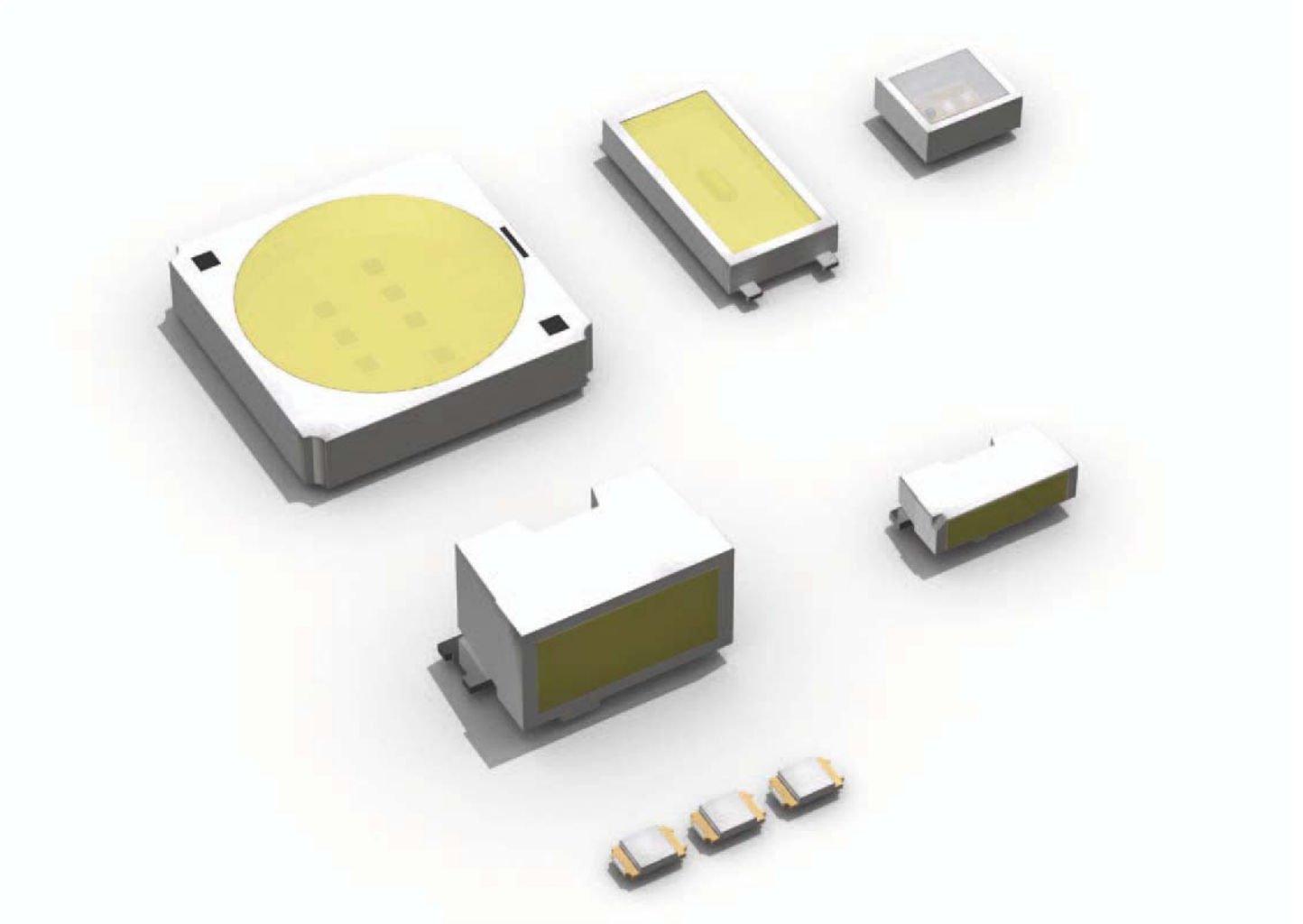
ROHM SEMICONDUCTOR

2012

New Products Catalog

Opto Electronics



LED New Products

LED New Products

ROHM Co., Ltd.

Contents

SSML Series

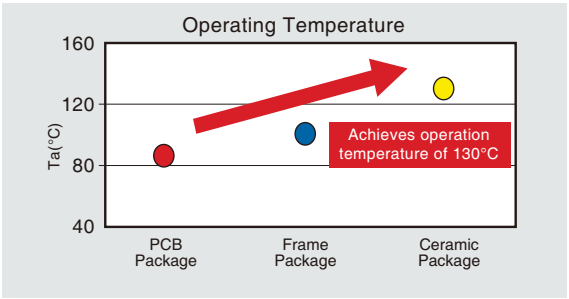
High Heat Resistance
High Power White LEDs
PSL0101 series / PSL0102 series

Color Type WB

High Reliability

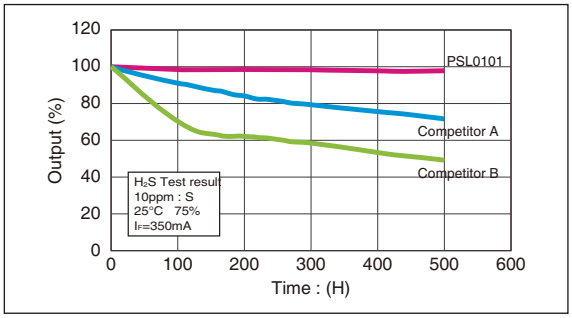
Achieves operation temperature of 130°C

A high thermal resistance material is used to ensure stable performance at high ambient temperatures.



High reliability product from the harsh environment of Out-side Lighting

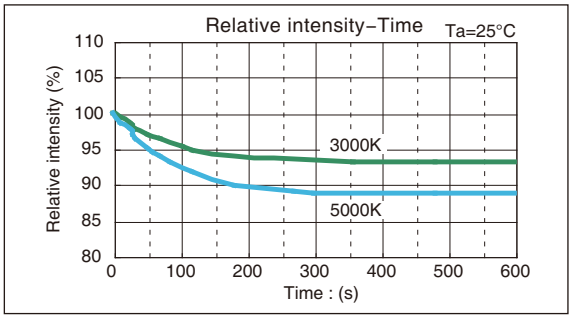
The product is made of Au plating with Ceramic package, non Sulfur influence and keeping Luminous intensity.



High Heat radiation

High Power 1W white LED

High efficiency is maintained (105 lm/W), even during continuous, large-current operation (350mA).
This product is keeping output intensity from high current condition due to our original packaging technology.
Keeping Luminous intensity less than approximately 10% after 300s turn-on.



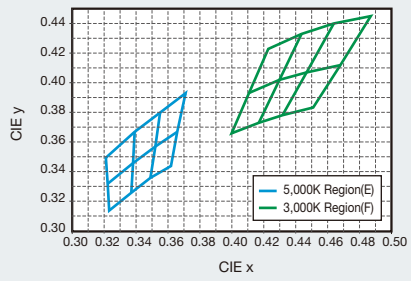
Specifications

Under Development

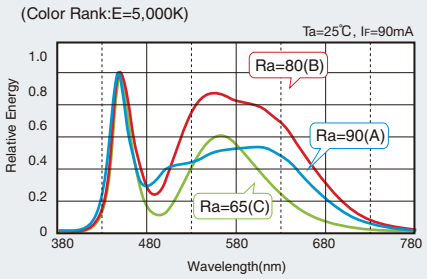
Part No.	Chip Structure	Emitted Color	Average Color Rendering Index (Ra)	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics(Ta=25°C)					
				Power Dissipation PD(W)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Operating Temperature Topr(°C)	Strage Temperature Tstg(°C)	Forward Voltage VF Typ.(V)	Forward Voltage VF IF(mA)	Chromaticity Coordinates (x, y)	Chromaticity Coordinates IF(mA)	Luminous Flux ϕV Typ. (lm)	Luminous Flux ϕV IF(mA)
☐PSL0101WBEA	InGaN	White (5,000K)	65	1.95	500*1	1,000*2	-40 to +130	-40 to +130	3.3	350	(0.345, 0.352)	350	95	350
☐PSL0101WBEB			80										85	
☐PSL0101WBEC			90										70	
☐PSL0101WBED			75										95	
☐PSL0101WBFA		White (3,000K)	65										90	
☐PSL0101WBFB			80								(0.437, 0.404)		80	
☐PSL0101WBFC			90										65	
☐PSL0101WBFD			74										85	
☐PSL0102WBEA	InGaN	White (5,000K)	65	0.78	200*1	400*2	-40 to +130	-40 to +130	3.3	120	(0.345, 0.352)	120	44	120
☐PSL0102WBEB			80										38	
☐PSL0102WBEC			90										30	
☐PSL0102WBED			75										42	

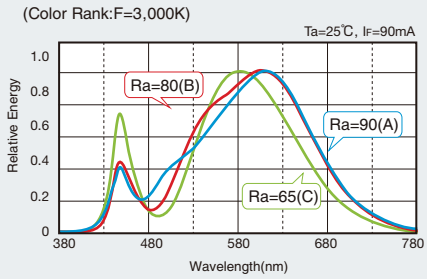
*1:Mounting conditions must be carefully considered. *2:Duty≤1/10, pulse width 10ms Max

Chromaticity Diagram

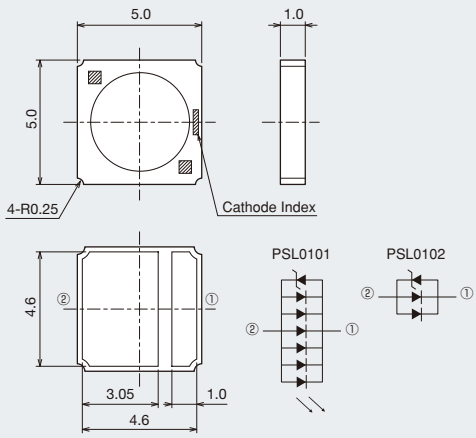


Spectram Data

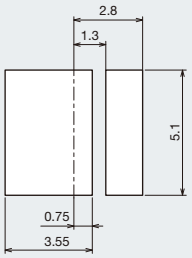




Dimensions

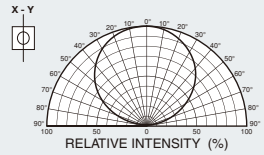


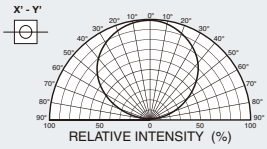
Recommended Solder Pattern



(unit : mm)

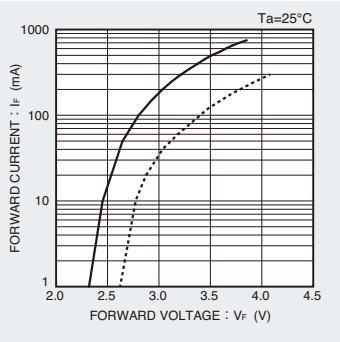
Viewing Angle





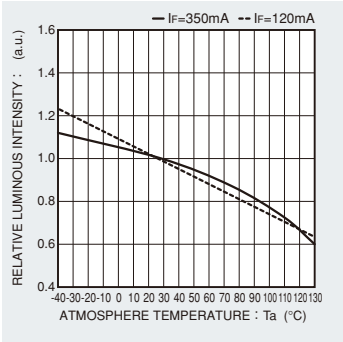
Electrical Characteristics Curves

Forward Voltage - Forward Current



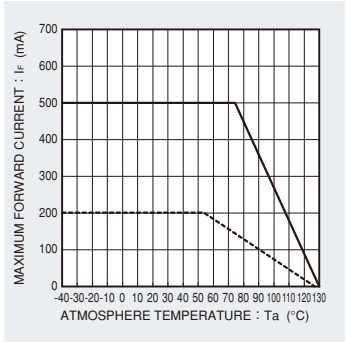
■ ☐PSL0101WBEA ◩ ☐PSL0102WBEA
☐PSL0101WBEB ☐PSL0102WBEB
☐PSL0101WBEC ☐PSL0102WBEC
☐PSL0101WBED ☐PSL0102WBED
☐PSL0101WBFA
☐PSL0101WBFB
☐PSL0101WBFC
☐PSL0101WBFD

Atmosphere Temperature - Relative Luminous Intensity



■ ☐PSL0101WBEA ◩ ☐PSL0102WBEA
☐PSL0101WBEB ☐PSL0102WBEB
☐PSL0101WBEC ☐PSL0102WBEC
☐PSL0101WBED ☐PSL0102WBED
☐PSL0101WBFA
☐PSL0101WBFB
☐PSL0101WBFC
☐PSL0101WBFD

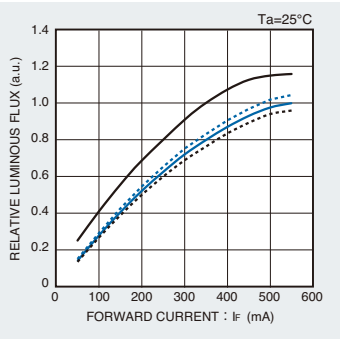
Derating



■ ☐PSL0101WBEA ◩ ☐PSL0102WBEA
☐PSL0101WBEB ☐PSL0102WBEB
☐PSL0101WBEC ☐PSL0102WBEC
☐PSL0101WBED ☐PSL0102WBED
☐PSL0101WBFA
☐PSL0101WBFB
☐PSL0101WBFC
☐PSL0101WBFD

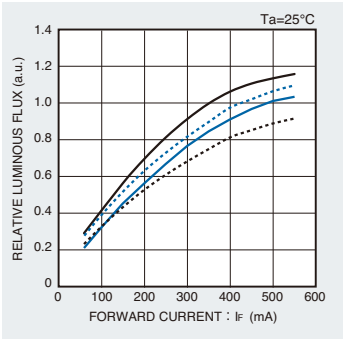
Forward Current-Relative Luminous Flux(PSL0101 series)

【5000K】



■ ☐PSL0101WBEA
◩ ☐PSL0101WBEB
■ ☐PSL0101WBEC
◩ ☐PSL0101WBED

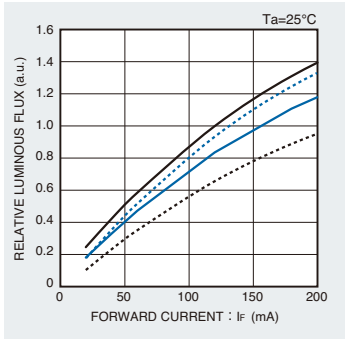
【3000K】



■ ☐PSL0101WBFA
◩ ☐PSL0101WBFB
■ ☐PSL0101WBFC
◩ ☐PSL0101WBFD

Forward Current-Relative Luminous Flux(PSL0102 series)

【5000K】

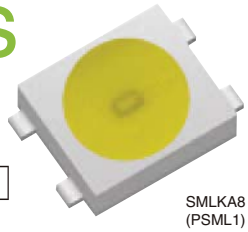


■ ☐PSL0102WBEA
◩ ☐PSL0102WBEB
■ ☐PSL0102WBEC
◩ ☐PSL0102WBED

PSML Series

High Luminous Intensity, High Heat Dissipation LEDs

SMLKA □ / SMLK1 □ / SMLK2 □



SMLKA8
(PSML1)

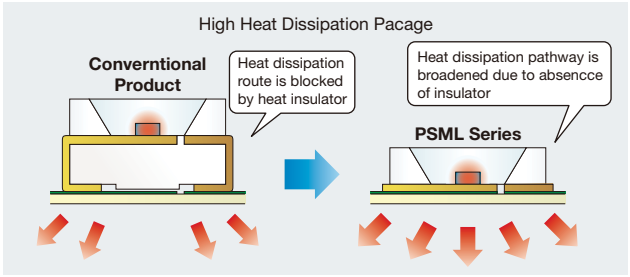
SMLK18
SMLK28
(PSML2)

Color Type WB

Flat-frame high heat dissipation package

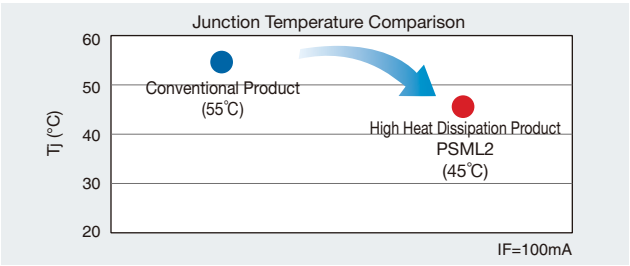
ROHM utilizes a Cu frame package featuring high heat conductivity, with exposed backside for improved thermal dissipation. As a result, thermal esistance is increased by 25%, enabling high current flow and greater luminosity.

Advantages of High Heat Dissipation
- Reduced temperature dependency (deterioration in luminous intensity and color)
- Longer life
- Higher operating temperature range
- Excellent derating characteristics



Industry-leading brightness

Superior heat dissipation characteristics ensure high brightness, even in the medium current range (50-150mA).
(45)Lower junction temperatures result in excellent derating characteristics, extending the operating temperature range. High reliability is also ensured.



SMLKA8(PSML1)

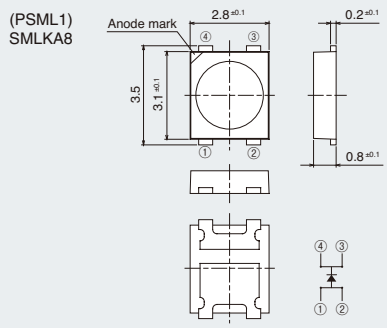
Specifications

Under Development

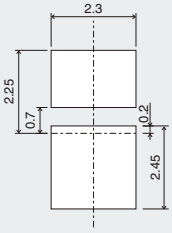
Part No.	Chip Structure	Emitted Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Voltage VF Typ.(V)	IF(mA)	Reverse Current IR Max.(μA)	VR(V)	Chromaticity Coordinates (x, y)	IF(mA)	Luminous Intensity Iv Min.(cd)	Typ.(cd)	IF(mA)	Luminous Flux Φv Typ.(lm)	IF(mA)
□**SMLKA8WBJCW**	InGaN	White	675	150*1	230*2	5	-40 to +100	-40 to +100	3.9	90	10	5	(0.30, 0.28)	90	4.0	5.9	90	(20)	90

*1:Mounting conditions must be carefully considered *2:Duty≦1/10, 10ms

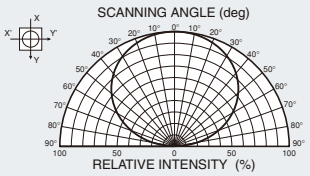
Dimensions



Recommended Solder Pattern

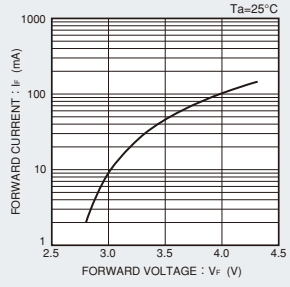


Viewing Angle



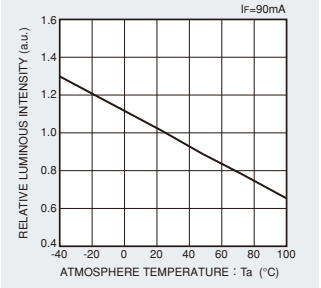
Electrical Characteristics Curves

Forward Voltage-Forward Current



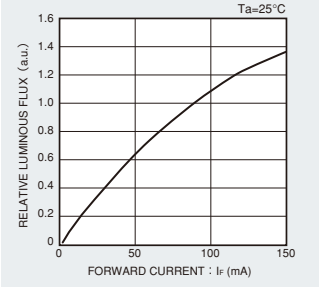
■ □SMLKA8WBJCW

Atmosphere Temperature-Relative Luminous Intensity



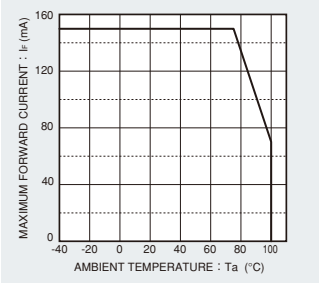
■ □SMLKA8WBJCW

Forward Current-Relative Luminous Intensity



■ □SMLKA8WBJCW

Derating



■ □SMLKA8WBJCW

SMLK18/SMLK28(PSML2)

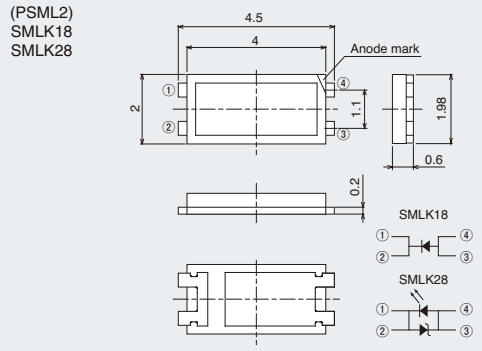
Under Development

Specifications

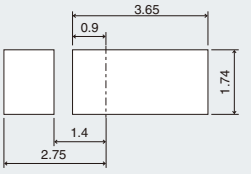
Part No.	Chip Structure	Emitted Color	Absolute Maximum Ratings (Ta=25℃)						Electrical and Optical Characteristics (Ta=25℃)									
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(℃)	Storage Temperature Tstg(℃)	Forward Voltage VF Typ.(V)	Forward Voltage VF IF(mA)	Reverse Current IR Max.(μA)	Reverse Current IR VR(V)	Chromaticity Coordinates (x, y)	IF(mA)	Luminous Intensity Iv Min.(cd)	Luminous Intensity Iv Typ.(cd)	Luminous Intensity Iv IF(mA)	Luminous Flux Φv Typ.(lm)	Luminous Flux Φv IF(mA)
☐SMLK18WBJAW	InGaN	White (5000K)	675	150	230*	5	-40 to +100	-40 to +100	3.9	90	10	5	(0.345, 0.351)	90	3.3	4.8	90	(17)	90
☐SMLK18WBJBW		White (3000K)											(0.44, 0.40)			4.5		(16)	
☐SMLK18WBJCW													(0.30, 0.28)			5.9		(21)	
☐SMLK18WBJDW		White											(0.34, 0.34)		4.8	6.0		(22)	
☐SMLK28WBJCW						-					-	-	(0.30, 0.28)			5.9		(21)	

*Duty1/10≦10ms ( ): Reference

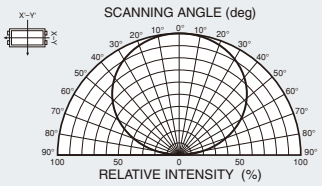
Dimensions



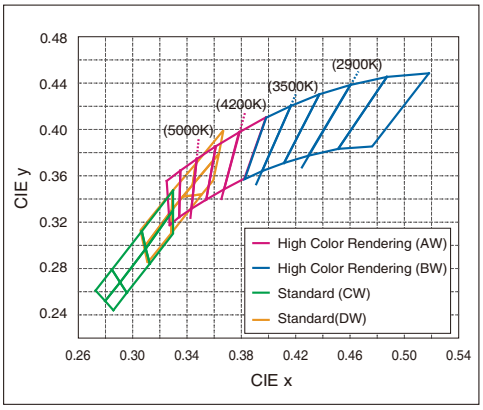
Recommended Solder Pattern



Viewing Angle

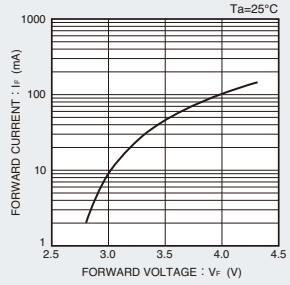


Chromaticity Diagram



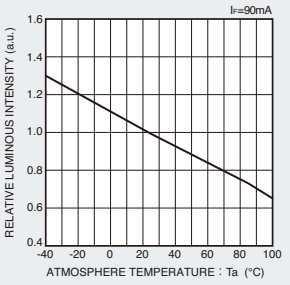
Electrical Characteristics Curves

Forward Voltage-Forward Current



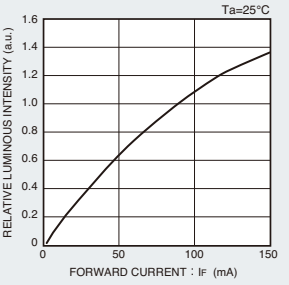
■ ☐SMLK18WBJAW
☐SMLK18WBJBW
☐SMLK18WBJCW
☐SMLK18WBJDW
☐SMLK28WBJCW

Atmosphere Temperature-Relative Luminous Intensity



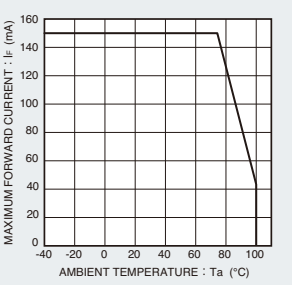
■ ☐SMLK18WBJAW
☐SMLK18WBJBW
☐SMLK18WBJCW
☐SMLK18WBJDW
☐SMLK28WBJCW

Forward Current-Relative Luminous Intensity



■ ☐SMLK18WBJAW
☐SMLK18WBJBW
☐SMLK18WBJCW
☐SMLK18WBJDW
☐SMLK28WBJCW

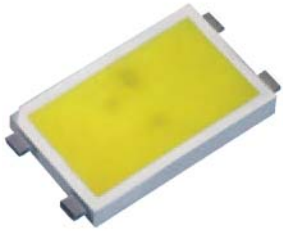
Derating



■ ☐SMLK18WBJAW
☐SMLK18WBJBW
☐SMLK18WBJCW
☐SMLK18WBJDW
☐SMLK28WBJCW

PSML3 Series

High Brightness
High Heat Dissipation White LEDs
PSL02 series

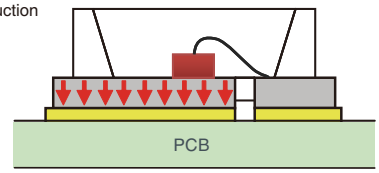


Color Type WB

ROHM's Original Heat Dissipation Package

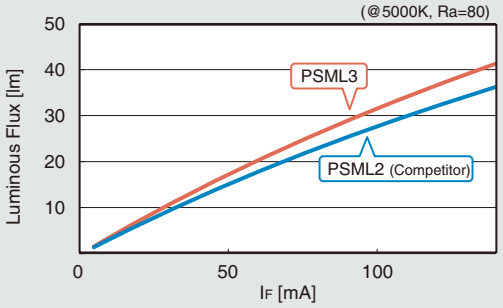
Optimized for both backlighting and illumination applications.
A new flat frame package type featuring high heat dissipation and high brightness is now available.
Optical output is increased with 5630 size package which is larger than PSML2 (4520).

Package Construction



Flat frame construction enables direct heat dissipation to the board

Forward Current vs. Luminous Flux



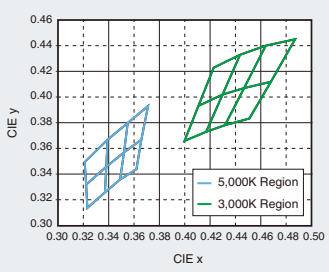
Luminous flux is improved in the high-current region compared with conventional products. In addition, heat generation is reduced even at high output.

Specifications

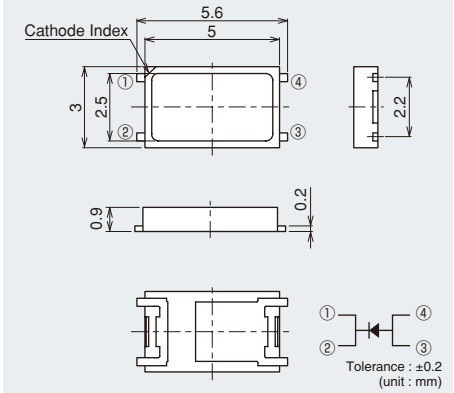
Part No.	Chip Structure	Emitted Color	Color Rendering Index (Ra)	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)										
				Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Voltage VF Typ. (V)	Forward Voltage VF IF (mA)	Reverse Current IR Max. (μA)	Reverse Current IR VR (V)	Chromaticity Coordinates (x,y)	Chromaticity Coordinates IF (mA)	Luminous Intesity Iv Typ. (cd)	Luminous Intesity Iv IF (mA)	Luminous Flux ϕV Min. (lm)	Luminous Flux ϕV Typ. (lm)	Luminous Flux ϕV IF (mA)
☐PSL0205WBEB	InGaN	White (5000K)	80	525	150	300*2	5	-40 to +100	-40 to +100	3.1	60	10	5	(0.345,0.350)	60	5.0	60	—	19	60
☐PSL0205WBEC			90													4.2			16	
☐PSL0205WBED			70													5.5			21	
☐PSL0205WBFB		White (3000K)	80													4.5			17	
☐PSL0205WBFC			90											(0.440,0.405)		3.8			14	
☐PSL0205WBFD			70													4.8			18	
☐PSL0212W50B	InGaN	White (5000K)	83	540	150	300*2	—	-40 to +100	-40 to +100	3.15	120	—	—	(0.345,0.350)	120	—	120	(36)	41	120
☐PSL0212W50C			93															(30.3)	37	
☐PSL0212W50D			75															(36)	44	
☐PSL0212W30B		White (3000K)	80															(30.3)	37	
☐PSL0212W30C			90											(0.440,0.405)				(25.5)	32	
☐PSL0212W30D			74															(30.3)	40	

*1:Ra=over 95 is available. *2:Duty ≤ 1/10, pulse width10ms Max.

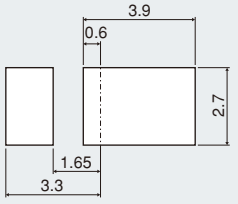
Chromaticity Diagram



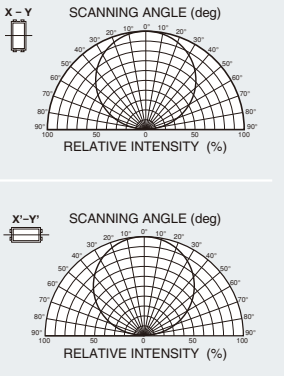
Dimensions



Recommended Solder Pattern

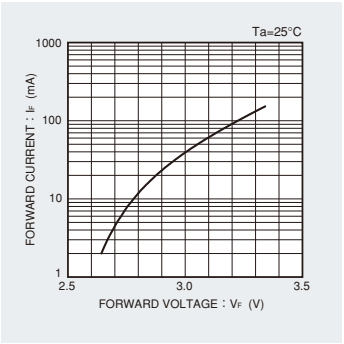


Viewing Angle

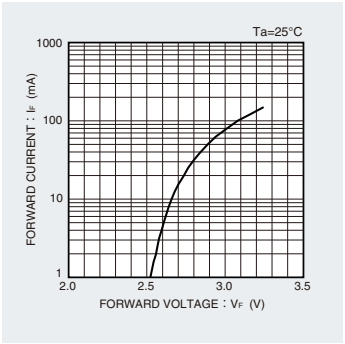


Electrical Characteristics Curves

Forward Voltage-Forward Current

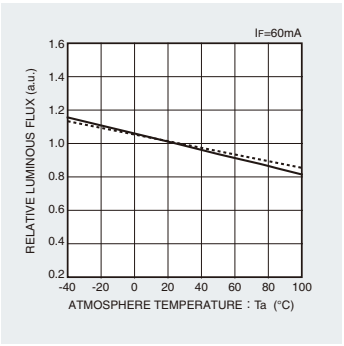


■ ☐PSL0205WBEB
☐PSL0205WBEC
☐PSL0205WBED
☐PSL0205WBFB
☐PSL0205WBFC
☐PSL0205WBFD

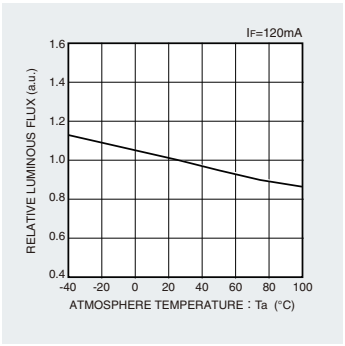


■ ☐PSL0212W50B
☐PSL0212W50C
☐PSL0212W50D
☐PSL0212W30B
☐PSL0212W30C
☐PSL0212W30D

Atmosphere Temperature-Relative Luminous Intensity

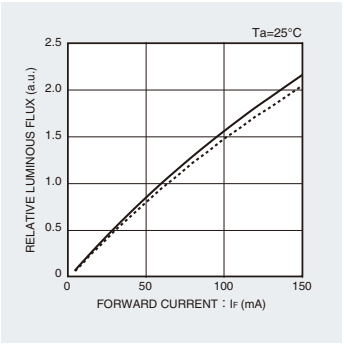


■ ☐PSL0205WBEB
◩ ☐PSL0205WBFB

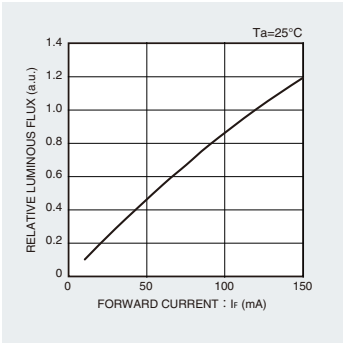


■ ☐PSL0212W50B
☐PSL0212W50C
☐PSL0212W50D
☐PSL0212W30B
☐PSL0212W30C
☐PSL0212W30D

Forward Current-Relative Luminous Intensity

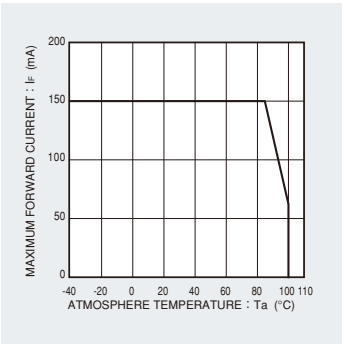


■ ☐PSL0205WBEB
◩ ☐PSL0205WBFB

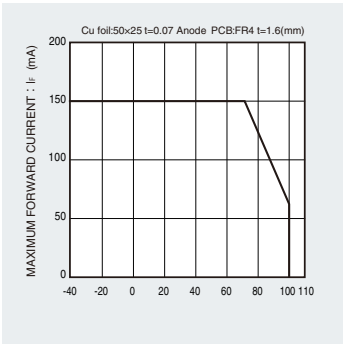


■ ☐PSL0212W50B
☐PSL0212W50C
☐PSL0212W50D
☐PSL0212W30B
☐PSL0212W30C
☐PSL0212W30D

Derating



■ ☐PSL0205WBEB
☐PSL0205WBEC
☐PSL0205WBED
☐PSL0205WBFB
☐PSL0205WBFC
☐PSL0205WBFD



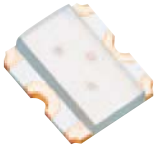
■ ☐PSL0212W50B
☐PSL0212W50C
☐PSL0212W50D
☐PSL0212W30B
☐PSL0212W30C
☐PSL0212W30D

PICOLED™-RGB Series

High Brightness, and Side-view RGB LED in Debut

SMLP34RGB2W / SMLP36RGB2W / MSL0201RGB

SMLP34
(PICOLED™-RGB)



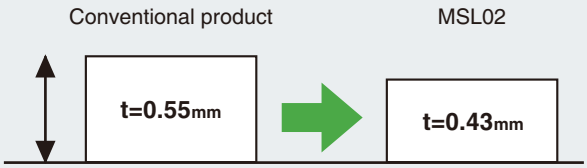
SMLP36

MSL02
(PICOLED™-RGB-Side)

Color Type

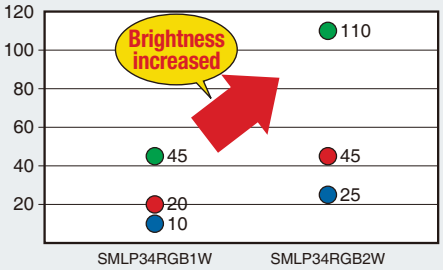
Thin package, side view RGB

Side view type now appeared in the line-up of small package 3 in 1 LED.
Height only 0.43mm, contribute space saving for mobile applications.



Ultra small and high brightness RGB1 LEDs

The luminous intensity improved drastically up keeping small size package by developing high luminance LED die.

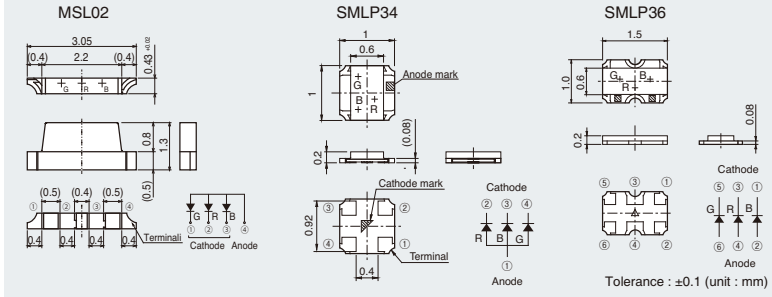


Specifications

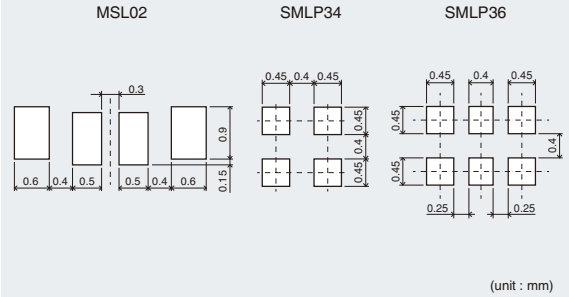
Part No.	Chip Structure	Emitted Color	Absolute Maximum Ratings (Ta=25°C)					Electrical and Optical Characteristics (Ta=25°C)									
			Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Votage VR(V)	Operating Temperature Topr(°C)	Strage Temperature Tstg(°C)	Forward Voltage VF Typ.(V)	IF(mA)	Reverse Current IR Max.(μA)	VR(V)	Dominant Wavelength λD Min.※2 (nm)	Typ. (nm)	Max.※2 (nm)	IF(mA)	Luminous Intensity Iv Min. (mcd)	Typ. (mcd)	IF(mA)
■	AlGaInP	Red						2.1				618	624	630		11	25	
■ **MSL0201RGB** (Side-View)	InGaN	Green	20	100※1	5	-40 to +85	-40 to +100	3.0	5	100	5	519	527	536	5	56	90	5
■		Blue						2.9				466	470	476		11	22	
■	AlGaInP	Red						2.2				619	624	629		14	35	
■ **SMLP34RGB2W** (4 terminals)	InGaN	Green	20	100※1	5	-40 to +85	-40 to +100	3.3	5	10	5	520	527	535	5	56	110	5
■		Blue						3.2				465	470	475		28	45	
■	AlGaInP	Red						2.2				619	624	629		14	35	
■ **SMLP36RGB2W** (6 terminals)	InGaN	Green	20	100※1	5	-40 to +85	-40 to +100	3.3	5	10	5	520	527	535	5	56	110	5
■		Blue						3.2				465	470	475		28	45	

※1 : Duty ≤ 1/20, 1kHz ※2 : Reference

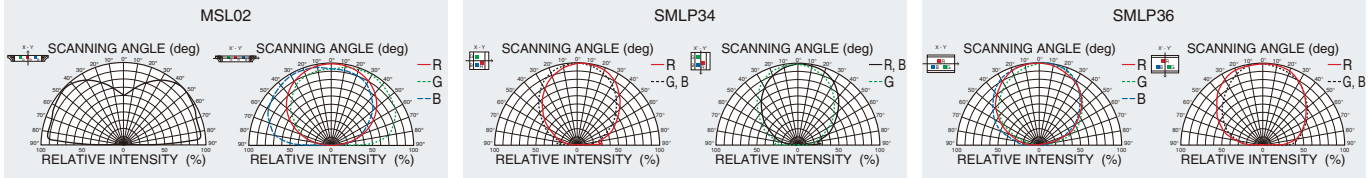
Dimensions



Recommended Solder Pattern



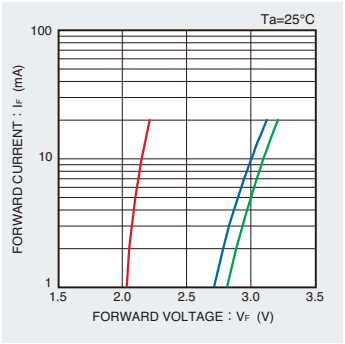
Viewing Angle

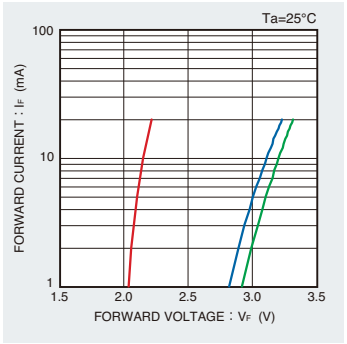


* PICOLED™ is ROHM's pending trademark.

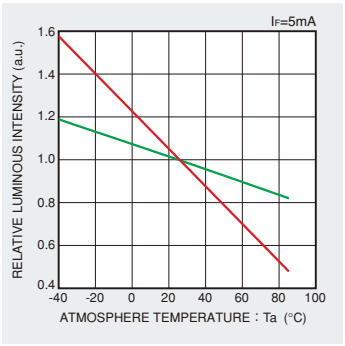
Electrical Characteristics Curves

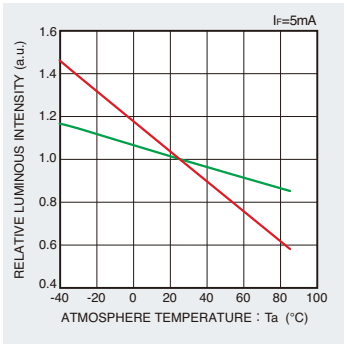
Forward Voltage-Forward Current



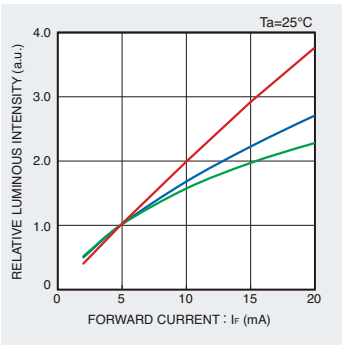


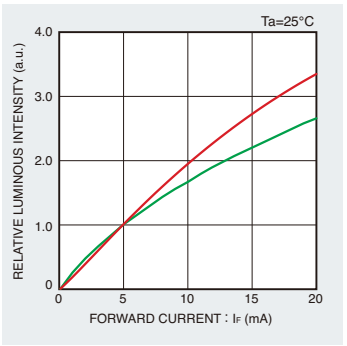
Atmosphere Temperature-Relative Luminous Intensity



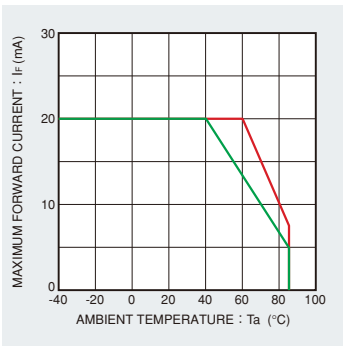


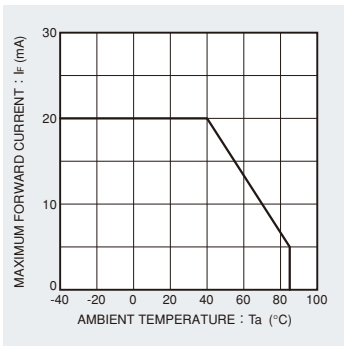
Forward Current-Relative Luminous Intensity





Derating

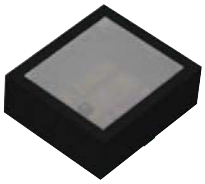




GC-RGB Series

Compact High Brightness RGB LEDs with Reflector

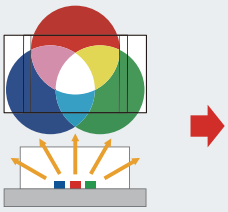
MSL0301RGB / MSL0401RGB



Color Type

High brightness with excellent color mixing

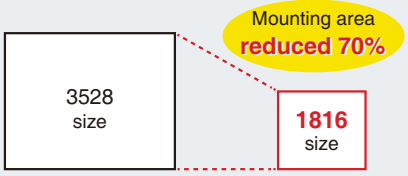
Reflector design increases luminosity at the front while minimizing light leakage from the sides. In addition, die miniaturization technology makes it possible to place the dies closer together for excellent color mixing characteristics.



(Molded type) (Reflector type)

Industry's smallest mounting area

ROHM's 1816-size reflector-type RGB is the smallest in its class, reducing mounting area considerably. The lineup includes white/black reflector models in 4- or 6-pin configurations for broad applicability.

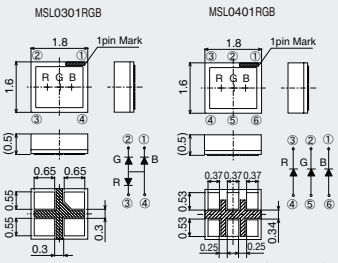


Specifications

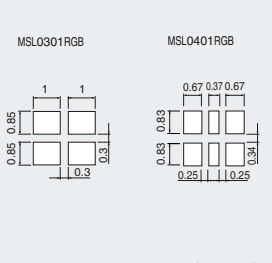
Part No.	Chip Structure	Emitted Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)									
			Power Dissipation ※1 PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Voltage VF		Reverse Current IR		Dominant Wavelength λD				Luminous Iv		
									Typ.(V)	IF(mA)	Max.(μA)	VR(V)	Min.(nm)	Typ.(nm)	Max.(nm)	IF(mA)	Min.(mcd)	Typ.(mcd)	IF(mA)
MSL0301RGBW (4 terminals)	AlGaInP	Red	104	40					2.1		10		618	624	630		220	400	
MSL0401RGBW (6 terminals)	InGaN	Green	120	30	100※2	5	-40 to +85	-40 to +100	3.4	20	100	5	519	527	536	20	360	550	20
		Blue	114						3.3				464	470	476		90	180	
MSL0301RGBB (4 terminals)	AlGaInP	Red	104	40					2.1		10		618	624	630		220	220	
MSL0401RGBB (6 terminals)	InGaN	Green	120	30	100※2	5	-40 to +85	-40 to +100	3.4	20	100	5	519	527	536	20	360	280	20
		Blue	114						3.3				464	470	476		90	90	

※1: Total power dissipation in the case of lighting all 3 colors (reduce by 30% a color)
※2: Duty ≤ 1/5, 1kHz (FR4 50mmx50mm substrate, t=1.6mm), copper foil t=0.07mm)

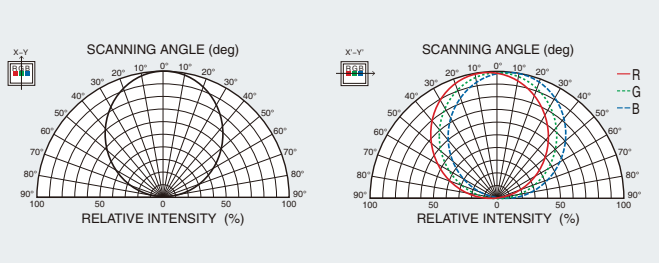
Dimensions



Recommended Solder Pattern

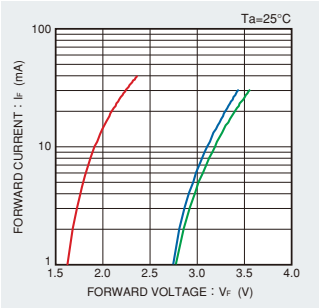


Viewing Angle



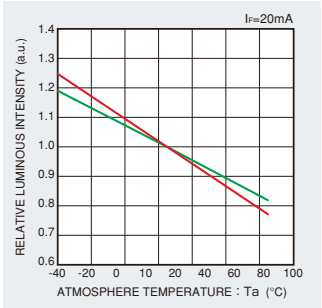
Electrical Characteristics Curves

Forward Voltage-Forward Current



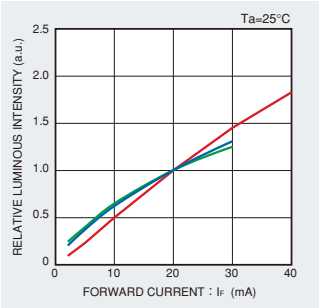
■ MSL0301RGBW(R) MSL0401RGBW(R) MSL0301RGBB(R) MSL0401RGBB(R)
■ MSL0301RGBW(G) MSL0401RGBW(G) MSL0301RGBB(G) MSL0401RGBB(G)
■ MSL0301RGBW(B) MSL0401RGBW(B) MSL0301RGBB(B) MSL0401RGBB(B)

Atmosphere Temperature-Relative Luminous Intensity



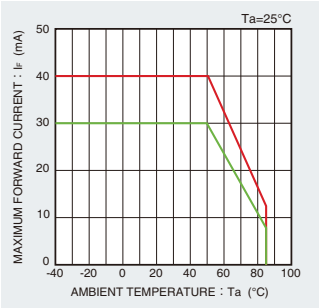
■ MSL0301RGBW(R) MSL0401RGBW(R) MSL0301RGBB(R) MSL0401RGBB(R)
■ MSL0301RGBW(G) MSL0401RGBW(G) MSL0301RGBB(G) MSL0401RGBB(G)
■ MSL0301RGBW(B) MSL0401RGBW(B) MSL0301RGBB(B) MSL0401RGBB(B)

Forward Current-Relative Luminous Intensity



■ MSL0301RGBW(R) MSL0401RGBW(R) MSL0301RGBB(R) MSL0401RGBB(R)
■ MSL0301RGBW(G) MSL0401RGBW(G) MSL0301RGBB(G) MSL0401RGBB(G)
■ MSL0301RGBW(B) MSL0401RGBW(B) MSL0301RGBB(B) MSL0401RGBB(B)

Derating

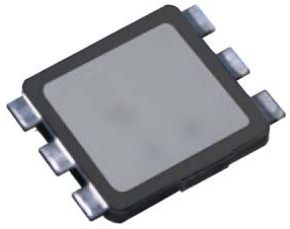


■ MSL0301RGBW(R) MSL0401RGBW(R) MSL0301RGBB(R) MSL0401RGBB(R)
■ MSL0301RGBW(G) MSL0401RGBW(G) MSL0301RGBB(G) MSL0401RGBB(G)
■ MSL0301RGBW(B) MSL0401RGBW(B) MSL0301RGBB(B) MSL0401RGBB(B)

SRGB-Black

More Vivid RGB LEDs

SMLV36RGB1B



Color Type

New package technology offering more vivid emitting color

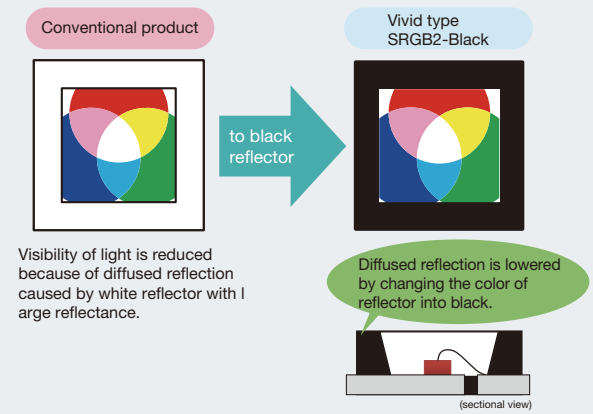
Making more vivid contrast lowering diffused reflection, by using black reflector.
Also the black package have good effect for display usage.
Making LEDs invisible when it is off, and showing lighted LED more vivid.

Dot Matrix Example

Using white reflector

Using black reflector

New package technology producing vivd color

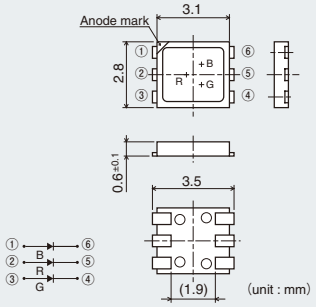


Specifications

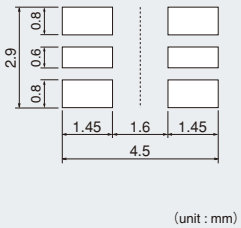
Part No.	Chip Structure	Emitted Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)										
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Votage VF Typ.(V)	IF(mA)	Reverse Current IR Max.(μA)	VR(V)	Dominant Wavelength λD Min.(nm)	Typ.(nm)	Max.(nm)	IF(mA)	Luminous Iv Min.(mcd)	Typ.(mcd)	IF(mA)
	AlGaInP	Red		50					2.1				618	624	630		220	360	
SMLV36RGB1B	InGaN	Green	130*1	40	100*2	5	-40 to +85	-40 to +100	3.4	20	10	5	519	527	536	20	360	630	20
		Blue							3.3				464	470	476		140	250	

*1: Total power dissipation in the case of lighting all 3 colors (reduce by 30% a color)
*2: Duty ≤ 1/20, 1ms(FR4 50mmx50mm substrate, t=1.6mm), copper foil t=0.07mm)

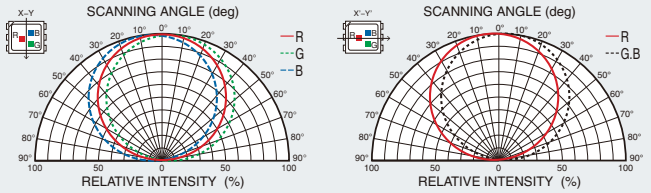
Dimensions



Recommended Solder Pattern

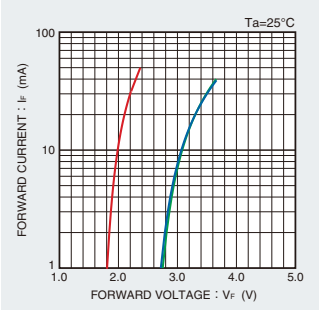


Viewing Angle



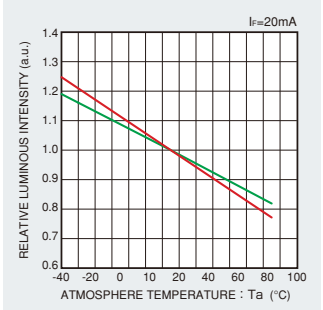
Electrical Characteristics Curves

Forward Voltage-Forward Current



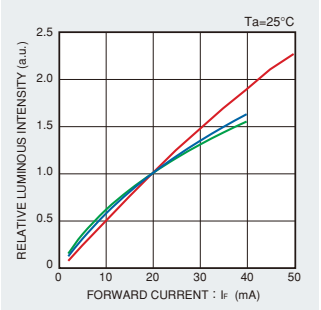
SMLV36RGB1B(R)
SMLV36RGB1B(G)
SMLV36RGB1B(B)

Atmosphere Temperature-Relative Luminous Intensity



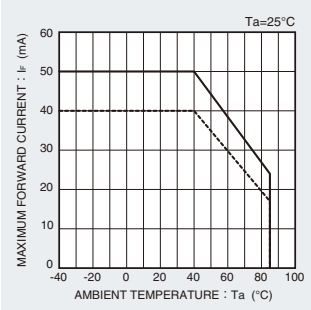
SMLV36RGB1B(R)
SMLV36RGB1B(G,B)

Forward Current-Relative Luminous Intensity



SMLV36RGB1B(R)
SMLV36RGB1B(G)
SMLV36RGB1B(B)

Derating



SMLV36RGB1B(R)
SMLV36RGB1B(G,B)

SRGB-S Series

High Luminosity Side View LEDs

MSL0101 series / MSL0102 series

MSL0101RGB

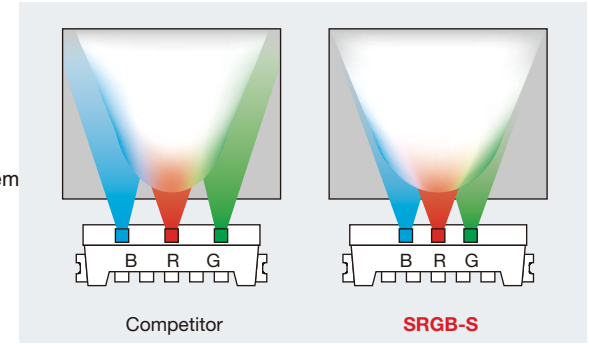
Color Type R G B

MSL0102WB

Color Type WB

Excellent color mixing characteristics ensure superior color reproduction

The side view configuration is suitabl e for waveguid e applications.
Use in combination with top view types for easy color matching.
In addition, original mounting technology ensures excellent color mixing, making them ideal for illumination and lighting devices.



High Luminosity White LED

White LED is newly added in the line up of high luminosity side view package.
Available to select the usage of RGB and white LED.
High power side-view LED with 60mS(max 100mA), realizing typ. 3.5cd.
Suitable for customers looking for brighter white LED.
Also, this product is high ESD with built-in diode.

Specifications(RGB)

Part No.	Chip Structure	Emitted 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 Votage VF		Reverse Current IR		Dominant Wavelength λD				Luminous Iv		
									Typ.(V)	IF(mA)	Max. (μA)	VR(V)	Min. (nm)	Typ. (nm)	Max. (nm)	IF(mA)	Min. (mcd)	Typ. (mcd)	IF(mA)
■	AlGaInP	Red	400	50	100*	5	-40 to +85	-40 to +100	2.1	20	10	5	619	624	629	20	450	700	20
■ **MSL0101RGB**	InGaN	Green		40					3.3		-	-	520	527	535		710	1200	
■		Blue							3.2				465	470	475		220	400	

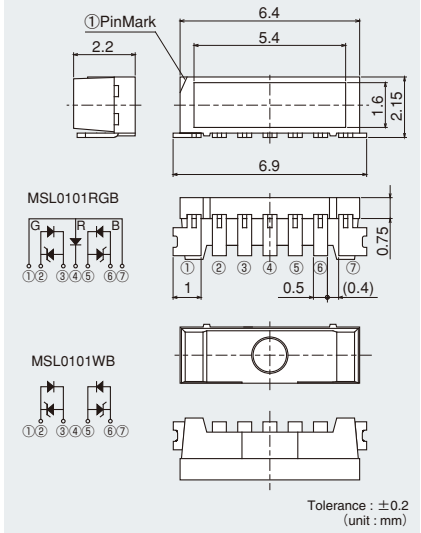
*Duty1/20, 1ms

Specifications(White)

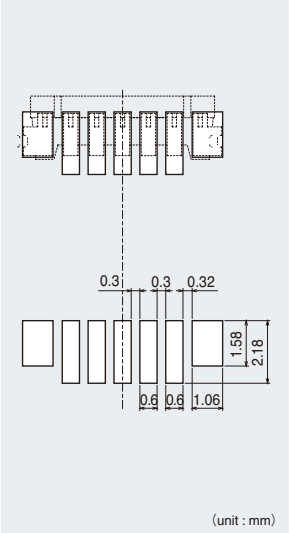
Part No.	Chip Structure	Emitted Color	Absolute Maximum Ratings (Ta=25°C)						Electrical and Optical Characteristics (Ta=25°C)								
			Power Dissipation PD(mW)	Forward Current IF(mA)	Peak Forward Current IFP(mA)	Reverse Voltage VR(V)	Operating Temperature Topr(°C)	Storage Temperature Tstg(°C)	Forward Votage VF		Reverse Current IR		Chromaticity Coordinates (x, y)		Luminous Iv		
									Typ.(V)	IF(mA)	Max. (μA)	VR(V)		IF(mA)	Min. (mcd)	Typ. (mcd)	IF(mA)
□ **MSL0102WB**	InGaN	White	400	100	100*	5	-40 to +85	-40 to +100	3.2	60	100	5	(0.30, 0.28)	60	3300	5800	60

*Duty1/10, 1kHz

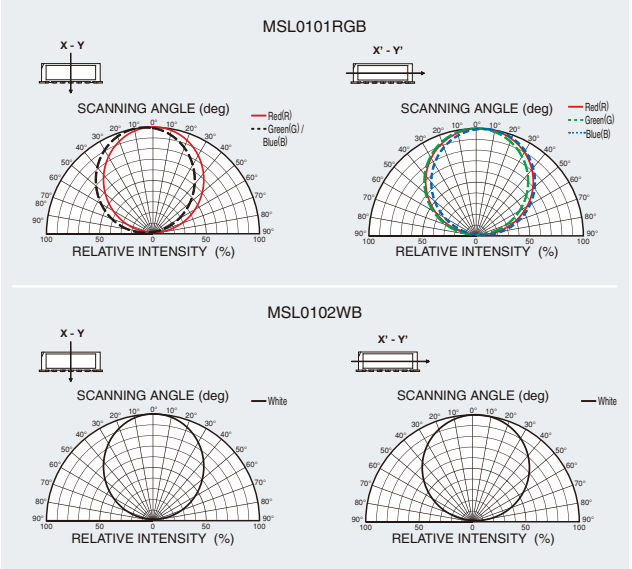
Dimensions



Recommended Solder Pattern

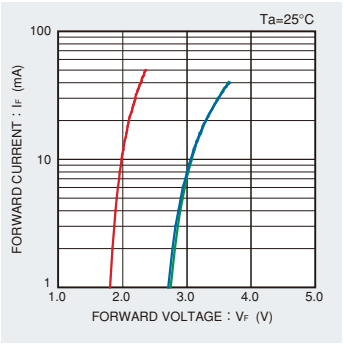


Viewing Angle

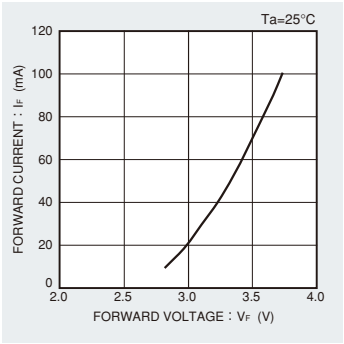


Electrical Characteristics Curves

Forward Voltage-Forward Current

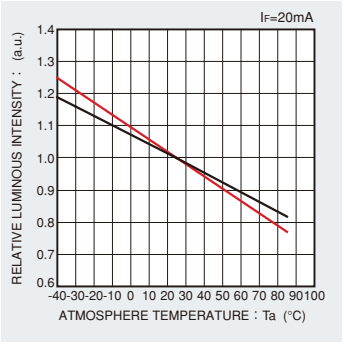


■ MSL0101RGB(R)
■ MSL0101RGB(G)
■ MSL0101RGB(B)

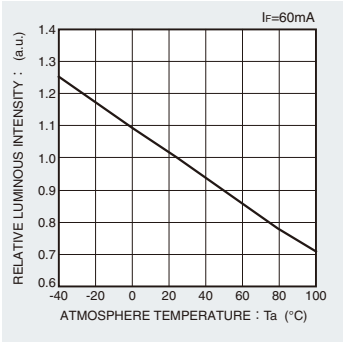


■ □MSL0102WB

Atmosphere Temperature-Relative Luminous Intensity

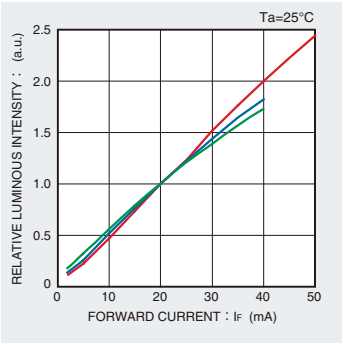


■ MSL0101RGB(R)
■ MSL0101RGB(G)
■ MSL0101RGB(B)

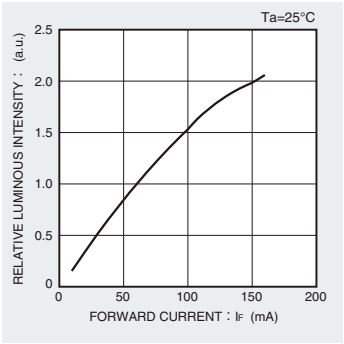


■ □MSL0102WB

Forward Current-Relative Luminous Intensity

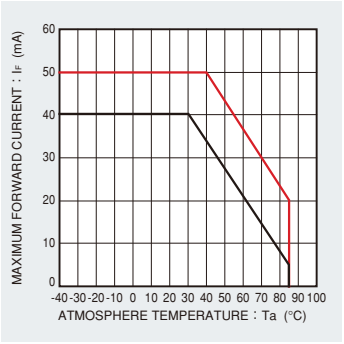


■ MSL0101RGB(R)
■ MSL0101RGB(G)
■ MSL0101RGB(B)

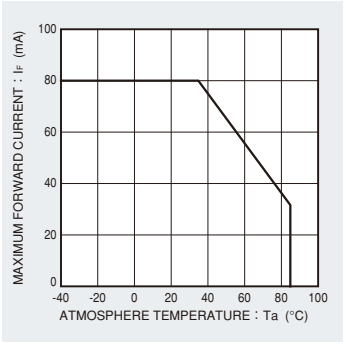


■ □MSL0102WB

Derating



■ MSL0101RGB(R)
■ MSL0101RGB(G)
■ MSL0101RGB(B)



■ □MSL0102WB

Lamp

Wide Viewing Angle Oval Type Lamp LEDs

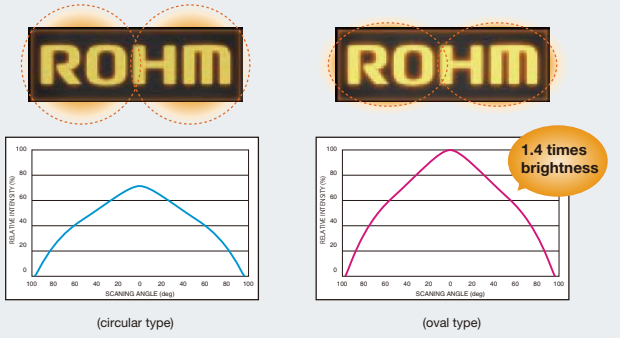
SLD430 / SLI-430 series

Color Type: U D Y M B WB

Wide viewing angle made possible by Rohm's original lens design

Use of oval lens made wide viewing angle on behalf of narrow viewing angle at vertical.
Therefore it has vivid view from the side, and is suitable for displays.
Also it is about 1.4 times brighter than the product of same viewing angle, for it condenses the light to the cross direction.

Example of indicator



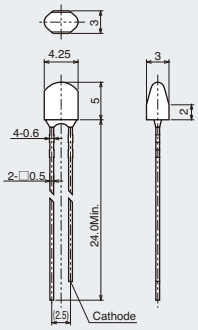
(circular type) (oval type)

Specifications

Part No.	Chip Structure	Emitted Color	Absolute Maximum Ratings (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)	Electrical and Optical Characteristics (Ta=25°C) Forward Voltage VF Typ.(V)	IF(mA)	Reverse Current IR Max.(μA)	VR(V)	Dominant Wavelength λD Typ.(nm)	IF(mA)	Luminous Iv Min.(mcd)	Typ.(mcd)	IF(mA)
SLI-430U2R	AlGaInP	Red	75	30	100*	9	-40 to +85	-40 to +100	2.0	20	10	9	620	20	220	400	20
SLI-430DU		Orange											605			470	
SLI-430Y2U		Yellow							2.1				590		330	500	
SLI-430MG		Yellowish Green											570		68	120	
SLD430BD2W	InGaN	Blue	120			5			3.2			5	470		330	560	
SLD430WBD2PT		White					-20 to +80	-30 to +100					(0.31, 0.31)		680	1850	

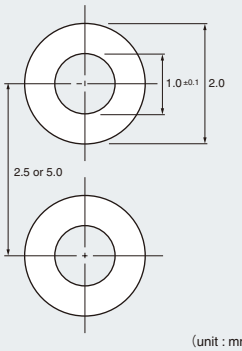
*Duty1/10, 1kHz

Dimensions



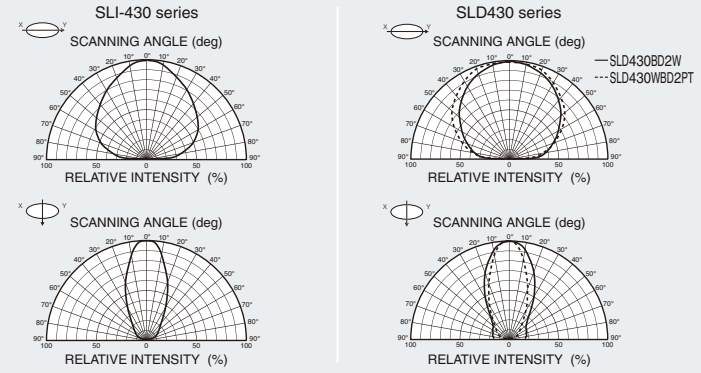
(unit : mm)

Recommended Solder Pattern



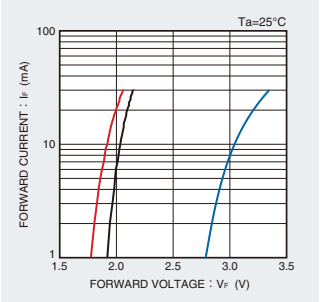
(unit : mm)

Viewing Angle



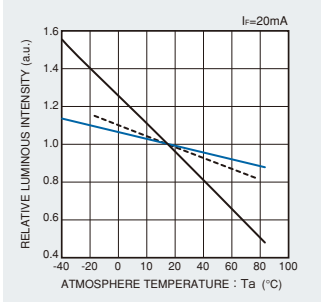
Electrical Characteristics Curves

Forward Voltage-Forward Current



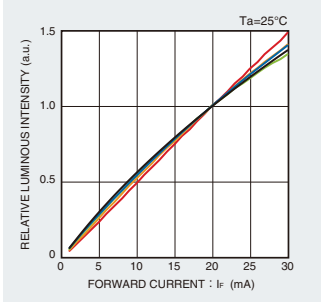
SLI-430U2R
SLI-430DU
SLI-430Y2U
SLI-430MG
SLD430BD2W
SLD430WBD2PT

Atmosphere Temperature-Relative Luminous Intensity



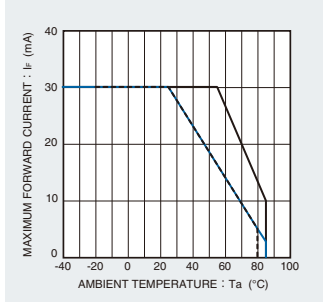
SLI-430U2R
SLI-430DU
SLI-430Y2U
SLI-430MG
SLD430BD2W
SLD430WBD2PT

Forward Current-Relative Luminous Intensity



SLI-430U2R
SLI-430DU
SLI-430Y2U
SLI-430MG
SLD430BD2W
SLD430WBD2PT

Derating



SLI-430U2R
SLI-430DU
SLI-430Y2U
SLI-430MG
SLD430BD2W
SLD430WBD2PT

Lamp

High Luminosity Wide Viewing Angle Lamp LEDs

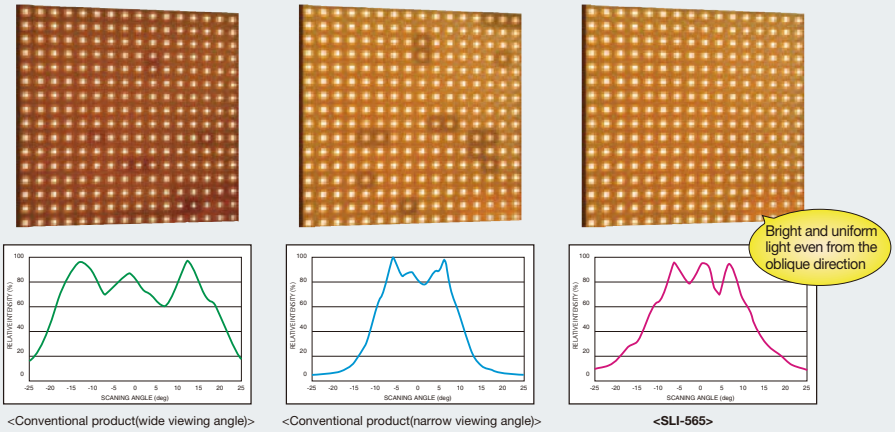
SLI-565 series

Color Type Y

High luminosity LED of viewing angle 25°

Viewing angle 25° type is newly added in the Rohm's lamp LEDs.

Dot Matrix Examples(vision of oblique direction)



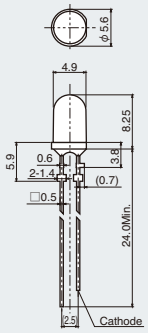
<Conventional product(wide viewing angle)> <Conventional product(narrow viewing angle)> **<SLI-565>**

Specifications

Part No.	Chip Structure	Emitted 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 Votage VF Typ.(V)	IF(mA)	Reverse Current IR Max.(μA)	VR(V)	Dominant Wavelength λD Typ.(nm)	IF(mA)	Luminous Iv Min.(mcd)	Typ.(mcd)	IF(mA)
SLI-565Y5C	AlGaInP	Yellow	125	50	200*	9	-40 to +85	-40 to +100	2.0	20	10	9	590	20	1500	3400	20

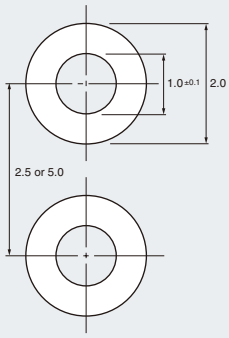
*Duty1/10, 1kHz

Dimensions



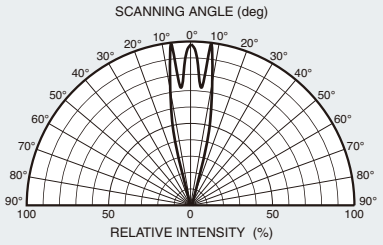
(unit : mm)

Recommended Solder Pattern



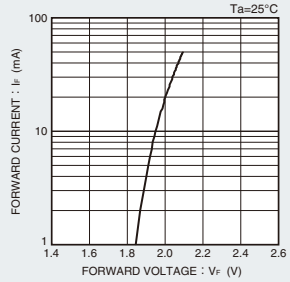
(unit : mm)

Viewing Angle



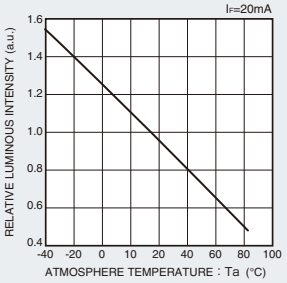
Electrical Characteristics Curves

Forward Voltage-Forward Current



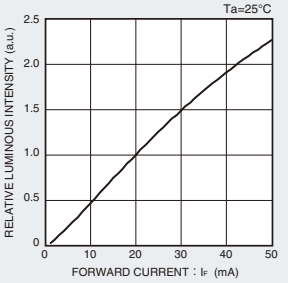
■ SLI-565Y5C

Atmosphere Temperature-Relative Luminous Intensity



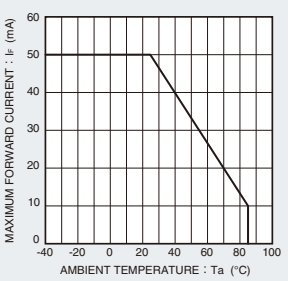
■ SLI-565Y5C

Forward Current-Relative Luminous Intensity



■ SLI-565Y5C

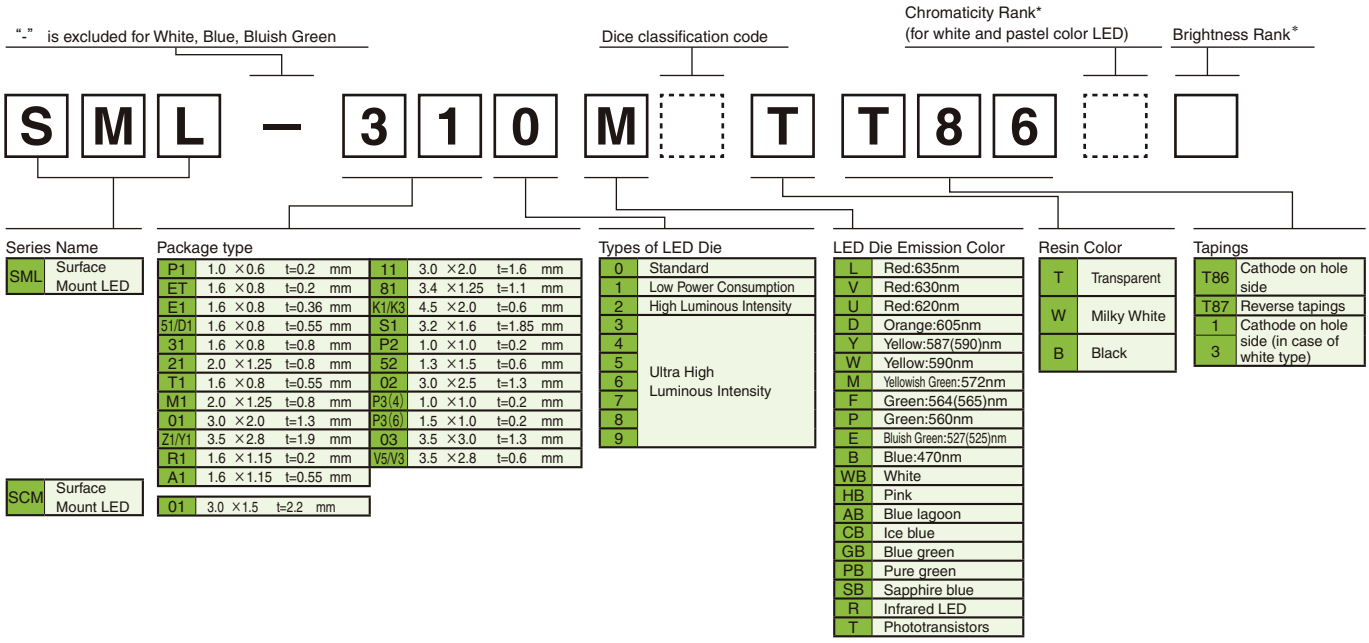
Derating

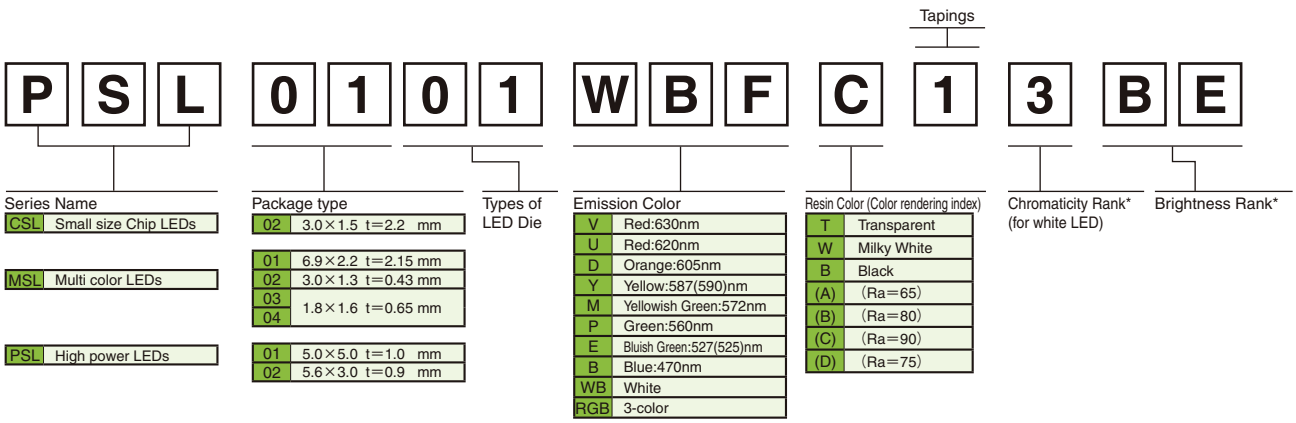


■ SLI-565Y5C

■Part No. Structure〈SMD LEDs〉

・Appoint by part names when ordering
・Refer to each category below for details of part No. structure
・Skip if there is a blank space
＊Part names are appointed indvidually per each ranks.
＊Please refer to specifications sheet for details.





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