



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		-40 to +100	3.3		5								63
■ SML312BC4T										3.2				464	470	476		22		46

※1:Duty1/5, 200Hz / ※2:Duty1/10, 1kHz

Dimensions



Recommended Solder Pattern

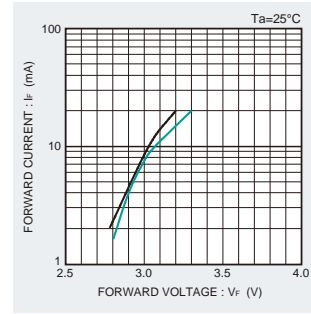
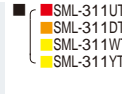
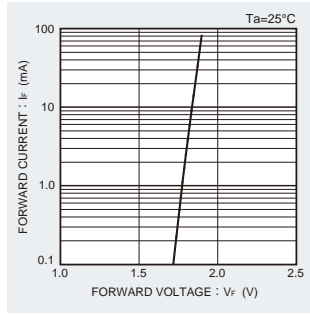
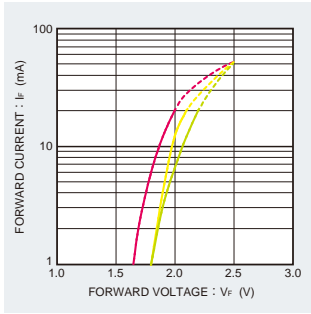


Viewing Angle

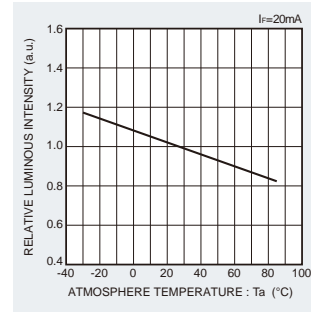
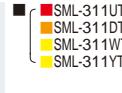
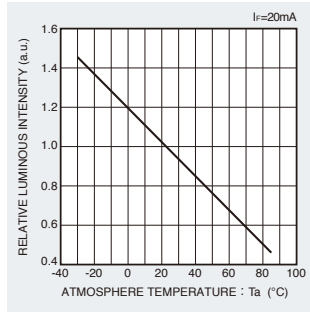
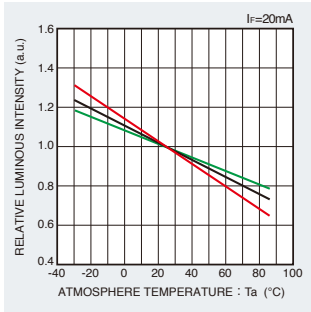


Electrical Characteristics Curves

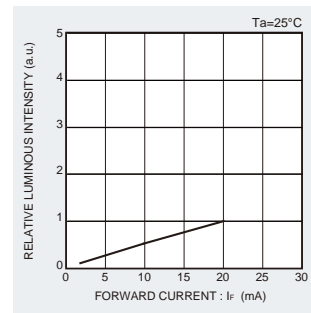
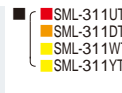
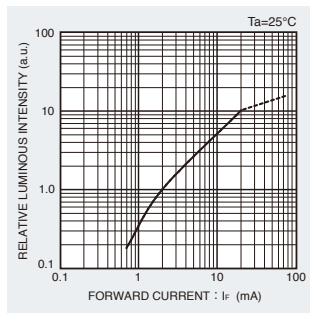
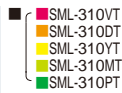
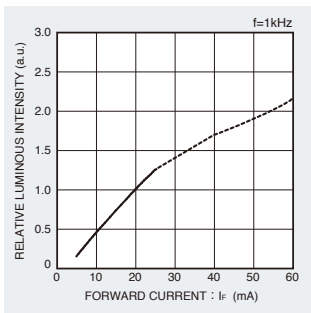
Forward Current-Forward Voltage



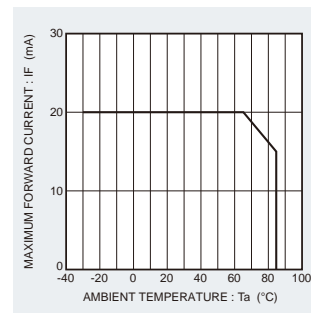
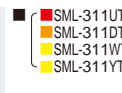
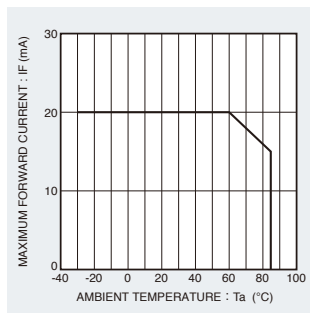
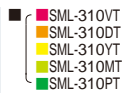
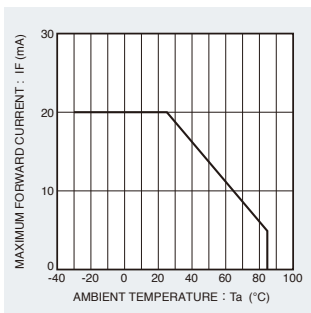
Luminous Intensity-Atmosphere Temperature



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-310MT [※]												SML312ECT [※]				
			SML-310PT [※]								SML312EC4T [※]								

Blue (B)

(Ta=25°C, If=20mA)

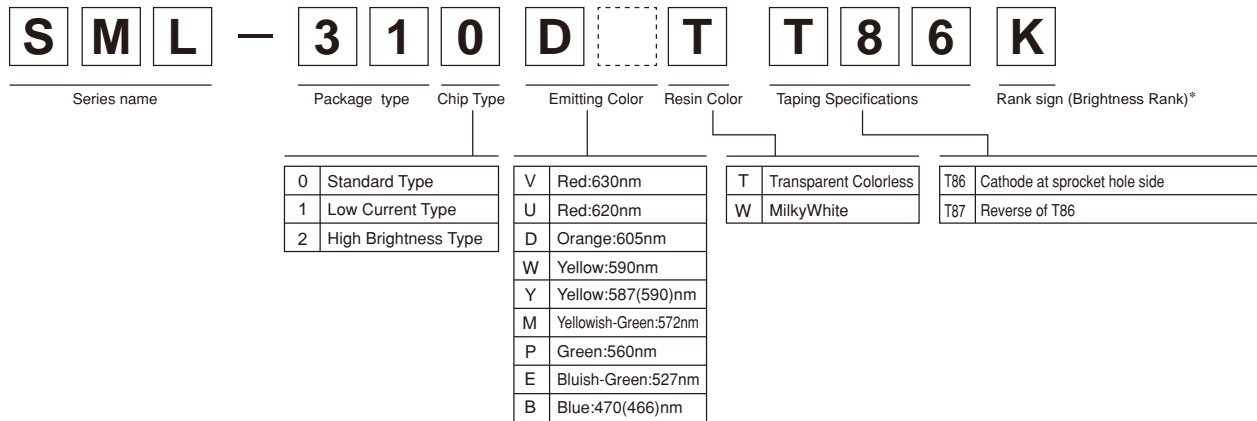
Package size(mm)	Height(mm)	Luminous Intensity (mcd)	G	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	
			0.9 to 1.4	1.4 to 2.2	2.2 to 3.6	3.6 to 5.6	5.6 to 9.0	9 to 14	14 to 22	22 to 36	36 to 56	56 to 90	90 to 140	140 to 220	220 to 360	360 to 560	560 to 900	
Mini-mold Chip LEDs	1608	0.8										SML312BC4T						
				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

- 1) The information contained herein is subject to change without notice.
- 2) Before you use our Products, please contact our sales representative and verify the latest specifications :
- 3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Products beyond the rating specified by ROHM.
- 4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.
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С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

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- Специальные условия для постоянных клиентов.
- Подбор аналогов.
- Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.
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- Комплексную поставку.
- Работу по проектам и поставку образцов.
- Формирование склада под заказчика.
- Сертификаты соответствия на поставляемую продукцию (по желанию клиента).
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- Регистрацию проекта у производителя компонентов.
- Техническую поддержку проекта.
- Защиту от снятия компонента с производства.
- Оценку стоимости проекта по компонентам.
- Изготовление тестовой платы монтаж и пусконаладочные работы.



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