

Product Information

DOUBLEDOME LED Series

Status: May 2011



[Applications]

If you need low-power LEDs for general light sources in residential or commercial buildings, industrial facilities or warehouses, high-efficiency DoubleDome LEDs from Sharp are the ideal solution where uniform bright light is essential. These SMT-type LEDs are suitable for compact recessed and surface-mounted luminaires. Typically, applications will come from the following areas:

- Ceiling luminaires
- Shop lighting
- Photography
- Medical technology
- LCD backlighting
- Retrofit lamps

[Main features]

- Available in a 0.3W (2 die), 0.5W (3 die) or 1W (6 die) version
- Precise dome-shaped light extraction encapsulation
- High-grade ceramic SMD package
- High CRI of min. 80 for all CCT ranges
- ENERGY STAR®/ANSI-compliant binning structure
- Drive currents from 100 mA to 350 mA
- Luminous flux (typ.) of up to 110 lm
- Luminous efficacy of up to 103 lm/W @ 100 mA
- Compact dimensions: 2.8 x 2.8 x 1.9 mm (0.3W & 0.5W), 3.2 x 3.2 x 2.1 mm (1W)
- Eight different colour temperatures for the 0.3W & 0.5W models: warm (2,700K and 3,000K), natural (3,500K, 4,000K and 4,500K), pure (5,000K and 5,700K) and cool (6,500K)
- Five different colour temperatures for the 1W model: warm (3,000K), natural (3,500K and 4,000K), pure (5,000K) and cool (6,500K)

[Benefits]

- Brighter illumination of desired area thanks to optimised light extraction; reduced need for secondary optics
- Extremely compact construction for ease of design in space-restricted applications
- Similar performance to conventional fluorescent lamps in efficiency, colour temperature and CRI terms
- ANSI standard and ENERGY STAR® requirements met or exceeded with regard to CCT range & CRI
- Low thermal resistance of ceramic substrate for efficient thermal management and high levels of heat release and reliability
- Long lifetime: 40,000 hrs at 80° package temperature

Colour options / DOUBLEDOME LED line-up

DOUBLEDOME 1W Series **NEW**

Model number CRI 80+	LED colour	Number of dies	Colour temp. [K]	Colour range coordinates (CIE 1931)		Luminous flux (typ.)* [lm]	CRI		Luminous efficacy* [lm/W]
				X	Y		(min.) [Ra]	(typ.) [Ra]	
GM2AA30QKBC	Warm white	6	3,000	0.434	0.403	96	80		87
GM2AA35QKBC	Natural white	6	3,500	0.407	0.392	101	80		92
GM2AA40QKBC	Natural white	6	4,000	0.382	0.380	104	80		94
GM2AA50QKBC	Pure white	6	5,000	0.345	0.355	110	80		100
GM2AA65QKBC	Cool white	6	6,500	0.312	0.328	104	80		94

* at 350 mA and 3.2V

DOUBLEDOME 0.5W Series (2nd generation) **NEW**

Model number CRI 80+	LED colour	Number of dies	Colour temp. [K]	Colour range coordinates (CIE 1931)		Luminous flux (typ.)* [lm]	CRI		Luminous efficacy* [lm/W]
				X	Y		(min.) [Ra]	(typ.) [Ra]	
GM2BB30QK0C	Warm white	3	3,000	0.434	0.403	41	80	83	89
GM2BB35QK0C	Natural white	3	3,500	0.407	0.392	43	80	83	93
GM2BB40QK0C	Natural white	3	4,000	0.382	0.380	45	80	83	97
GM2BB50QK0C	Pure white	3	5,000	0.345	0.355	47	80	83	102
GM2BB65QK0C	Cool white	3	6,500	0.312	0.328	44	80	83	96

* at 150 mA and 3.05V

DOUBLEDOME 0.5W Series (1st generation)

Model number CRI 80+	LED colour	Number of dies	Colour temp. [K]	Colour range coordinates (CIE 1931)		Luminous flux (typ.)* [lm]	CRI		Luminous efficacy* [lm/W]
				X	Y		(min.) [Ra]	(typ.) [Ra]	
GM2BB27BM0C	Warm white	3	2,700	0.458	0.410	34	80	85	69
GM2BB30BM0C	Warm white	3	3,000	0.434	0.403	35	80	85	71
GM2BB35BM0C	Natural white	3	3,500	0.407	0.392	36	80	85	73
GM2BB40BM0C	Natural white	3	4,000	0.382	0.380	37	80	85	75
GM2BB45BM0C	Natural white	3	4,500	0.361	0.366	38	80	85	77
GM2BB50BM0C	Pure white	3	5,000	0.345	0.355	39	80	85	80
GM2BB57BM0C	Pure white	3	5,700	0.329	0.342	38	80	85	77
GM2BB65BM0C	Cool white	3	6,500	0.312	0.328	37	80	85	75

* at 150 mA and 3.25V

DOUBLEDOME 0.3W Series (2nd generation) **NEW**

Model number CRI 80+	LED colour	Number of dies	Colour temp. [K]	Colour range coordinates (CIE 1931)		Luminous flux (typ.)* [lm]	CRI		Luminous efficacy* [lm/W]
				X	Y		(min.) [Ra]	(typ.) [Ra]	
GM2BB30QKAC	Warm white	2	3,000	0.434	0.403	28	80	83	90
GM2BB35QKAC	Natural white	2	3,500	0.407	0.392	29	80	83	95
GM2BB40QKAC	Natural white	2	4,000	0.382	0.380	30	80	83	98
GM2BB50QKAC	Pure white	2	5,000	0.345	0.355	32	80	83	103
GM2BB65QKAC	Cool white	2	6,500	0.312	0.328	30	80	83	98

* at 100 mA and 3.05V

DOUBLEDOME 0.3W Series (1st generation)

Model number CRI 80+	LED colour	Number of dies	Colour temp. [K]	Colour range coordinates (CIE 1931)		Luminous flux (typ.)* [lm]	CRI		Luminous efficacy* [lm/W]
				X	Y		(min.) [Ra]	(typ.) [Ra]	
GM2BB27BMAC	Warm white	2	2,700K	0.458	0.410	22	80	85	67
GM2BB30BMAC	Warm white	2	3,000K	0.434	0.403	23	80	85	70
GM2BB35BMAC NEW	Natural white	2	3,500K	0.407	0.392	24	80	85	73
GM2BB40BMAC	Natural white	2	4,000K	0.382	0.380	24	80	85	73
GM2BB45BMAC NEW	Natural white	2	4,500K	0.361	0.366	25	80	85	76
GM2BB50BMAC	Pure white	2	5,000K	0.345	0.355	26	80	85	80
GM2BB57BMAC NEW	Pure white	2	5,700K	0.329	0.342	25	80	85	76
GM2BB65BMAC NEW	Cool white	2	6,500K	0.312	0.328	24	80	85	73

* at 100 mA and 3.25V

Subject to alterations and modifications.

For comprehensive product information please refer to the product specifications.

SHARP

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