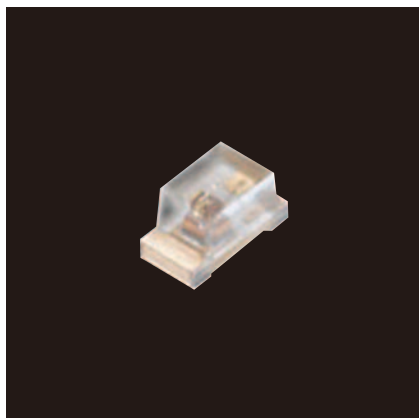




SML-31 series

1608(0603)
 1.6×0.8mm(t=0.8mm)

Features

- 1608 standard size(1.6×0.8mm, t=0.8mm)
- Abundant color variations with diverse luminous intensity types

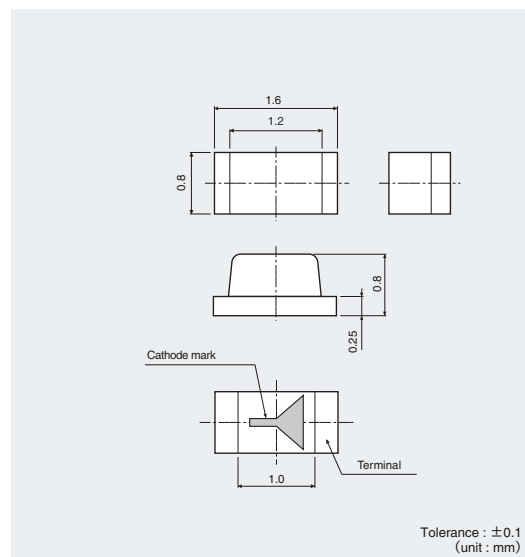
Color Type	V	U	D	Y	W
	M	P	E	B	WB

Product Specifications

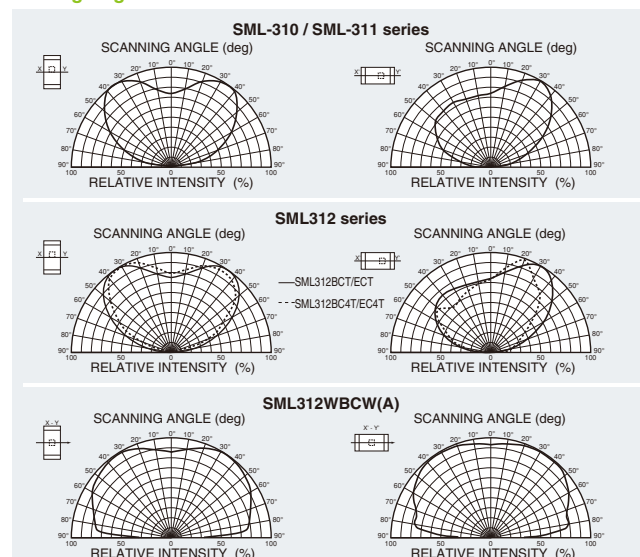
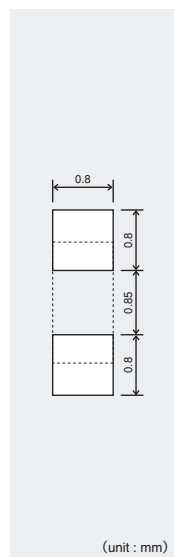
Part No.	LED chip	Emitting color	Absolute maximum ratings (Ta=25℃)						Electrical and optical characteristics (Ta=25℃)												
			Power dissipation PD(mW)	Forward current IF(mA)	Peak forward current IFP(mA)	Reverse voltage VR(V)	Operating temperature Topr(℃)	Storage temperature Tstg(℃)	Forward voltage VF		Reverse current IR		Dominant wavelength λD			Luminous intensity Iv					
			Typ. (V)	IF(mA)	Max. (μA)	VR(V)					Min. (nm)	Typ. (nm)	Max. (nm)	IF(mA)	Min. (mcd)	Typ. (mcd)	IF(mA)				
 SML-310VT	GaAsP on GaP	Red	55						2	20			625	630	635	20	1.4	4	20		
 SML-311UT	AlGaInP on GaAs		44						1.8	2			615	620	625	2	0.9	2.5	2		
 SML-311DT		Orange											602	605	608		1.6	3.15			
 SML-310DT	GaAsP on GaP		55						2	20						20	2.2	6.3	20		
 SML-311WT	AlGaInP on GaAs	Yellow	44		60±1	4		-40 to +85	1.8	2			4	587	590	593	2	0.9	2.5	2	
 SML-311YT															584	587	590		2.2	6.3	
 SML-310YT	GaAsP on GaP			20				-30 to +85	2.1		100										
 SML-310MT	GaP	Yellowish Green	55						2.2					567	570	573		3.6	16		
 SML-310PT		Green												557	560	563		1.4	4		
 SML312ECT	InGaN	Bluish Green							3.3	20			520	527	535	20	90	200	20		
 SML312EC4T										3.2				525				36		90	
 SML312BCT		Blue	84		100±2	5			-40 to +100	3.3				5	464	470	476		22	63	
 SML312BC4T											3.2								46		
 SML312WBCW(A)		White	108	30	100±2			-40 to +100	3.0	5				(x, y) (0.30, 0.29)	5	45	71	5			

※1:Duty 1/5, 200Hz / ※2:Duty 1/10, 1kHz

Dimensions

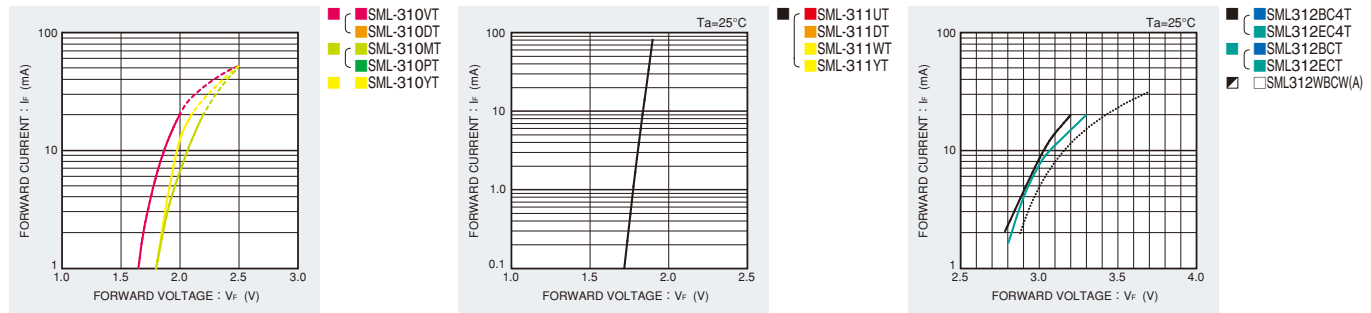


Recommended Solder Pattern Viewing Angle

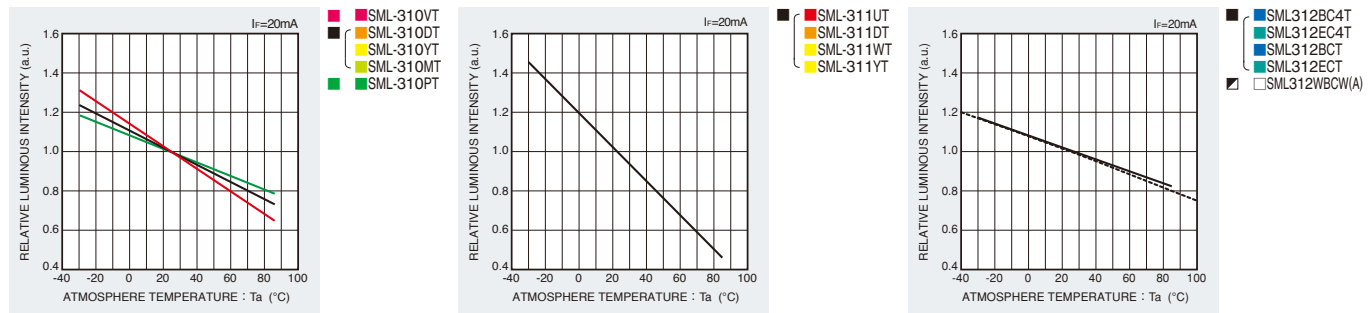


Electrical Characteristics Curves

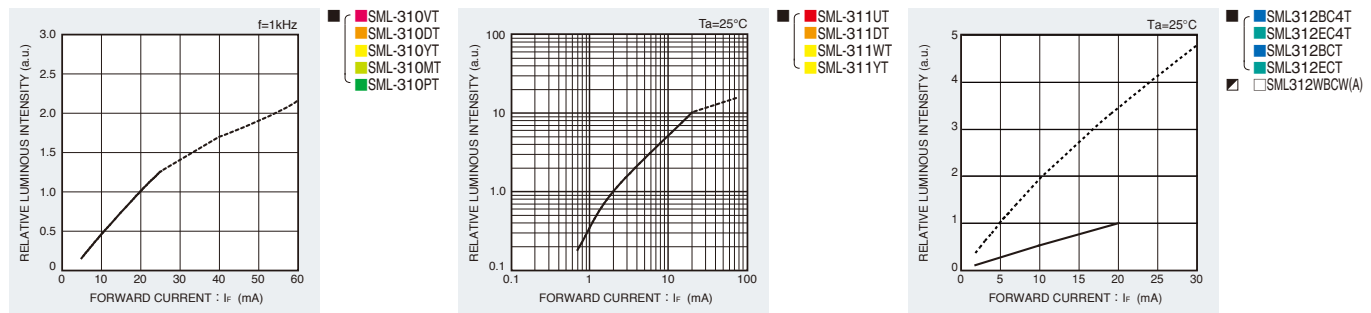
Forward Current-Forward Voltage



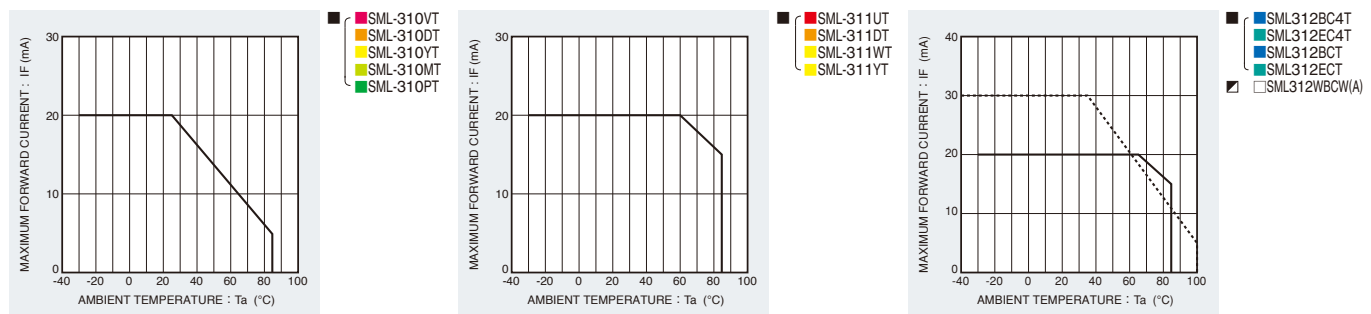
Luminous Intensity-Atmosphere Temperature



Luminous Intensity-Forward Current



Deratings



SML-31 series

Rank Reference of Brightness

■ Red (V, U)

(Ta=25°C, If=20mA)

	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
Mini-mold Chip LEDs	1608	0.8		1.0 to 1.6	1.6 to 2.5	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600
				SML-311UT ^{※/※1}															
				SML-310VT [※]															

■ Orange (D)

(Ta=25°C, If=2mA)

	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
Mini-mold Chip LEDs	1608	0.8		1.0 to 1.6	1.6 to 2.5	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600
				SML-311DT															

■ Yellow (Y, W)

(Ta=25°C, If=20mA)

	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
Mini-mold Chip LEDs	1608	0.8		1.0 to 1.6	1.6 to 2.5	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600
				SML-311YT ^{※/※1}															
				SML-311WT ^{※/※1}															
				SML-310YT [※]															

■ Green (M, P, E)

(Ta=25°C, If=20mA)

	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X
				0.63 to 1.0	1.0 to 1.6	1.6 to 2.5	2.5 to 4.0	4.0 to 6.3	6.3 to 10	10 to 16	16 to 25	25 to 40	40 to 63	63 to 100	100 to 160	160 to 250	250 to 400	400 to 630	630 to 1000	1000 to 1600
Mini-mold Chip LEDs	1608	0.8		SML-310MT [※]									SML312ECT [※]							
				SML-310PT [※]									SML312EC4T [※]							

■ Blue (B)

(Ta=25°C, If=20mA)

	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W
Mini-mold Chip LEDs	1608	0.8		0.9 to 1.4	1.4 to 2.2	2.2 to 3.6	3.6 to 5.6	5.6 to 9.0	9 to 14	14 to 22	22 to 36	36 to 56	56 to 90	90 to 140	140 to 220	220 to 360	360 to 560	560 to 900
				SML312BC4T														
				SML312BCT														

■ White (WB)

(Ta=25°C, If=5mA)

	Package size(mm)	Height(mm)	Luminous Intensity (mcd)	P	Q	R	S	T	U	V	W	X1	X2	Y1	Y2	Z1
Mini-mold Chip LEDs	1608	0.8		25 to 36	36 to 56	56 to 90	90 to 140	140 to 220	220 to 360	360 to 560	560 to 900	900 to 1100	1100 to 1400	1400 to 1800	1800 to 2200	2200 to 2800
				SML312WBCW(A)												

※Brightness on specification sheet include tolerance of within ±10%. ※1:If=2mA

Part No. Construction

* "-" will be taken out for emitting color W/B/E series.

Special Code will be applied for Emitting color W/B/E series.

Chromaticity rank (for white LED)

S	M	L	-	3	1	0	D		T	T	8	6		K
Series name				Package type		Chip Type	Emitting Color	Resin Color	Taping Specifications			Rank sign (Brightness Rank)*		

0	Standard Type
1	Low Current Type
2	High Brightness Type

V	Red:630nm
U	Red:620nm
D	Orange:605nm
W	Yellow:590nm
Y	Yellow:587(590)nm
M	Yellowish-Green:572nm
P	Green:560nm
E	Bluish-Green:527nm
B	Blue:470(466)nm
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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