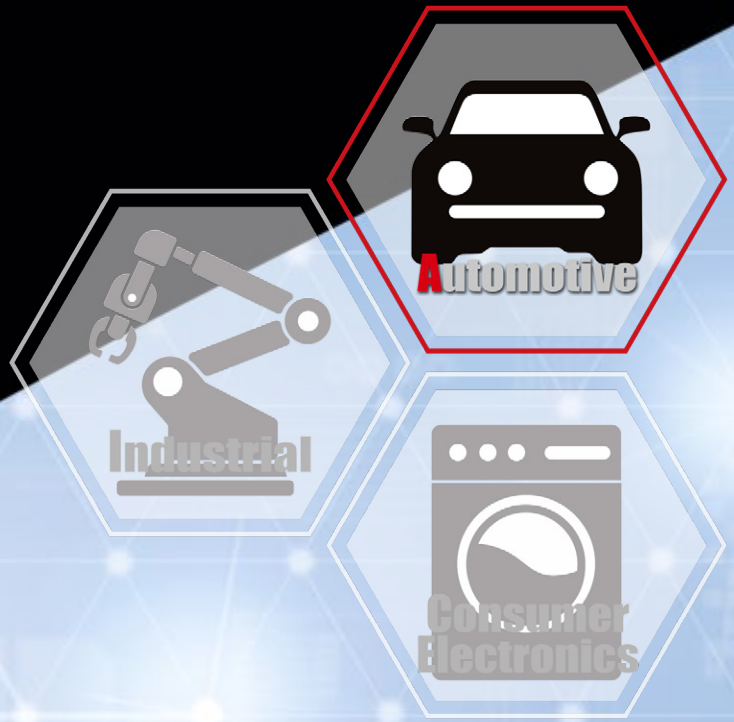
Featured Products

Electronics for the Future

ROHM SEMICONDUCTOR

Achieve accurate your image color

RGB Chip LED for Automotive Interiors



SMLVN6RGBFU

Outline of RGB Chip LED for Automotive Interiors SMLVN6RGBFU

The SMLVN6RGBFU RGB chip LED utilizes an in-house element that greatly reduces chromaticity variations.
This allows for precise color matching, making it ideal as a light source for automotive interior applications where the image color is important, such as instrument clusters and decorative lighting.

Features

- **Utilizes In-house produced elements to achieve a 3-Color RGB LED with significantly reduced chromaticity variation**

①In-house construction minimizes the emission characteristics range
②Optimized by taking in the combination of each RGB element rank
③Chromaticity guaranteed through white lighting (classification and taping by rank)

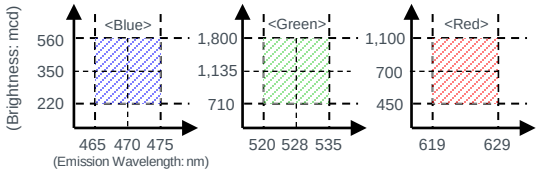
- **<Special Support> Allows for more precise adjustment of image color**

④Simulation supports accurate matching to image color

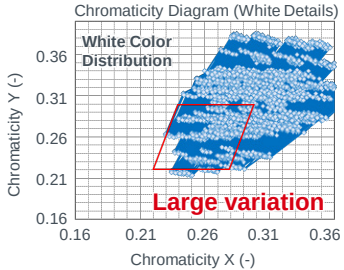
New 3-Color LED Minimizes Chromaticity Variation SMLVN6RGBFU

General RGB LED

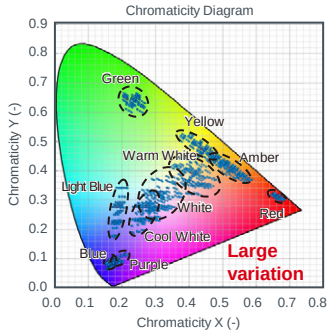
<Element>
Utilizes elements within the general luminous characteristics range
No consideration of element rank combinations



<Finished Product>
No chromaticity guarantee due to white light

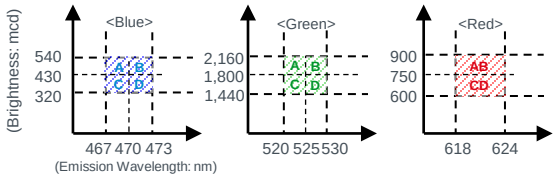


<Color Development Image of Finished Product>

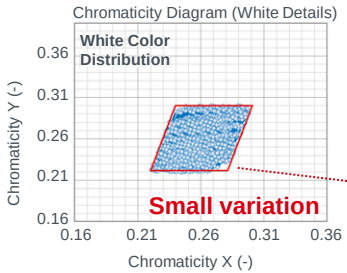


ROHM SMLVN6RGBFU

<Element>
Utilizes in-house elements with a narrower luminous characteristics range
Specifies combinations of input element ranks (e.g. A+A+AB)

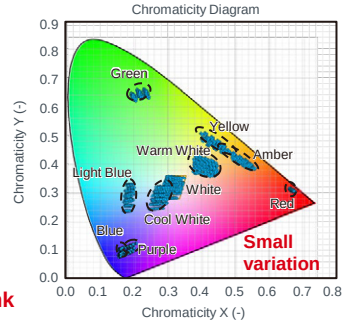


<Finished Product>
Chromaticity adjustment via white light



Taping by chromaticity rank

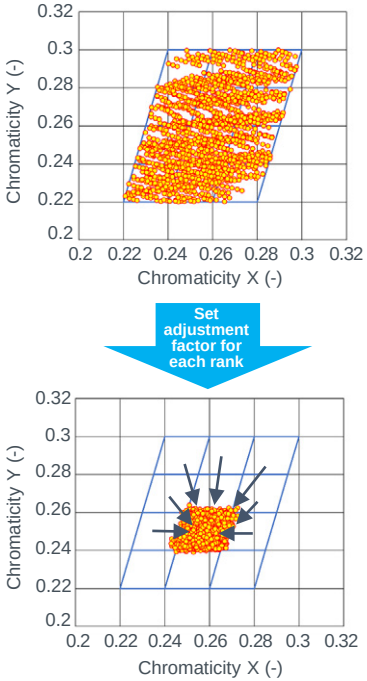
<Color Development Image of Finished Product>



<Special Support>
Allows for More Precise Adjustment of Image Color① SMLVN6RGBFU

Presentation of lighting conditions by color simulation

Supports accurate color matching



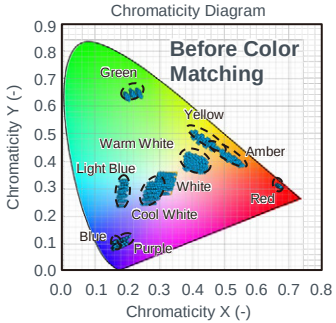
Example of Coefficient Adjustment for Collecting G Rank

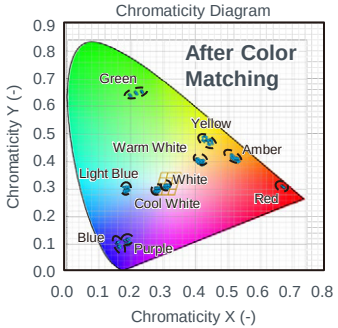
Rank	B Adjustment Ratio (%)	G Adjustment Ratio (%)	R Adjustment Ratio (%)
A	126.7	86.6	129.5
B	110.7	89.8	125.2
C	96.5	93.8	121.2
D	83.5	99.3	116.0
E	132.6	90.8	108.8
F	115.2	94.9	104.4
G	100.0	100.0	100.0
H	86.5	106.9	94.9
J	139.0	95.7	93.3
K	120.1	100.8	89.0
L	104.2	107.0	85.0
M	90.0	115.6	80.5

*Adjustment factor: Multiplied by the PWM duty value

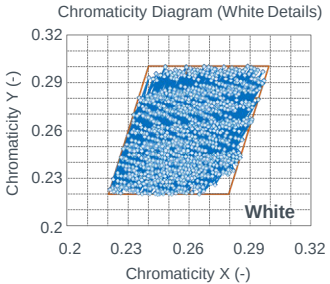
<Special Support>
Allows for More Precise Adjustment of Image Color① SMLVN6RGBFU

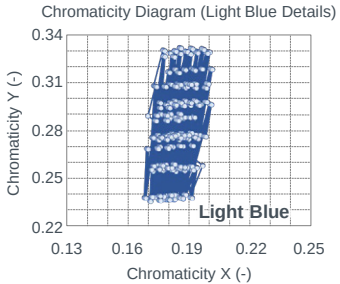
Example of accurate color matching

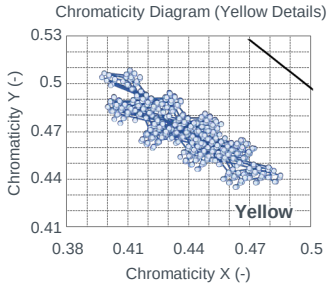




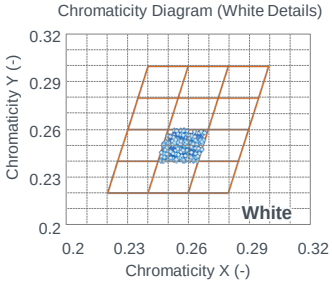
Example Color Matching (Magnified)

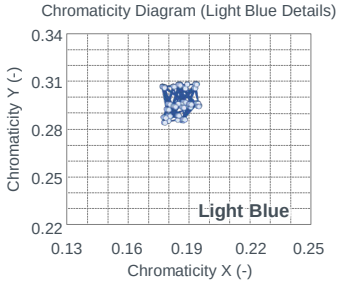


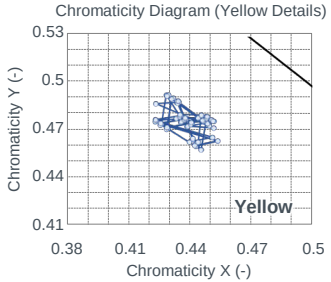




Adjust to target color







Specifications: RGB Chip LED for Automotive Interiors SMLVN6RGBFU

Emitting Color	Part No.	Absolute Max Ratings (Ta=25°C)						Electrical-Optical Characteristics (Ta=25°C)									
		Power Dissipation P_D (mW)	Forward Current I_F (mA)	Peak Forward Current I_{FP} (mA)	Reverse Voltage V_R (V)	Operating Temp. Topr (°C)	Storage Temp. Tstg (°C)	Forward Voltage V_F		Reverse Current I_R		Dominant Wavelength λ_D		Luminous Intensity I_V (mcd)			
								Typ (V)	I_F (mA)	Max (μA)	V_R (V)	Typ (nm)	I_F (mA)	Min	Typ	Max	I_F (mA)
Red	New SMLVN6RGBFU	400	50	100	5	-40 to +100	-40 to +100	2.1	20	10	5	621	20	600	750	900	20
Green			40	100	-			3.3	20	-	-	525	20	1,440	1,800	2,160	20
Blue			40	100	-			3.3	20	-	-	470	20	320	430	540	20

Click on the icon to access the product page and the icon to view the datasheet on ROHM's website.

Conditions of I_{FP}: Pulse width≤1ms, Duty≤1/20

Notice

- The information contained in this document is intended to introduce ROHM Group (hereafter referred to as ROHM) products. When using ROHM products, please verify the latest specifications or datasheets before use.
- ROHM does not warrant that the information contained herein is error-free. ROHM shall not be in any way responsible or liable for any damages, expenses, or losses incurred by you or third parties resulting from errors contained in this document.
- The information and data described in this document, including typical application circuits, are examples only and are not intended to guarantee to be free from infringement of third parties intellectual property or other rights. ROHM does not grant any license, express or implied, to implement, use, or exploit any intellectual property or other rights owned or controlled by ROHM or any third parties with respect to the information and data contained herein.
- When exporting ROHM products or technologies described in this document to other countries, you must abide by the procedures and provisions stipulated in all applicable export laws and regulations, such as the Foreign Exchange and Foreign Trade Act and the US Export Administration Regulations, and follow the necessary procedures in accordance with these provisions.
- No part of this document may be reprinted or reproduced in any form by any means without the prior written consent of ROHM.
- The information contained in this document is current as of May 2023 and is subject to change without notice.

ROHM SEMICONDUCTOR

ROHM Co.,Ltd.
21 Saiin Mizosaki-cho, Ukyo-ku,
Kyoto 615-8585 Japan

www.rohm.com

【O_173】Catalog No.65OP7352E 05.2023 PDF