



# SML-Z1 Series

3528(1411)  
3.5×2.8mm(t=1.9mm)

### Features

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

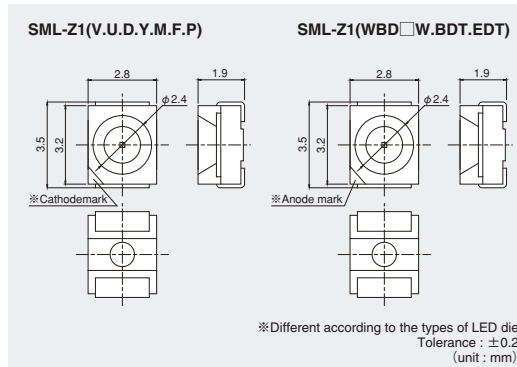


### Specifications

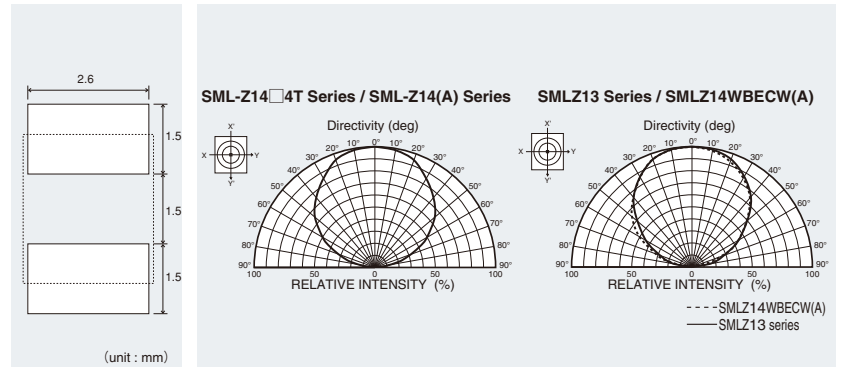
Part No.	Chip Structure	Emitting Color	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics (Ta=25°C)																	
			Power Dissipation Pd(mW)	Forward Current If(mA)	Peak Forward Current I <sub>FP</sub> (mA)	Reverse Voltage Vr(V)	Operating Temperature Topr(°C)	Storage Temperature Tsig(°C)	Forward Voltage V <sub>F</sub> Typ.(V)	Forward Current I <sub>F</sub> (mA)	Reverse Current I <sub>R</sub> Max.(μA)	Reverse Voltage Vr(V)	Dominant Wavelength λ D Min. <sup>*2</sup> (nm)	Typ.(nm)	Max. <sup>*2</sup> (nm)	Luminous Intensity I <sub>v</sub> Min.(mcd)	Typ.(mcd)	I <sub>F</sub> (mA)							
SML-Z14VT(A)	AlGaInP on GaAs	Red	175	70	-	12	-40 to +100	-40 to +100	1.9				625	630	635		56	112							
SML-Z14UT(A)													615	620	625		112	224							
SML-Z14DT(A)		Orange							20	10	12														
SML-Z14YT(A)																									
SML-Z14MT(A)		Yellowish Green							2.0																
SML-Z14FT(A)		586																							
SML-Z14PT(A)		Green							2.0																
SML-Z14V4T		568																							
SML-Z14U4T		Red							2.0																
SML-Z14D4T		557																							
SML-Z14Y4T		Yellow							2.1																
SML-Z14M4T		587																							
SML-Z14F4T		Yellowish Green							2.1																
SML-Z14P4T		569																							
SMLZ13EDT(A)	InGaInP on GaAs	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)													464	470	476		140	280							
SMLZ14WBECW(A)		White							115	30	100 <sup>*1</sup>	5	-40 to +100	-40 to +100	3.2	20		5	(x, y) (0.30, 0.28)			1400	2000		
SMLZ13WBDAW																			(x, y) (0.36, 0.36)			360	700		
SMLZ13WBDBW		White							115	30	100 <sup>*1</sup>	5	-40 to +100	-40 to +100	3.2	20		10	(x, y) (0.30, 0.40)			900	1400	20	
SMLZ13WBDCW(A)																			(x, y) (0.34, 0.34)			900	1400		
SMLZ13WBDDW(A)		White							115	30	100 <sup>*1</sup>	5	-40 to +100	-40 to +100	3.2	20		100	(x, y) (0.34, 0.34)			900	1400	20	
SMLZ13WBDDW(A)																			(x, y) (0.34, 0.34)			900	1400		

\* 1:Duty/10, 1kHz / \* 2:Reference

### Dimensions

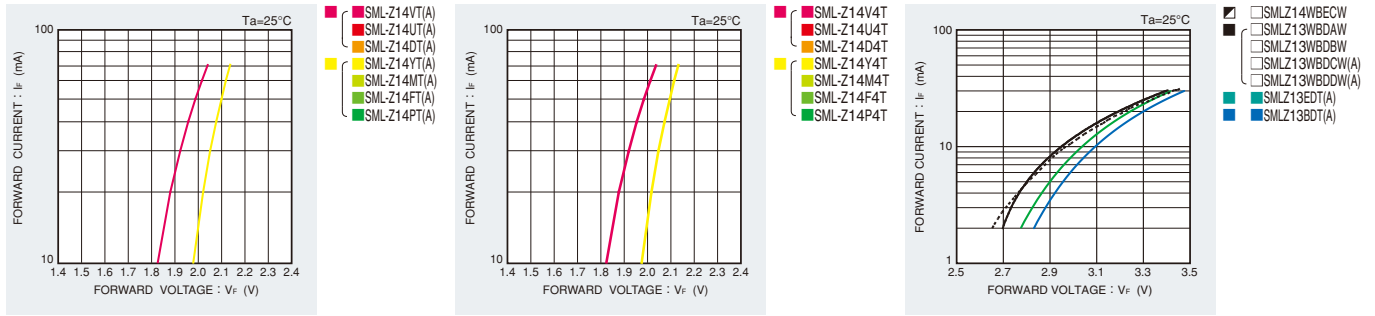


### Recommended Solder Pattern Viewing Angle

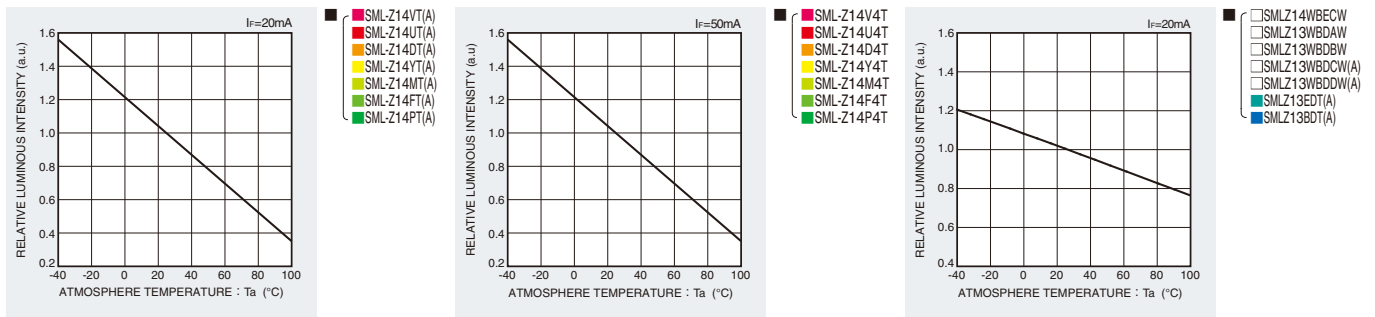


Electrical Characteristics Curves

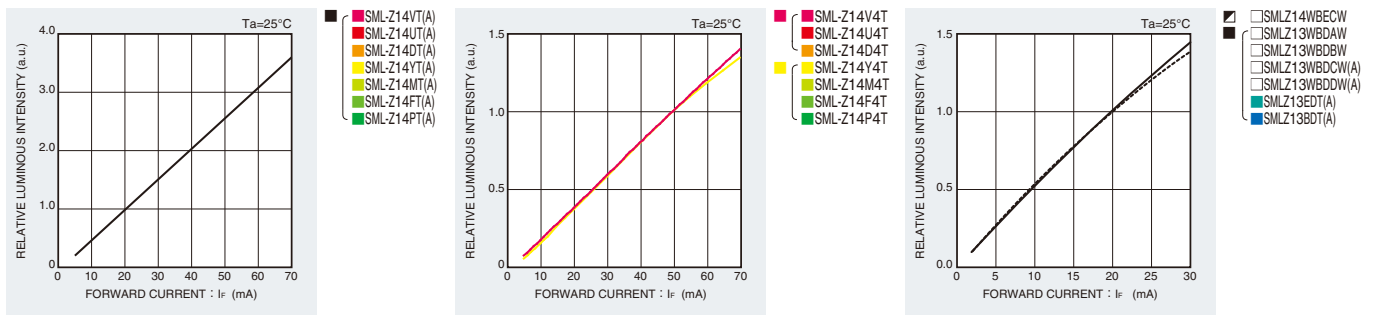
Forward Current-Forward Voltage



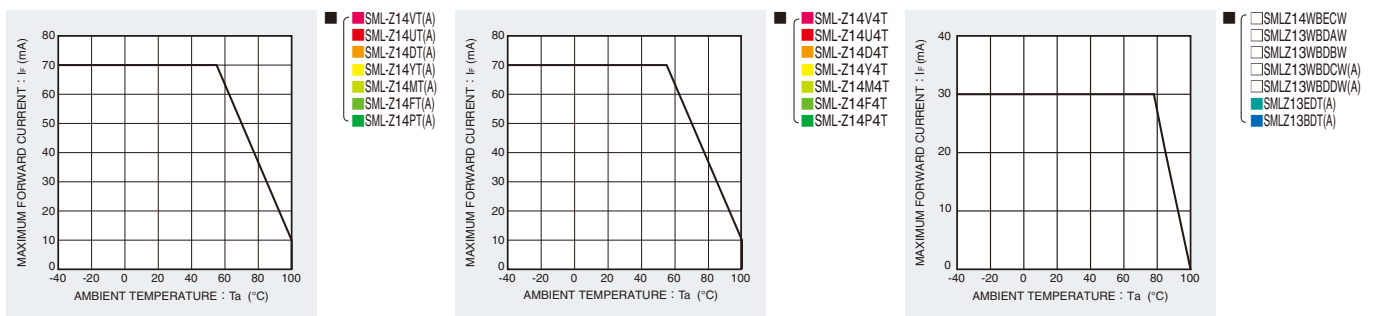
Luminous Intensity-Atmosphere Temperature



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)	Height(mm)	Luminous Intensity(mcd)	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)	Height(mm)	Luminous Intensity(mcd)	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)	Height(mm)	Luminous Intensity(mcd)	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)	Height(mm)	Luminous Intensity(mcd)	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-Z14MT(A)																
			SML-Z14PT(A)							SML-Z14FT(A)									

SML-Z14 \* 4T Series

Red (V, U)

(Ta=25°C, If=50mA)

Package size(mm)	Height(mm)	Luminous Intensity(mcd)	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)	Height(mm)	Luminous Intensity(mcd)	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)	Height(mm)	Luminous Intensity(mcd)	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)	Height(mm)	Luminous Intensity(mcd)	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-Z14F4T										SML-Z14M4T									
			SML-Z14P4T																			

SMLZ13 \* T(A) Series

Green (E)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity(mcd)	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)	Height(mm)	Luminous Intensity(mcd)	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)

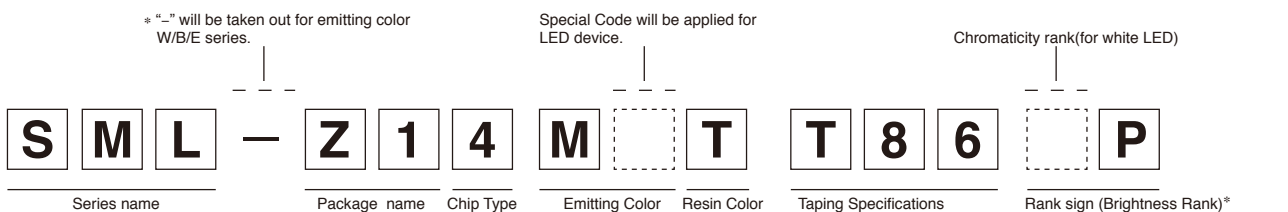
White (WB)

(Ta=25°C, If=20mA)

Package size(mm)	Height(mm)	Luminous Intensity(mcd)	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		
PLCC2	3528	1.9	SMLZ14WBECW(A)								
			SMLZ13WBDAW								
			SMLZ13WBDBW								
			SMLZ13WBDCW(A)								
SMLZ13WBDDW(A)											

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

Part No. Construction



2	High Brightness Type
3	Ultra High Brightness Type
4	

V	Red:630nm
U	Red:620nm
D	Orange:605nm
Y	Yellow:587(590)nm
M	Yellowish-Green:572nm
F	Green:564nm
P	Green:560nm
E	Bluish-Green:527nm
B	Blue:470nm
WB	White

T	Transparent Colorless
W	MilkyWhite

T86	Cathode at sprocket hole side
T87	Reverse of T86
1	For white LED, cathode at sprocket hole side

- \* 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 distributor if necessary.

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