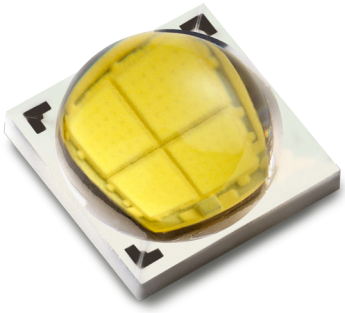
LUXEON M

High Flux Density and Efficacy



LUXEON® M emitters are illumination grade LEDs designed to enable outdoor and indoor applications optimized either for high efficiency or low cost where exceptional flux density and/or image uniformity are critical. With *Freedom from Binning* and leading performance, LUXEON M emitters deliver high efficacy and high flux density from a uniform source with tight correlated color temperature control.

Features

- Freedom From Binning
  - Single 3-step and 5-step MacAdam ellipse
- Hot tested at T_j 85°C
- Full portfolio of CRI / CCT combinations
- Superior efficacy and light output
- Proven LUXEON reliability

Benefits

- Exceptional uniformity and flux density enable street lighting optics and compact spot applications
- BOM and manufacturing cost reduction due to fewer components
- Higher system efficiency from use of low costs, high efficiency, highly reliable drivers
- System design flexibility: efficacy or low costs enabling product differentiation

Key Applications

- Outdoor
- High bay and low bay
- Downlights
- Lamps
- Indoor Area Lighting
- Spotlights

Absolute Maximum Ratings

Parameter	Maximum Performance
DC Forward Current	1050 mA for LXRx-Sxxx; 2100 mA for LXRx-Rxxx
Peak Pulsed Forward Current	1200 mA for LXRx-Sxxx; 2400 mA for LXRx-Rxxx
ESD Sensitivity	≤ 8000V Human Body Model (HBM) Class 3B JESD22-A114-E < 400V Machine Model (MM) Class B JESD22-A115-B
LED Junction Temperature	135°C
Operating Case Temperature	-40°C - 120°C @ 700 mA for LXRx-Sxxx; @1400 mA for LXRx-Rxxx
Storage Temperature	-40°C - 120°C
Lead Soldering Temperature	JEDEC 020c 260°C
Allowable Reflow Cycles	3
Autoclave Conditions	121°C at 2 ATM 100% Relative Humidity for 96 Hours Maximum
Reverse Voltage (Vr)	LUXEON M LEDs are not designed to be driven in reverse bias

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LUXEON M 12V Product Characteristics

Typical Performance Characteristics at 350 mA, 700 mA, and 1000 mA for LUXEON M 12V, Junction Temperature = 85°C												
Part Number	Nominal ANSI CCT	CRI	Luminous Flux (lm) Min	Typical Luminous Flux (lm)			Typical Forward Voltage (V_f)			Typical Efficacy (lm/W)		
		700 mA	700 mA	350 mA	700 mA	1000 mA	350 mA	700 mA	1000 mA	350 mA	700 mA	1000 mA
LXR7-SW30	3000K	70	840	491	905	1210	10.88	11.2	11.43	128	115	106
LXR7-SW40	4000K	70	900	529	980	1311	10.88	11.2	11.43	139	125	115
LXR7-SW50	5000K	70	900	529	980	1311	10.88	11.2	11.43	139	125	115
LXR7-SW57	5700K	70	900	545	1000	1334	10.88	11.2	11.43	143	128	117
LXR7-SW65	6500K	70	900	545	1000	1334	10.88	11.2	11.43	143	128	117
LXR8-SW27	2700K	80	680	418	760	1018	10.88	11.2	11.43	109	97	89
LXR8-SW30	3000K	80	710	440	800	1071	10.88	11.2	11.43	115	102	94
LXR8-SW35	3500K	80	745	464	860	1159	10.88	11.2	11.43	121	110	102
LXR8-SW40	4000K	80	780	491	905	1210	10.88	11.2	11.43	128	115	106
LXR8-SW50	5000K	80	800	491	905	1210	10.88	11.2	11.43	128	115	106
LXR9-SW27	2700K	90	570	332	610	818	10.88	11.2	11.43	87	78	72
LXR9-SW30	3000K	90	580	337	620	833	10.88	11.2	11.43	88	79	73

LUXEON M 6V Product Characteristics

Typical Performance Characteristics at 700 mA, 1400 mA, and 2000 mA for LUXEON M 6V, Junction Temperature = 85°C												
Part Number	Nominal ANSI CCT	CRI	Luminous Flux (lm) Min	Typical Luminous Flux (lm)			Typical Forward Voltage (V_f)			Typical Efficacy (lm/W)		
		1400 mA	1400 mA	700 mA	1400 mA	2000 mA	700 mA	1400 mA	2000 mA	700 mA	1400 mA	2000 mA
LXR7-RW30	3000K	70	840	491	905	1210	5.44	5.6	5.72	128	115	106
LXR7-RW40	4000K	70	900	529	980	1311	5.44	5.6	5.72	139	125	115
LXR7-RW50	5000K	70	900	529	980	1311	5.44	5.6	5.72	139	125	115
LXR7-RW57	5700K	70	900	545	1000	1334	5.44	5.6	5.72	143	128	117
LXR7-RW65	6500K	70	900	545	1000	1334	5.44	5.6	5.72	143	128	117
LXR8-RW27	2700K	80	680	418	760	1018	5.44	5.6	5.72	109	97	89
LXR8-RW30	3000K	80	710	440	800	1071	5.44	5.6	5.72	115	102	94
LXR8-RW35	3500K	80	745	464	860	1159	5.44	5.6	5.72	121	110	102
LXR8-RW40	4000K	80	780	491	905	1210	5.44	5.6	5.72	128	115	106
LXR8-RW50	5000K	80	800	491	905	1210	5.44	5.6	5.72	128	115	106
LXR9-RW27	2700K	90	570	332	610	818	5.44	5.6	5.72	87	78	72
LXR9-RW30	3000K	90	580	337	620	833	5.44	5.6	5.72	88	79	73

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