SML-Z1 Series

3528(1411)
3.5×2.8mm(t=1.9mm)

Features

- High brightness
- 20/50mA guaranteed specifications
- PLCC2 package

Color Type: V U D Y M / F P E B WB

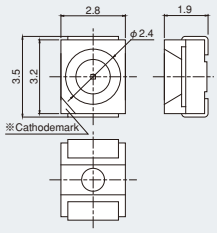
Specifications

Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Voltage VF Typ.(V)	VF IF(mA)	Reverse Current IR Max.(μA)	IR VR(V)	Dominant Wavelength λD Min.*2 (nm)	Typ. (nm)	Max.*2 (nm)	IF(mA)	Luminous intensity Iv Min. (mcd)	Typ. (mcd)	IF(mA)
SML-Z14VT(A)	AlGaInP on GaAs	Red	175	70	-	12	-40 to +100	-40 to +100	1.9	20	10	12	625	630	635	20	56	112	20
SML-Z14UT(A)													615	620	625		112	224	
SML-Z14DT(A)		Orange											602	605	608		140	280	
SML-Z14YT(A)		Yellow											586	589	592				
SML-Z14MT(A)		Yellowish Green							2.0				568	571	574		45	90	
SML-Z14FT(A)		Green											561.5	564	566.5		22.4	45	
SML-Z14PT(A)													557	560	563		11.2	22.4	
SML-Z14V4T		Red							2.0	50	100	12	625	630	635	50	140	280	50
SML-Z14U4T													615	620	625		280	560	
SML-Z14D4T		Orange											602	605	608		355	710	
SML-Z14Y4T		Yellow											587	590	593				
SML-Z14M4T		Yellowish Green							2.1				569	572	575		112	224	
SML-Z14F4T		Green											562	565	568		71	120	
SML-Z14P4T													558	561	564		22.4	56	
SMLZ13EDT(A)	InGaN on SiC	Bluish Green	120	30		5	-40 to +100	-40 to +100	3.3	20	10	5	519	527	536	20	355	710	20
SMLZ13BDT(A)		Blue							3.2				464	470	476		140	280	
SMLZ14WBECW(A)		White	120	115	100*1	5	-40 to +100	-40 to +100	3.2	20	100	5	(x, y) (0.30, 0.28)			20	1400	2000	20
SMLZ13WBDAW													(x, y) (0.36, 0.36)				360	700	
SMLZ13WBDBW													(x, y) (0.44, 0.40)						
SMLZ13WBDCW(A)											10		(x, y) (0.30, 0.28)				900	1400	
SMLZ13WBDDW(A)											100		(x, y) (0.34, 0.34)						

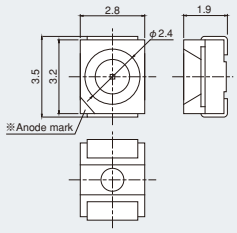
*1:Duty1/10, 1kHz / *2:Reference

Dimensions

SML-Z1(V.U.D.Y.M.F.P)

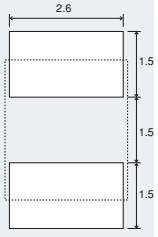


SML-Z1(WBD□W.BDT.EDT)



※Different according to the types of LED die
Tolerance : ±0.2
(unit : mm)

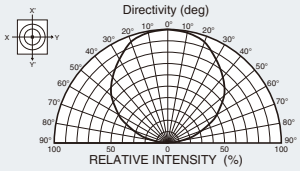
Recommended Solder Pattern



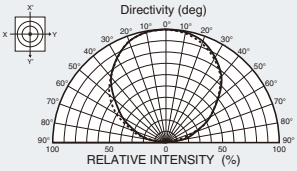
(unit : mm)

Viewing Angle

SML-Z14□4T Series / SML-Z14(A) Series



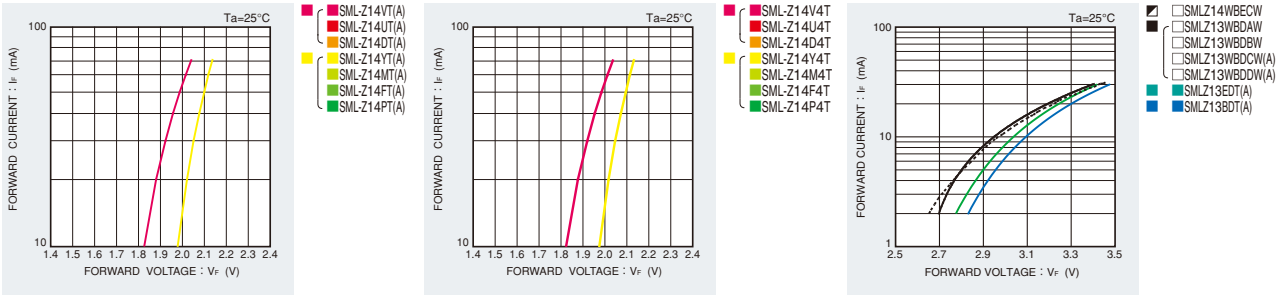
SMLZ13 Series / SMLZ14WBECW(A)



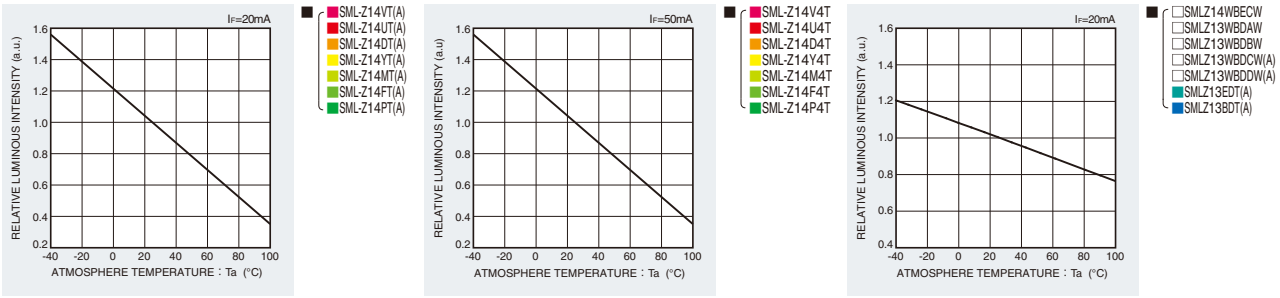
----SMLZ14WBECW(A)
——SMLZ13 series

Electrical Characteristics Curves

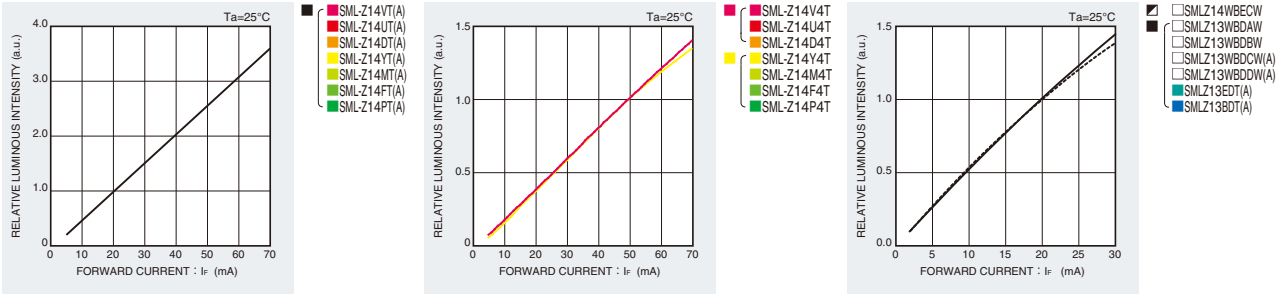
Forward Current-Forward Voltage



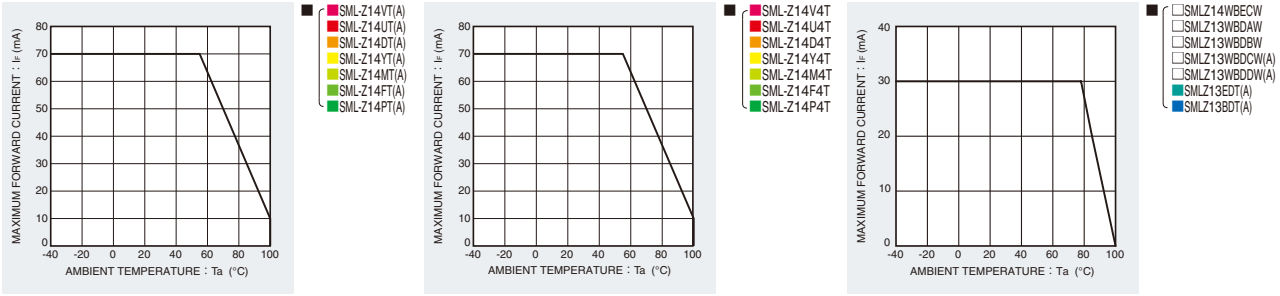
Luminous Intensity-Atmosphere Temperature



Luminous Intensity-Forward Current



Derating



Rank Reference of Brightness

SML-Z14＊T(A) Series

Red (V, U)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
			11.2 to 14	14 to 18	18 to 22.4	22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450
PLCC2	3528	1.9								SML-Z14VT(A)								
													SML-Z14UT(A)					

Orange (D)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
			11.2 to 14	14 to 18	18 to 22.4	22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450
PLCC2	3528	1.9												SML-Z14DT(A)				

Yellow (Y)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
			11.2 to 14	14 to 18	18 to 22.4	22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450
PLCC2	3528	1.9												SML-Z14YT(A)				

Green (M, P, F)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AH	AJ	AK	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY
			11.2 to 14	14 to 18	18 to 22.4	22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450
									SML-Z14MT(A)									
PLCC2	3528	1.9				SML-Z14FT(A)												
			SML-Z14PT(A)															

SML-Z14＊4T Series

Red (V, U)

(Ta=25°C, IF=50mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD
			22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450	450 to 560	560 to 710	710 to 900	900 to 1120	1120 to 1400
PLCC2	3528	1.9									SML-Z14V4T									
														SML-Z14U4T						

Orange (D)

(Ta=25°C, IF=50mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD
			22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450	450 to 560	560 to 710	710 to 900	900 to 1120	1120 to 1400
PLCC2	3528	1.9													SML-Z14D4T					

Yellow (Y)

(Ta=25°C, IF=50mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD
			22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450	450 to 560	560 to 710	710 to 900	900 to 1120	1120 to 1400
PLCC2	3528	1.9													SML-Z14Y4T					

Green (M, P, F)

(Ta=25°C, IF=50mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AL	AM	AN	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD
			22.4 to 28	28 to 35.5	35.5 to 45	45 to 56	56 to 71	71 to 90	90 to 112	112 to 140	140 to 180	180 to 224	224 to 280	280 to 355	355 to 450	450 to 560	560 to 710	710 to 900	900 to 1120	1120 to 1400
										SML-Z14M4T										
PLCC2	3528	1.9						SML-Z14F4T												
			SML-Z14P4T																	

SMLZ13＊T(A) Series

Green (E)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE
			140 to 180	180 to 224	224 to 280	280 to 355	355 to 450	450 to 560	560 to 710	710 to 900	900 to 1120	1120 to 1400	1400 to 1800
PLCC2	3528	1.9					SMLZ13EDT(A)						

Blue (B)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	AU	AV	AW	AX	AY	AZ	BA	BB	BC	BD	BE
			140 to 180	180 to 224	224 to 280	280 to 355	355 to 450	450 to 560	560 to 710	710 to 900	900 to 1120	1120 to 1400	1400 to 1800
PLCC2	3528	1.9	SMLZ13BDT(A)										

SMLZ1＊(White Series)

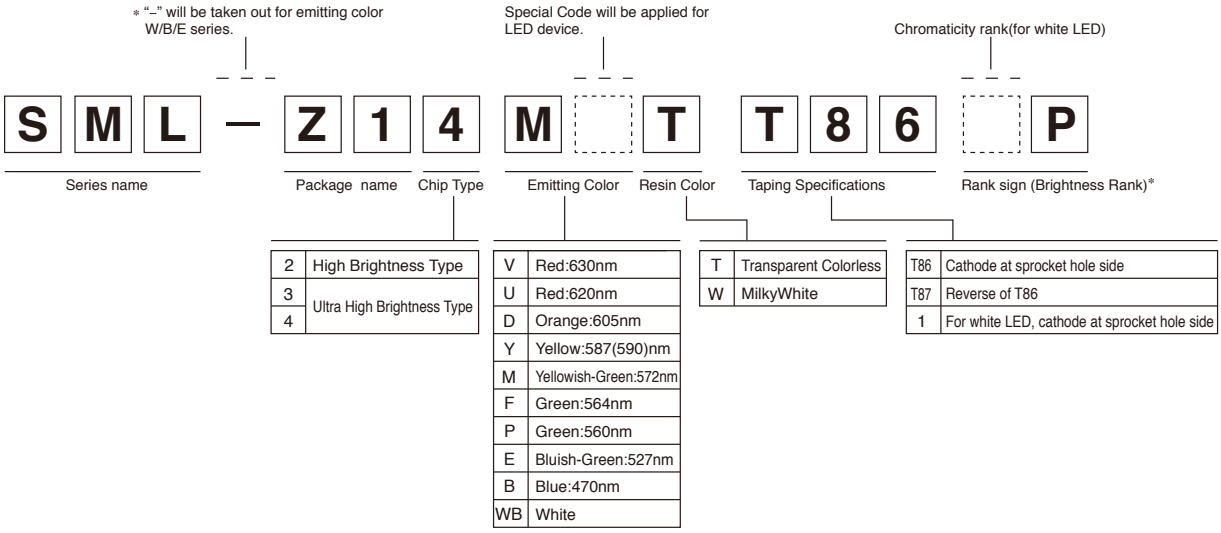
White (WB)

(Ta=25°C, IF=20mA)

	Package size(mm)	Luminous Intensity (mcd) / Height(mm)	V	W	X1	X2	Y1	Y2	Z1
			360 to 560	560 to 900	900 to 1120	1120 to 1400	1400 to 1800	1800 to 2200	2200 to 2800
							SMLZ14WBECW(A)		
			SMLZ13WBDAW						
PLCC2	3528	1.9	SMLZ13WBDBW						
				SMLZ13WBDCW(A)					
				SMLZ13WBDDW(A)					

＊Please note that the brightness of some products may fall between ranks (half rank).

Part No. Construction



* Concerning the Brightness rank
- Please refer to the rank chart above for luminous intensity classification.
- Part name is individual for each rank.
- When shipped as sample, the part name will be a representative part name. General products are free of ranks. Please contact sales if rank appointment is needed.

Packing Specification

ROHM LED products are being shipped with desiccant (silica gel) concluded in moisture-proof bags.
Pasting the moisture sensitive label on the outer surface of the moisture-proof bags or enclosing the humidity indication card inside the bag is available upon request.
Please contact the nearest sales office or distributer if necessary.

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