

# Selection Guide



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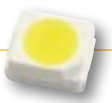
## [High-luminosity white chip LEDs for lighting applications]

High brightness and luminous intensity, industry-leading performance levels, compact packages: Sharp's high-luminosity white chip LEDs bring clear benefits in a wide variety of lighting applications. The sizes and performance details of these LEDs are listed in the tables below.


## [Standard package]

Compliant with ENERGY STAR® requirements in terms of CRI and colour temperature.

Package type size	Type number	Outline dimensions (LxWxD) in mm	Colour range/ wavelength [x, y]	Colour temperature [K]	CRI TYP. [Ra]	Luminous flux (typ.) [lm]	Luminous intensity Iv (typ.) [mcd]	V <sub>F</sub> [V]	I <sub>F</sub> [mA]	T <sub>opr</sub> [°C]
 3228 (PLCC 2) 	GM5SAE27P0A	3.2x2.8x1.9	(0.458, 0.410) Warm white	2,700	85	4.4	1,900	3.2	20	-30 to +85
	GM5SAE30P0A	3.2x2.8x1.9	(0.434, 0.404) Warm white	3,000	85	4.6	2,000	3.2	20	-30 to +85
	GM5SAE35P0A	3.2x2.8x1.9	(0.407, 0.392) Natural white	3,500	83	4.7	2,100	3.2	20	-30 to +85
	GM5SAE40P0A	3.2x2.8x1.9	(0.382, 0.380) Natural white	4,000	83	5.0	2,100	3.2	20	-30 to +85
	GM5SAE45P0A	3.2x2.8x1.9	(0.361, 0.366) Pure white	4,500	83	5.2	2,200	3.2	20	-30 to +85
	GM5SAE50P0A	3.2x2.8x1.9	(0.345, 0.355) Pure white	5,000	83	5.3	2,200	3.2	20	-30 to +85
	GM5SAE57P0A	3.2x2.8x1.9	(0.329, 0.342) Pure white	5,700	80	5.3	2,200	3.2	20	-30 to +85
	GM5SAE65P0A	3.2x2.8x1.9	(0.312, 0.328) Cool white	6,500	80	5.2	2,200	3.2	20	-30 to +85

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 3228 (PLCC 2)	GM5BW96382A	3.2x2.8x1.9	(0.31, 0.31) Cool white	6,800		5.0	2,000	3.2	20	-30 to +100
	GM5BW96385A	3.2x2.8x1.9	(0.34, 0.36) Pure white	5,200		5.5	2,300	3.2	20	-30 to +100
	GM5BW96387A	3.2x2.8x1.9	(0.29, 0.28) Cool white	10,000	60	5.0	2,000	3.2	20	-30 to +100

## [3-chip package]

Package type size	Type number	Outline dimensions (LxWxD) in mm	Colour range/ wavelength [x, y]	Colour temperature [K]	CRI (typ.) [Ra]	Luminous flux (typ.) [lm]	Luminous intensity Iv (typ.) [mcd]	V <sub>F</sub> [V]	I <sub>F</sub> [mA]	T <sub>opr</sub> [°C]
 3228 (PLCC 4)	GM5BW97330A	3.2x2.8x1.9 3 chip	(0.338, 0.356) Pure white	5,300	62	17.0	6,400	3.2	20	-30 to +100
	GM5BW97331A	3.2x2.8x1.9 3 chip	(0.335, 0.344) Pure white	5,300	62	17.0	6,400	3.2	20	-30 to +100
	GM5BW97332A	3.2x2.8x1.9 3 chip	(0.312, 0.311) Cool white	6,700		15.0	5,800	3.2	20	-30 to +100
	GM5BW97333A	3.2x2.8x1.9 3 chip	(0.283, 0.262) Ultra-cool white	11,500		12.0	5,100	3.2	20	-30 to +100





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## [High-luminosity colour chip LED]

A high-luminosity colour chip LED from Sharp can be controlled individually to display various colours, including white.

## [RGB standard package]

Package type size	Type number	Outline dimensions (L x W x D) in mm	Colour range / wavelength [nm]	Luminous intensity (typ.) [mcd]	V <sub>F</sub> [V]	I <sub>F</sub> [mA]	I <sub>Reverse</sub> [μA]	V <sub>Reverse</sub> [V]	T <sub>opr</sub> [°C]
3228 (PLCC 6) 	GM5WA94315A	3.2 x 2.8 x 1.9	626 Red 	680	2.2	20	50	5	-30 to +85
			525 Green 	1,500	3.3	20	50	5	-30 to +85
			465 Blue 	450	3.2	20	50	5	-30 to +85

Subject to alterations and modifications.  
For comprehensive product information please refer to the product specifications.

Whatever your application, Sharp RGB LEDs will not only meet your requirements but even inspire you to more creative and indeed unique designs.

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Sharp Microelectronics Europe a division of Sharp Electronics (Europe) GmbH  
SonninstraÙe 3 | 20097 Hamburg | Germany | Tel.: +49-18 05-07 35 07\* | Fax: +49-40-23 76 22 32 | [www.sharpleds.eu](http://www.sharpleds.eu)

\*Calls cost € 0.14 per minute from German landlines and no more than € 0.42 per minute from the German mobile network.