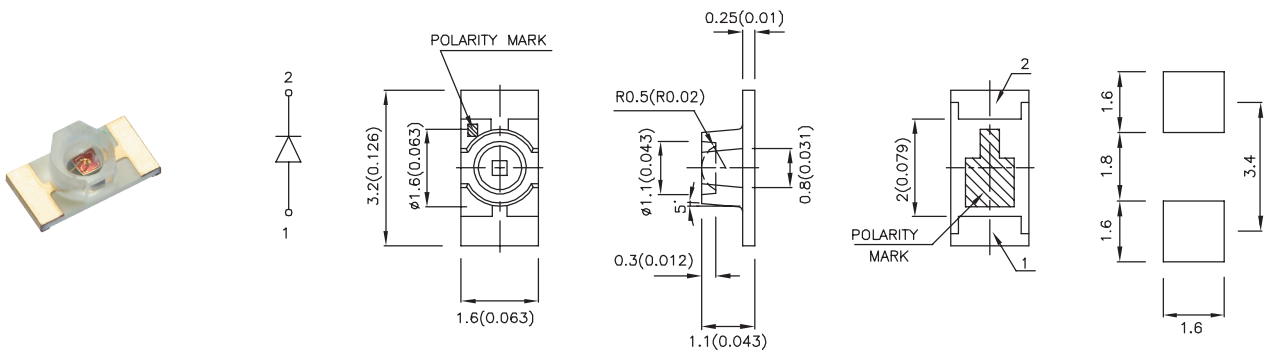


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)$ "

Recommended Soldering Pattern

ZMDK55W-2	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
ZM2CRK55W-2	◆ AlGaInP(Red)	640	200	347	120°	Water Clear
ZMOK55W-2	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZMYK55W-2	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZM2CYK55W-2	◆ AlGaInP(Yellow)	590	200	317	120°	Water Clear
ZVG55W-2	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZDGK55W-2	◆ InGaN(Green)	515	200	347	120°	Water Clear
ZM2DG55W-2	◆ InGaN(Green)	520	400	745	120°	Water Clear
ZCBD55W-2	◆ InGaN(Blue)	460	40	98	120°	Water Clear
ZFBB55W-2	◆ InGaN(Blue)	465	120	178	120°	Water Clear

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



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

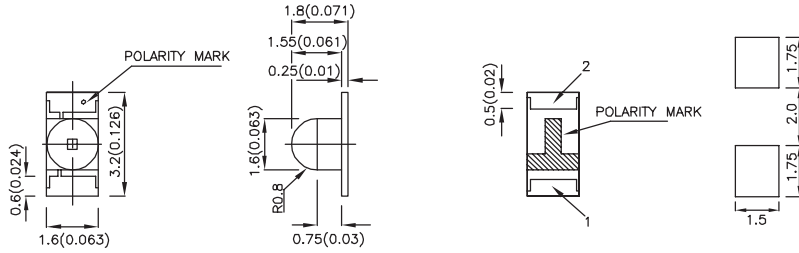
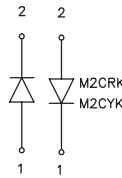
Recommended Soldering Pattern

ZMDK55W-A2	◆ AlGaInP(Red)	645	120	228	70°	Water Clear
ZMOK55W-A2	◆ AlGaInP(Orange)	610	200	347	70°	Water Clear
ZMYK55W-A2	◆ AlGaInP(Yellow)	590	200	347	70°	Water Clear
ZVG55W-A2	◆ AlGaInP(Green)	574	55	98	70°	Water Clear
ZDGK55W-A2	◆ InGaN(Green)	515	500	995	70°	Water Clear
ZCBD55W-A2	◆ InGaN(Blue)	460	80	248	70°	Water Clear
ZFBB55W-A2	◆ InGaN(Blue)	465	400	597	70°	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.	Typ.		

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

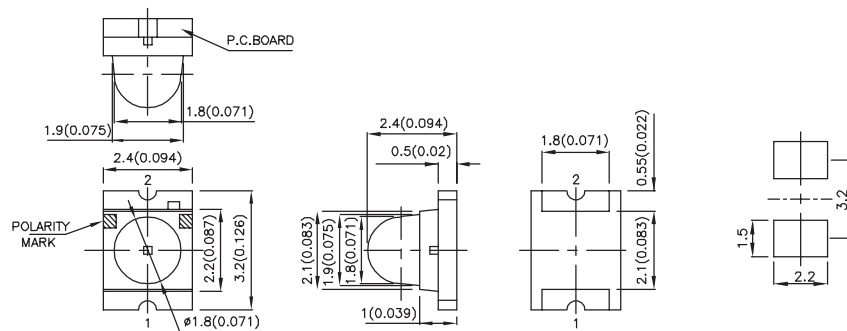
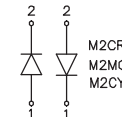
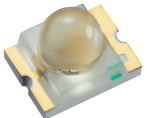


Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)^*$

Recommended Soldering Pattern

ZMDK55W-3	◆ AlGaInP(Red)	645	300	795	35°	Water Clear
ZM2CRK55W-3	◆ AlGaInP(Red)	640	1600	2490	35°	Water Clear
ZMOK55W-3	◆ AlGaInP(Orange)	610	500	995	35°	Water Clear
ZMYK55W-3	◆ AlGaInP(Yellow)	590	700	795	35°	Water Clear
ZM2CYK55W-3	◆ AlGaInP(Yellow)	590	1300	1690	35°	Water Clear
ZVG55W-3	◆ AlGaInP(Green)	574	120	297	35°	Water Clear
ZDGK55W-3	◆ InGaN(Green)	515	1300	2090	35°	Water Clear
ZM2DG55W-3	◆ InGaN(Green)	520	3100	4190	35°	Water Clear
ZCBD55W-3	◆ InGaN(Blue)	460	300	695	35°	Water Clear
ZFBB55W-3	◆ InGaN(Blue)	465	700	1195	35°	Water Clear

**3.2x2.4x2.4mm
(Dome Lens)**

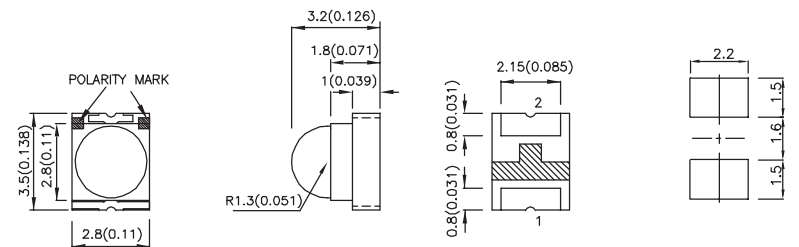
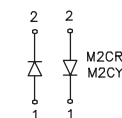
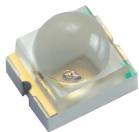


Dimension Unit: mm(inches), Tolerance : $\pm 0.1(0.004)^*$

Recommended Soldering Pattern

ZMDK78W	◆ AlGaInP(Red)	645	700	1495	20°	Water Clear
ZM2CRK78W	◆ AlGaInP(Red)	640	2300	3490	20°	Water Clear
ZMOK78W	◆ AlGaInP(Orange)	610	1000	1590	20°	Water Clear
ZM2MOK78W	◆ AlGaInP(Orange)	611	3100	3790	20°	Water Clear
ZMYK78W	◆ AlGaInP(Yellow)	590	1000	1295	20°	Water Clear
ZM2CYK78W	◆ AlGaInP(Yellow)	590	2300	3290	20°	Water Clear
ZVG78W	◆ AlGaInP(Green)	574	400	597	20°	Water Clear
ZDGK78W	◆ InGaN(Green)	515	1900	2890	20°	Water Clear
ZM2DG78W	◆ InGaN(Green)	520	3600	5990	20°	Water Clear
ZCBD78W	◆ InGaN(Blue)	460	400	795	20°	Water Clear
ZFBB78W	◆ InGaN(Blue)	465	1600	1990	20°	Water Clear

**3.5x2.8x3.2mm
(Dome Lens)**



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

Recommended Soldering Pattern

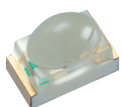
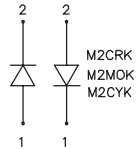
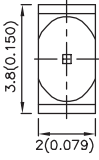
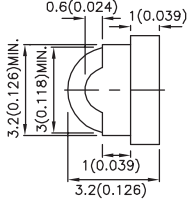
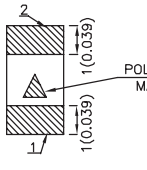
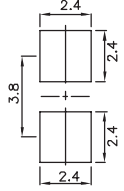
ZM2CRK45W-2	◆ AlGaInP(Red)	640	1000	1790	40°	Water Clear
ZM2CYK45W-2	◆ AlGaInP(Yellow)	590	700	1295	40°	Water Clear
ZM2DG45W-2	◆ InGaN(Green)	520	1900	3190	40°	Water Clear
ZFBB45W-2	◆ InGaN(Blue)	465	500	745	40°	Water Clear

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

3.8x2.0x3.2mm (Dome Lens)



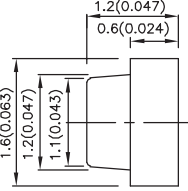
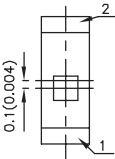
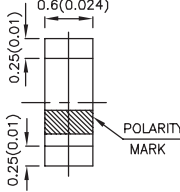
Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008^*)$

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		
ZMDK79W	◆ AlGaInP(Red)	645	120	347	60°(H) 35°(V)	Water Clear
ZM2CRK79W	◆ AlGaInP(Red)	640	1000	1690	60°(H) 35°(V)	Water Clear
ZMOK79W	◆ AlGaInP(Orange)	610	300	597	60°(H) 35°(V)	Water Clear
ZM2MOK79W	◆ AlGaInP(Orange)	611	1300	1495	60°(H) 35°(V)	Water Clear
ZMYK79W	◆ AlGaInP(Yellow)	590	200	397	60°(H) 35°(V)	Water Clear
ZM2CYK79W	◆ AlGaInP(Yellow)	590	700	1195	60°(H) 35°(V)	Water Clear
ZVG79W	◆ AlGaInP(Green)	574	80	148	60°(H) 35°(V)	Water Clear
ZDGK79W	◆ InGaN(Green)	515	700	1195	60°(H) 35°(V)	Water Clear
ZM2DG79W	◆ InGaN(Green)	520	1900	2690	60°(H) 35°(V)	Water Clear
ZCBD79W	◆ InGaN(Blue)	460	120	248	60°(H) 35°(V)	Water Clear
ZFBB79W	◆ InGaN(Blue)	465	500	745	60°(H) 35°(V)	Water Clear

SIDE EMITTING

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


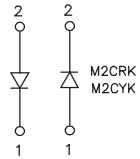
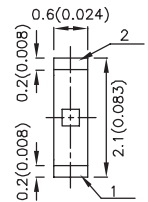
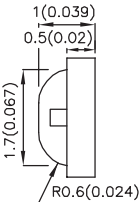
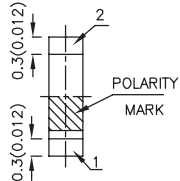
1.6x0.6x1.2mm (0602 Right Angle)

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

Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		
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
ZDGK87W	◆ InGaN(Green)	515	200	297	110°	Water Clear
ZCBD87W	◆ InGaN(Blue)	460	40	79	110°	Water Clear
ZFBB87W	◆ InGaN(Blue)	465	120	198	110°	Water Clear

2.1x0.6x1.0mm (0802 Right Angle)

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

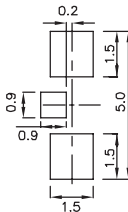
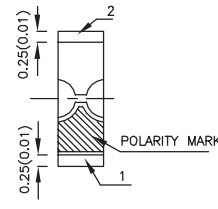
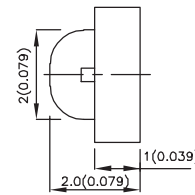
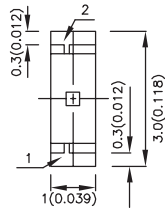
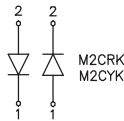
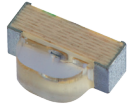
Part Number	Chip Structure (Emitted Color)	λ_{peak} (nm)	Intensity(mcd) $I_f=20mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		
ZMDK74W	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
ZM2CRK74W	◆ AlGaInP(Red)	640	200	377	120°	Water Clear
ZMOK74W	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZMYK74W	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZM2CYK74W	◆ AlGaInP(Yellow)	590	200	347	120°	Water Clear
ZVG74W	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZDGK74W	◆ InGaN(Green)	515	200	297	120°	Water Clear
ZCBD74W	◆ InGaN(Blue)	460	40	79	120°	Water Clear
ZFBB74W	◆ InGaN(Blue)	465	120	198	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.	Typ.		

**3.0x1.0x2.0mm
(1104 Right Angle)**

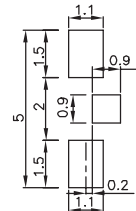
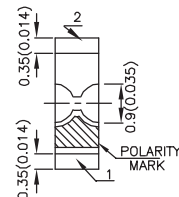
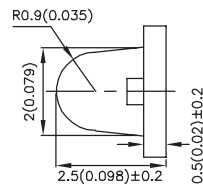
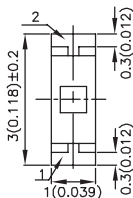
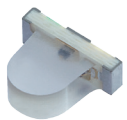


Dimension Unit: mm(inches), Tolerance: $\pm 0.15mm$ (0.006")

Recommended Soldering Pattern

ZUR56W	◆ GaAsP/GaP(Red)	627	3	5	120°	Water Clear
ZMDK56W	◆ AlGaInP(Red)	645	40	79	120°	Water Clear
ZM2CRK56W	◆ AlGaInP(Red)	640	200	377	120°	Water Clear
ZMOK56W	◆ AlGaInP(Orange)	610	80	178	120°	Water Clear
ZUY56W	◆ GaAsP/GaP(Yellow)	590	3	5	120°	Water Clear
ZMYK56W	◆ AlGaInP(Yellow)	590	80	148	120°	Water Clear
ZM2CYK56W	◆ AlGaInP(Yellow)	590	200	347	120°	Water Clear
ZMG56W	◆ GaP(Green)	565	5	11	120°	Water Clear
ZVG56W	◆ AlGaInP(Green)	574	20	49	120°	Water Clear
ZDGK56W	◆ InGaN(Green)	515	200	297	120°	Water Clear
ZCBD56W	◆ InGaN(Blue)	460	40	79	120°	Water Clear
ZFBB56W	◆ InGaN(Blue)	465	120	198	120°	Water Clear

**3.0x1.0x2.5mm
(1104 Right Angle)**

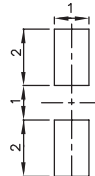
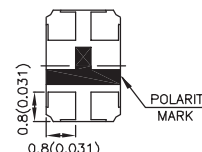
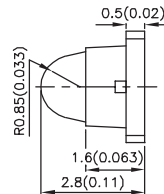
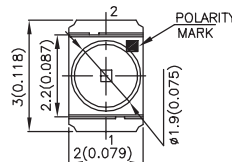
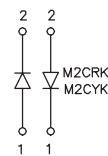


Dimension Unit: mm(inches), Tolerance: $\pm 0.15mm$ (0.006")

Recommended Soldering Pattern

ZMDK56W-1	◆ AlGaInP(Red)	645	120	218	30°	Water Clear
ZMOK56W-1	◆ AlGaInP(Orange)	610	200	377	30°	Water Clear
ZMYK56W-1	◆ AlGaInP(Yellow)	590	200	397	30°	Water Clear
ZVG56W-1	◆ AlGaInP(Green)	574	55	118	30°	Water Clear
ZDGK56W-1	◆ InGaN(Green)	515	500	695	30°	Water Clear
ZCBD56W-1	◆ InGaN(Blue)	460	120	198	30°	Water Clear
ZFBB56W-1	◆ InGaN(Blue)	465	300	447	30°	Water Clear

**3.0x2.0x2.8mm
(1208 Right Angle)**



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

Recommended Soldering Pattern


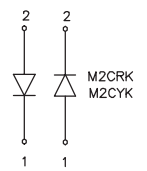
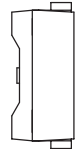
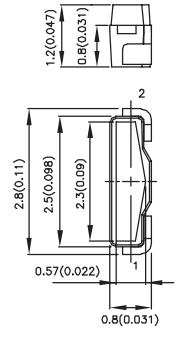
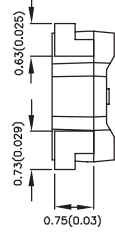
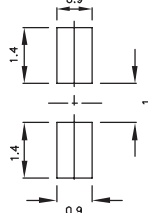
ZMDK50W-2	◆ AlGaInP(Red)	645	400	547	10°	Water Clear
ZM2CRK50W-2	◆ AlGaInP(Red)	640	2300	3790	10°	Water Clear
ZMOK50W-2	◆ AlGaInP(Orange)	610	1900	2990	10°	Water Clear
ZMYK50W-2	◆ AlGaInP(Yellow)	590	500	895	10°	Water Clear
ZM2CYK50W-2	◆ AlGaInP(Yellow)	590	1900	2990	10°	Water Clear
ZVG50W-2	◆ AlGaInP(Green)	574	200	397	10°	Water Clear
ZDGK50W-2	◆ InGaN(Green)	515	1000	1395	10°	Water Clear
ZM2DG50W-2	◆ InGaN(Green)	520	2300	3290	10°	Water Clear
ZCBD50W-2	◆ InGaN(Blue)	460	300	397	10°	Water Clear
ZFBB50W-2	◆ InGaN(Blue)	465	500	795	10°	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.	Typ.		


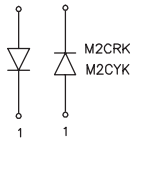
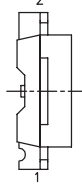
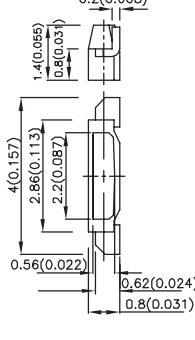
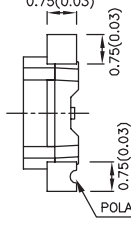
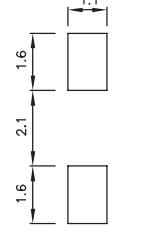
2.8x0.8x1.2mm (1103 Right Angle)

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
ZMOK81FS	AlGaInP(Orange)	610	120	248	110°	Water Clear
ZMYK81FS	AlGaInP(Yellow)	590	120	198	110°	Water Clear
ZM2CYK81FS	AlGaInP(Yellow)	590	300	547	110°	Water Clear
ZVG81FS	AlGaInP(Green)	574	20	59	110°	Water Clear
ZDGK81FS	InGaN(Green)	515	400	597	110°	Water Clear
ZM2DG81FS	InGaN(Green)	520	700	1195	110°	Water Clear
ZCBD81FS	InGaN(Blue)	460	80	148	110°	Water Clear
ZFBB81FS	InGaN(Blue)	465	200	347	110°	Water Clear

4.0x0.8x1.4mm (1603 Right Angle)

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

ZM2CRK89S-1	AlGaInP(Red)	640	300	447	120°	Water Clear
ZM2CYK89S-1	AlGaInP(Yellow)	590	350	447	120°	Water Clear
ZM2DG89S-1	InGaN(Green)	520	700	1195	120°	Water Clear
ZFBB89S-1	InGaN(Blue)	465	300	447	120°	Water Clear



Winged Right Angle

- ◆ Winged lead frame
- ◆ Silicone resin
- ◆ Lateral emission window: 2.2x0.56mm

Winged Right Angle - Zxx89S-1 Series

SunLED is proud to introduce our Zxx89S-1 into the family of right angle SMD LEDs. This small footprint right angle package is an improvement over the traditional right angle chip type SMDs through advancement in package design to deliver excellent light dispersion. The 4.0x1.4mm package size and low package profile height of 0.8mm allows this package to fit onto various designs and applications. The winged lead design significantly improves production efficiency no matter what type of manufacturing equipment you're using. This LED's lateral design is excellent for various hand held products, backlighting, area illumination, and icon/text indications.

PRODUCT APPLICATIONS

- Consumer Devices
- Audio Equipment
- Backlighting
- Icon & Text Indication
- Area Illumination
- Hand Held Products

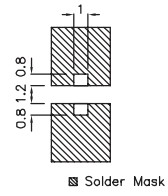
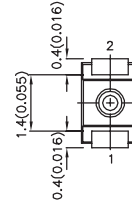
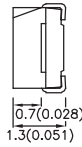
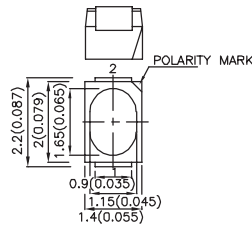
PRODUCT FEATURES

- Silicone lens for better MSL (Level 3)
- Winged lead frame design
- 4.0x1.4mm package size with a 0.8mm height
- Lateral emission window: 2.2x0.56mm
- Wide viewing angle: 120°

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.		

**2.2x1.4x1.3mm
(PLCC2)**



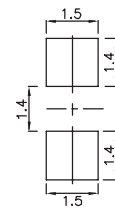
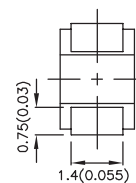
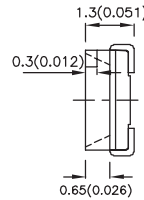
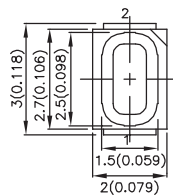
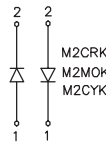
Dimension Unit: mm(inches), Tolerance : $\pm 0.2(0.008)^*$

Recommended Soldering Pattern

ZMDK80S-2HTA	◆ AlGaInP(Red)	645	55	200	120°	Water Clear
ZMOK80S-2HTA	◆ AlGaInP(Orange)	610	120	300	120°	Water Clear
ZMYK80S-2HTA	◆ AlGaInP(Yellow)	590	120	400	120°	Water Clear
ZDG80S-2HTA	◆ InGaN(Green)	515	400	1000	120°	Water Clear
ZCBD80S-2HTA	◆ InGaN(Blue)	460	80	300	120°	Water Clear

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

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



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

Recommended Soldering Pattern

ZMDK105S	◆ AlGaInP(Red)	645	40	89	125°	Water Clear
ZM2CRK105S	◆ AlGaInP(Red)	640	300	447	125°	Water Clear
ZMOK105S	◆ AlGaInP(Orange)	610	120	297	125°	Water Clear
ZM2MOK105S	◆ AlGaInP(Orange)	611	400	695	125°	Water Clear
ZMYK105S	◆ AlGaInP(Yellow)	590	120	198	125°	Water Clear
ZM2CYK105S	◆ AlGaInP(Yellow)	590	300	497	125°	Water Clear
ZVG105S	◆ AlGaInP(Green)	574	40	79	125°	Water Clear
ZDGK105S	◆ InGaN(Green)	515	400	695	125°	Water Clear
ZM2DG105S	◆ InGaN(Green)	520	700	1295	125°	Water Clear
ZCBD105S	◆ InGaN(Blue)	460	80	118	125°	Water Clear
ZFB105S	◆ InGaN(Blue)	465	200	447	125°	Water Clear



Oval Lens PLCC2 - Zxx105S Series

PRODUCT HIGHLIGHT

Constantly striving to provide engineers with more design flexibility, SunLED is proud to announce the addition of our Zxx105S series to our vast selection of SMD LEDs. This PLCC2 LED takes all the advantages of a plastic leaded chip carrier while retaining a compact package size of 3.0x2.0mm with 1.3mm height. This series is suitable for a wide range of applications by offering superior light output in a uniformly distributed 125° Lambertian pattern under low 20mA operation, while the low thermal resistance provides solid reliability and unmatched performance. The Zxx105S series are available in all standard colors and various intensities, including our Ultra-Bright 'M2 Series'.

PRODUCT APPLICATIONS

- Backlighting
- Automotive Gauges
- Icon Indication
- Consumer Devices
- Medical Equipment
- Hand Held Devices

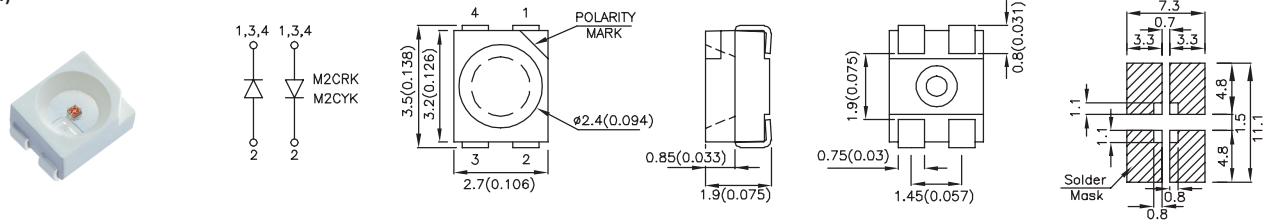
PRODUCT FEATURES

- Low Current/High Output: Up to 1295mcd @ 20mA
- Compact size: 3.0x2.0mm, 1.3mm height
- Wide emission angle: 125° Viewing Angle (Lambertian Distribution)
- Available colors: Red, Orange, Yellow, Green, True-Green, and Blue

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) $I_f=20mA*50mA$		Viewing Angle 2 θ 1/2	Lens
			Min.	Typ.		

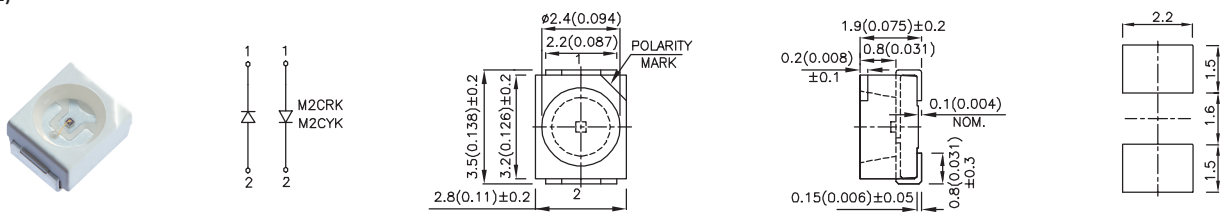
3.5x2.7x1.9mm (PLCC4)



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

Part Number	Chip Structure	λ_{peak} (nm)	Min. Intensity	Typ. Intensity	Viewing Angle	Lens
ZM2CRK96FS50MAV	AlGaInP(Red)	640	*1000	*1495	120°	Water Clear
ZM2CYK96FS50MAV	AlGaInP(Yellow)	590	*1000	*1495	120°	Water Clear
ZM2DG96FS	InGaN(Green)	520	700	1095	120°	Water Clear
ZFBB96FS	InGaN(Blue)	465	300	447	120°	Water Clear

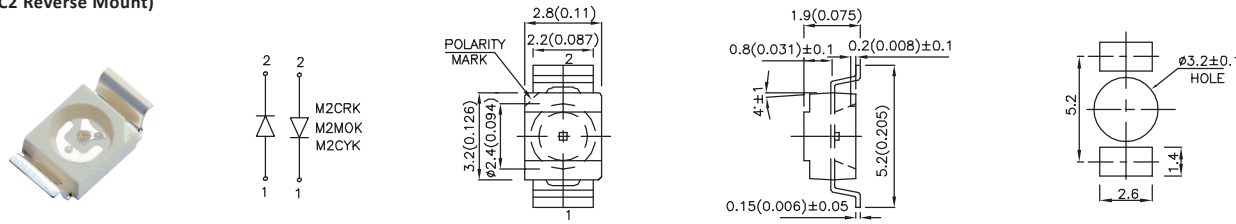
3.5x2.8x1.9mm (PLCC2)



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

Part Number	Chip Structure	λ_{peak} (nm)	Min. Intensity	Typ. Intensity	Viewing Angle	Lens
ZMDK45WT	AlGaInP(Red)	645	55	98	120°	Water Clear
ZM2CRK45WT	AlGaInP(Red)	640	300	447	120°	Water Clear
ZMOK45WT	AlGaInP(Orange)	610	120	228	120°	Water Clear
ZMYK45WT	AlGaInP(Yellow)	590	80	198	120°	Water Clear
ZM2CYK45WT	AlGaInP(Yellow)	590	200	447	120°	Water Clear
ZVG45WT	AlGaInP(Green)	574	40	98	120°	Water Clear
ZDGK45WT	InGaN(Green)	515	300	497	120°	Water Clear
ZM2DG45WT	InGaN(Green)	520	1000	1395	120°	Water Clear
ZCBD45S	InGaN(Blue)	460	80	148	120°	Water Clear
ZFBB45S	InGaN(Blue)	465	300	447	120°	Water Clear

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



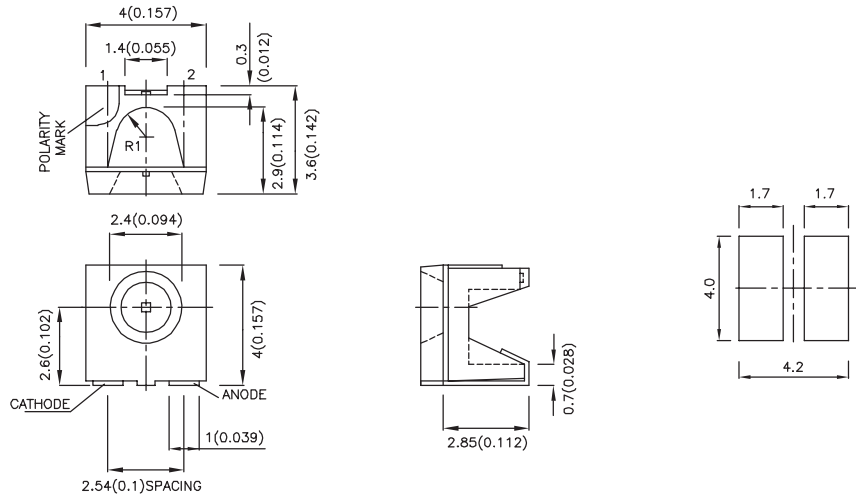
Dimension Unit: mm(ounces), Tolerance: $\pm 0.25mm$ (0.01")

Part Number	Chip Structure	λ_{peak} (nm)	Min. Intensity	Typ. Intensity	Viewing Angle	Lens
ZMDK45WT-9	AlGaInP(Red)	645	55	98	120°	Water Clear
ZM2CRK45WT-9	AlGaInP(Red)	640	300	447	120°	Water Clear
ZM2MOK45WT-9	AlGaInP(Orange)	611	500	795	120°	Water Clear
ZMYK45WT-9	AlGaInP(Yellow)	590	80	198	120°	Water Clear
ZM2CYK45WT-9	AlGaInP(Yellow)	590	200	447	120°	Water Clear
ZVG45WT-9	AlGaInP(Green)	574	40	98	120°	Water Clear
ZDGK45WT-9	InGaN(Green)	515	300	497	120°	Water Clear
ZM2DG45WT-9	InGaN(Green)	520	1000	1395	120°	Water Clear
ZCBD45S-9	InGaN(Blue)	460	80	148	120°	Water Clear
ZFBB45S-9	InGaN(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.	Typ.		

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



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

Recommended Soldering Pattern

ZMDK67S	◆ AlGaInP(Red)	645	80	148	120°	Water Clear
ZM2CRK67S	◆ AlGaInP(Red)	640	400	577	120°	Water Clear
ZMOK67S	◆ AlGaInP(Orange)	610	80	218	120°	Water Clear
ZMYK67S	◆ AlGaInP(Yellow)	590	120	248	120°	Water Clear
ZM2CYK67S	◆ AlGaInP(Yellow)	590	400	547	120°	Water Clear
ZVG67S	◆ AlGaInP(Green)	574	40	89	120°	Water Clear
ZDGK67S	◆ InGaN(Green)	515	400	795	120°	Water Clear
ZM2DG67S	◆ InGaN(Green)	520	700	1195	120°	Water Clear
ZCBD67S	◆ InGaN(Blue)	460	80	218	120°	Water Clear
ZFBB67S	◆ InGaN(Blue)	465	300	497	120°	Water Clear

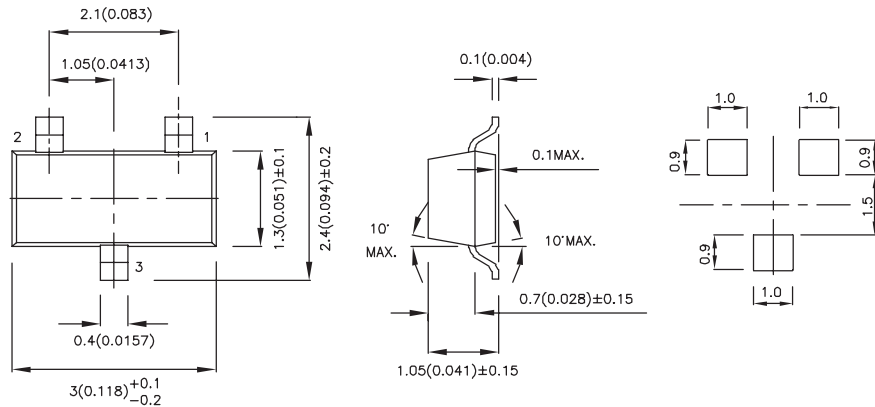
SOT-23

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

**3.0x1.3x1.05mm
(SOT-23)**



- 1 ANODE
- 2 N.C.
- 3 CATHODE



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

Recommended Soldering Pattern

ZUR48WA	◆ GaAsP/GaP(Red)	627	3	4.8	140°	Water Clear
ZMDK48WA	◆ AlGaInP(Red)	645	40	59	140°	Water Clear
ZUY48WA	◆ GaAsP/GaP(Yellow)	590	3	7	140°	Water Clear
ZMYK48WA	◆ AlGaInP(Yellow)	590	80	118	140°	Water Clear
ZMG48WA	◆ GaP(Green)	565	5	9	140°	Water Clear
ZVG48WA	◆ AlGaInP(Green)	574	20	49	140°	Water Clear
ZCBD48WA	◆ InGaN(Blue)	460	40	69	140°	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.

