



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



Product Specifications

Part No.	LED chip	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 (V)		Reverse current IR (μA)		Dominant wavelength λD (nm)			Luminous intensity Iv (mcd)				
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										567	570	573		3.6	16		
SML-310PT		Green							2.2					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					5								63
SML312BC4T										3.2				464	470	476		22		46

※1:Duty1/5, 200Hz / ※2:Duty1/10, 1kHz

Dimensions



Recommended Solder Pattern

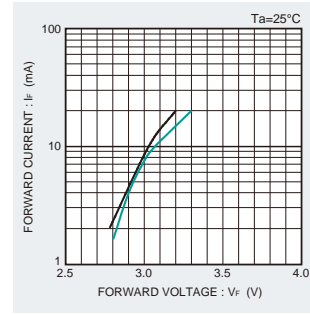
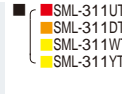
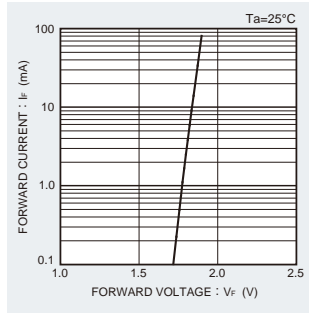
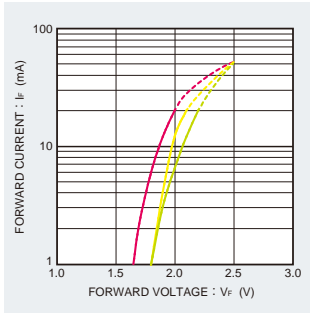


Viewing Angle

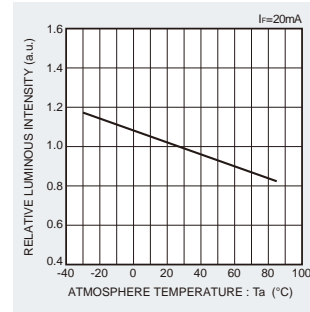
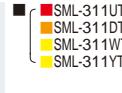
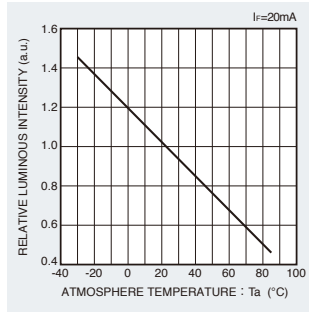
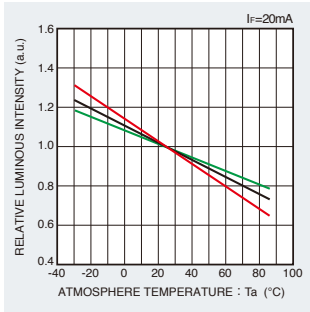


Electrical Characteristics Curves

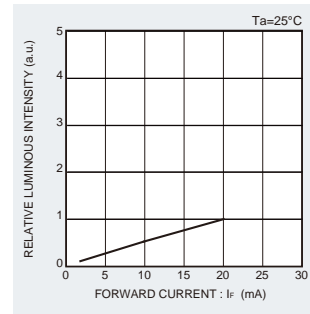
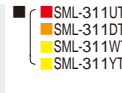
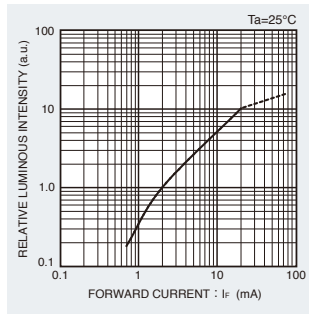
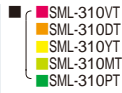
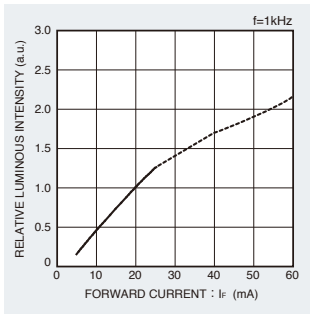
Forward Current-Forward Voltage



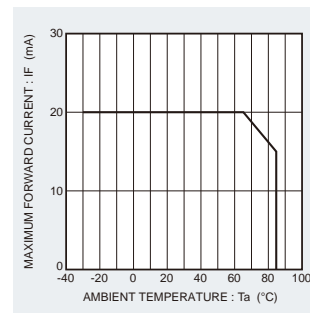
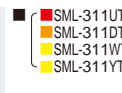
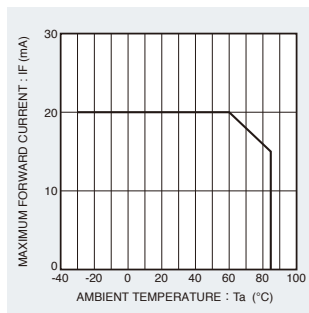
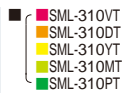
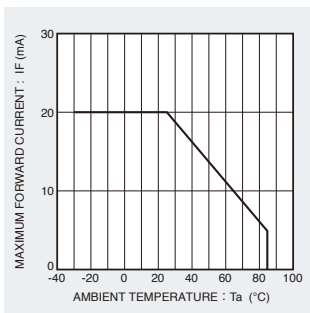
Luminous Intensity-Atmosphere Temperature



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		
			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-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		
			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-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		
			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-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-310PT [※]						SML-310MT [※]						SML312ECT [※]					

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			
			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			
Mini-mold Chip LEDs	1608	0.8							SML312BC4T						SML312BCT					

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

Part No. Construction

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

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



- * 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.

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.

Notes

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