







LED Displays

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High Brightness LED Numeric Displays

High brightness, low power consumption, and high reliability.


Shape	Part No.	Emitting color	Absolute maximum ratings (Ta=25°C)				Absolute maximum ratings		Electrical and 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 temperature Topr (°C)	Storage temperature Tstg (°C)	Forward voltage V _F		Reverse current I _R		Light wavelength		Brightness / Digit I _v			
								Typ. (V)	I _F (mA)	Max. (μA)	V _R (V)	λ _P Typ. (nm)	λ _{1/2} Typ. (nm)	I _F (mA)	Min. (mcd)	Typ. (mcd)	I _F (mA)	
 Character Height: 8mm External Dimensions: (7×11)	LAP-301VB/VL	Red										650			14	36		
	LAP-301MB/ML	Green	448	20	60	5	-25 to +75	-30 to +85	1.9	10	100	3	572	20	10	36	100	10
	LAP-301DB/DL	Orange											605			56	250	
	LAP-301YB/YL	Yellow											590			90	450	
 Character Height: 10.16mm External Dimensions: (9.6×13)	LAP-401VD/VN	Red										650			14	36		
	LAP-401MD/MN	Green	448	20	60	5	-25 to +75	-30 to +85	1.9	10	100	3	572	20	10	36	100	10
	LAP-401DD/DN	Orange											605			56	250	
	LAP-401YD/YN	Yellow											590			90	450	
 Character Height: 14.6mm External Dimensions: (12.5×19)	LAP-601VB/VL	Red										650			14	36		
	LAP-601MB/ML	Green	448	20	60	5	-25 to +75	-30 to +85	1.9	10	100	3	572	20	10	36	100	10
	LAP-601DB/DL	Orange											605			56	250	
	LAP-601YB/YL	Yellow											590			90	450	
 Character Height: 14.3mm External Dimensions: (25×19)	LBP-602VA2/VK2	Red										650			14	36		
	LBP-602MA2/MK2	Green	896	20	60	5	-25 to +75	-30 to +85	1.9	10	100	3	572	20	10	36	100	10
	LBP-602DA2/DK2	Orange											605			56	250	
	LBP-602YA2/YK2	Yellow											590			90	450	

Notes: * I_{FP} measured under duty ≤ 1/5, Pulse width ≤ 1ms

LED Numeric Displays

Single Digit LED Numeric Displays (Surface Mount Type)

ROHM's LED numeric displays are compatible with automatic reflow processes.

Shape	Part No.	Emitting color	Absolute maximum ratings (Ta=25°C)				Absolute maximum ratings		Electrical and 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 temperature Topr (°C)	Storage temperature Tstg (°C)	Forward voltage V _F		Reverse current I _R		Light wavelength		Brightness / Digit I _v			
								Typ. (V)	I _F (mA)	Max. (μA)	V _R (V)	λ _P Typ. (nm)	λ _{1/2} Typ. (nm)	I _F (mA)	Min. (mcd)	Typ. (mcd)	I _F (mA)	
 Character Height: 8mm External Dimensions: (6.8×11)	LF-301VA/VK	Red	320	15	60	5	-25 to +75	-30 to +85	2.0	10	100	3	650	40	10	3.6	10	10
	LF-301MA/MK	Green	480	20					2.1				563					

Notes: * I_{FP} measured under duty ≤ 1/5, Pulse width ≤ 1ms

Single Digit LED Numeric Displays

These single digit numeric displays are 8 to 25.4mm in height and available in a range of colors.

Shape	Part No.	Emitting color	Absolute maximum ratings (Ta=25°C)				Absolute maximum ratings		Electrical and 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 temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)	Forward voltage V _F		Reverse current I _R		Light wavelength		Brightness / Digit I _v		
									Typ. (V)	I _F (mA)	Max. (μA)	V _R (V)	λ _P Typ. (nm)	λ _A Typ. (nm)	I _F (mA)	Min. (mcd)	Typ. (mcd)
	LA-301VB/VL	Red	320	15	60				2.0				650	40	10	3.6	10
	LA-301MB/ML	Green	480	20													
	LA-301BB/BL	Blue	336	10	14	56											
	LA-301AB/AL	High Brightness Red	520	25	50				2.05	20			610	17	20	36	90
	LA-301EB/EL	High Brightness Orange															
LA-301XB/XL	High Brightness Yellow											589	15				
	LA-401VD/VN	Red	320	15	60				2.0				650	40	10	5.6	16
	LA-401MD/MN	Green	480	20													
	LA-401BD/BN	Blue	336	10	14	56											
	LA-401AD/AN	High Brightness Red	520	25	50				2.05	20			610	17	20	36	90
	LA-401ED/EN	High Brightness Orange															
LA-401XD/XN	High Brightness Yellow											589	15				
	LA-501VD/VN	Red	480	20	60				2.0				650			5.6	16
	LA-501MD/MN	Green															
	LA-601VB/VL	Red	336	10	50				2.0	10			650	10	14		
	LA-601MB/ML	Green															
	LA-601BB/BL	Blue	336	10	14	56											
	LA-601AB/AL	High Brightness Red	520	25	50				2.05	20			610	17	20	36	90
	LA-601EB/EL	High Brightness Orange															
LA-601XB/XL	High Brightness Yellow											589	15				
	LA-101VA/VK	Red	640	15	60				4.0	10			650	40	10	3.6	10
	LA-101MA/MK	Green	4.2	563													

Notes: * I_{FP} measured under duty ≤ 1/5, Pulse width ≤ 1 ms, High Brightness and Blue I_{FP} measured under duty ≤ 1/10, Pulse width ≤ 0.1 ms 2) LA-101 series : order-based production

Two Digit LED Numeric Displays

These two digit numeric displays are 7.62 to 14.3mm in height and available in a range of colors.

Shape	Part No.	Emitting color	Absolute maximum ratings (Ta=25°C)				Absolute maximum ratings		Electrical and 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 temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)	Forward voltage V _F		Reverse current I _R		Light wavelength		Brightness / Digit I _v		
									Typ. (V)	I _F (mA)	Max. (μA)	V _R (V)	λ _P Typ. (nm)	λ _A Typ. (nm)	I _F (mA)	Min. (mcd)	Typ. (mcd)
	LB-302VF/VP	Red	800	15	60				2.0				650			2.2	6.3
	LB-302MF/MP	Green	960	20													
	LB-402VD/VN	Red	640	15	60	5	-25 to +75	-30 to +85	2.0	10			650	40	10	5.6	16
	LB-402MD/MN	Green	2.1	563													
	LB-502VD/VN	Red	960	20	60				2.0				650			5.6	16
	LB-502MD/MN	Green	2.1	563													
	LB-602VA2/VK2	Red	960	20	60				2.0				650	40		5.6	16
	LB-602MA2/MK2	Green															
	LB-602BA2/BK2	Blue	672	10	14	56											
	LB-602AA2/AK2	High Brightness Red	1040	25	50				3.6				470	26	14	36	90
	LB-602EA2/EK2	High Brightness Orange															
LB-602XA2/XK2	High Brightness Yellow											589	15				

Notes: * I_{FP} measured under duty ≤ 1/5, Pulse width ≤ 1 ms, High Brightness and Blue I_{FP} measured under duty ≤ 1/10, Pulse width ≤ 0.1 ms

Three Digit LED Numeric Displays

This lineup of three digit numeric displays ranges in height from 8 to 14.3mm and are available in either red or green.

Shape	Part No.	Emitting color	Absolute maximum ratings (Ta=25°C)				Absolute maximum ratings		Electrical and 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 temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)	Forward voltage V _F		Reverse current I _R		Light wavelength		Brightness / Digit I _v		
									Typ. (V)	I _F (mA)	Max. (μA)	V _R (V)	λ _P Typ. (nm)	λ _A Typ. (nm)	I _F (mA)	Min. (mcd)	Typ. (mcd)
	LB-303VA/VK	Red	960	15	60	5	-25 to +75	-30 to +85	2.0				650			1.4	4.0
	LB-303MA/MK	Green	1440	20													
	LB-603VF/VP	Red	960	15	60				2.0		100	3	650	40	10	5.6	16
	LB-603MF/MP	Green	1440	20													

Notes: * I_{FP} measured under duty ≤ 1/5, Pulse width ≤ 1 ms

LED Dot Matrix Units

■ 16×32 Dots Matrix Units

The 16×32 dot matrix LED modules combine the LED matrix and IC drivers. Character strings can be displayed via cascade connection. The IC drivers have enough RAM to allow programming of one screen of information while another screen is being displayed. Both graphics and characters can be displayed.

Emitting surface size (mm)	Shape	Part No.	Display	Emitting color	Wavelength (nm)	Dot size (mm)	Dot pitch (mm)	Number of dots (dot)	Control		LED		Brightness (cd/m ²)	Operating freq. (MHz)	Drive type
									V _{DD} (V)	I _{CC1} Max. (mA)	V _{LED} (V)	I _{CC2} Max. (A)			
40 × 80		LUM-512CMU300	Milky white Chip LEDs	Red	630	1.1×1.3	2.5	16×32	5	80	4.5	2.0	100	13 (Max.)	1/16 duty (Shift register type)
				Green	570								120		
		LUM-512CMU301	Milky white Chip LEDs with Louver	Red	630	1.1×1.3	2.5	16×32	5	80	4.5	2.0	100	13 (Max.)	1/16 duty (Shift register type)
				Green	570								120		
		☆LUM-512CMU302	Milky white Chip LEDs with Louver	Red	630	1.1×1.3	2.5	16×32	5	100	4.5	3.0	600	13 (Max.)	1/16 duty (Shift register type)
				Green	570								400		
		LUM-512CMU320	Milky white Chip LEDs	Red	630	1.1×1.3	2.5	16×32	5	30	5	2.0	100	20 (Max.)	1/16 duty (Memory type)
Green				570	120										
	LUM-512CY300	Milky white Chip LEDs	Yellow	590	1.2×0.8	2.5	16×32	5	80	5	1.7	1000	10 (Max.)	1/16 duty (Shift register type)	
	LUM-512CD300	Milky white Chip LEDs	Orange	611	1.2×0.8	2.5	16×32	5	80	5	1.7	1000	10 (Max.)	1/16 duty (Shift register type)	
	LUM-512CU300	Milky white Chip LEDs	Red	630	1.2×0.8	2.5	16×32	5	80	5	1.7	800	10 (Max.)	1/16 duty (Shift register type)	
64×128		LPM-5123BMU813	Potting lens	Red (624)	525	φ2.8	4	16×32	5	500	5	3.0	330	10 (Max.)	1/16 duty (shift register type) External gray levels clock 1024 gray levels
				Green									890		
				Blue (471)									180		
		LUM-512HY304	Chip LEDs with Louver	Yellow	590	1.6×2.3	4	16×32	5	30	5	2.0	2400	20 (Max.)	1/16 duty (Memory type)
		☆LUM-512CY371	Chip LEDs	Yellow	590	1.2×0.8	4	16×32	5	100	5	2.0	600	10 (Max.)	1/16 duty (Shift register type)
		LPM-5123Y320	Potting lens	Yellow	590	φ2.8	4	16×32	5	100	5	1.6	500	10 (Max.)	1/16 duty (Shift register type)
		LPM-5123D320	Potting lens	Orange	605	φ2.8	4	16×32	5	100	5	1.6	700	10 (Max.)	1/16 duty (Shift register type)
	LPM-5123U320	Potting lens	Red	624	φ2.8	4	16×32	5	100	5	1.6	500	10 (Max.)	1/16 duty (Shift register type)	
96×192		LPM-5123MU350	Potting lens	Red	624	φ2.8	6	16×32	5	20	5	5.2	250	20 (Max.)	1/16 duty (Memory type)
				Green	571								200		
		LUM-512HML350	Chip LEDs	Red	660	2.1×2.3	6	16×32	5	20	5	4.3	100	20 (Max.)	1/16 duty (Memory type)
Green				563	100										
	LUM-512HY354	Chip LEDs with Louver	Yellow	590	1.6×2.3	6	16×32	5	60	5	4.0	2000	20 (Max.)	1/8 duty (Memory type)	
122×244		LUM-512HY3A0	Chip LEDs with Louver	Yellow	590	1.6×2.3	7.62	16×32	5	2000	5	6.0	2000	8 (Max.)	Static

☆ : Under development

16×16 Dots Matrix Units

The 16×16 dot matrix LED modules combine the LED matrix and IC drivers. Multiple letters can be displayed by cascade connection. The IC drivers have enough RAM to allow programming of one screen of information while another screen is being displayed. Both graphics and characters can be displayed.

Emitting surface size (mm)	Shape	Part No.	Display	Emitting color	Wavelength (nm)	Dot size (mm)	Dot pitch (mm)	Number of dots (dot)	Control		LED		Brightness (cd/m ²)	Operating freq. (MHz)	Drive type
									V _{DD} (V)	I _{CC1} Max. (mA)	V _{LED} (V)	I _{CC2} Max. (A)			
64×64		LPM-2563MU300	Potting lens	Red	624	φ2.8	4	16×16	5	20	5	1.6	300	20 (Max.)	1/16 duty (Memory type)
				Green	571								300		

24×24 Dots Matrix Units

The 24×24 dot matrix LED modules combine the LED matrix and IC drivers. Multiple letters can be displayed by cascade connection. The IC drivers have enough RAM to allow programming of one screen of information while another screen is being displayed. Both graphics and characters can be displayed.

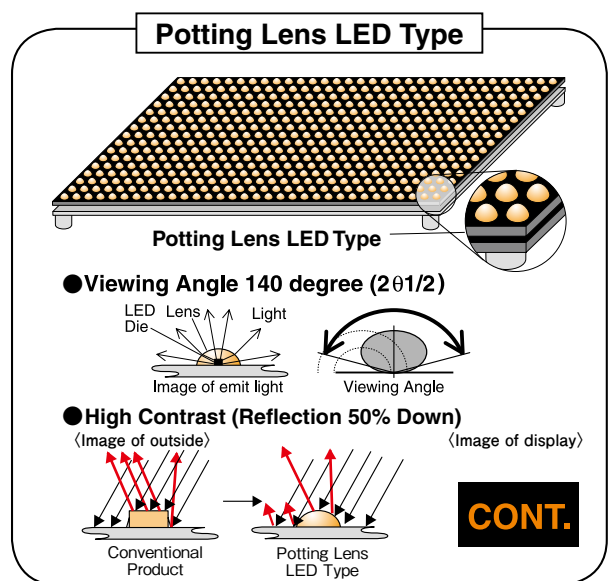
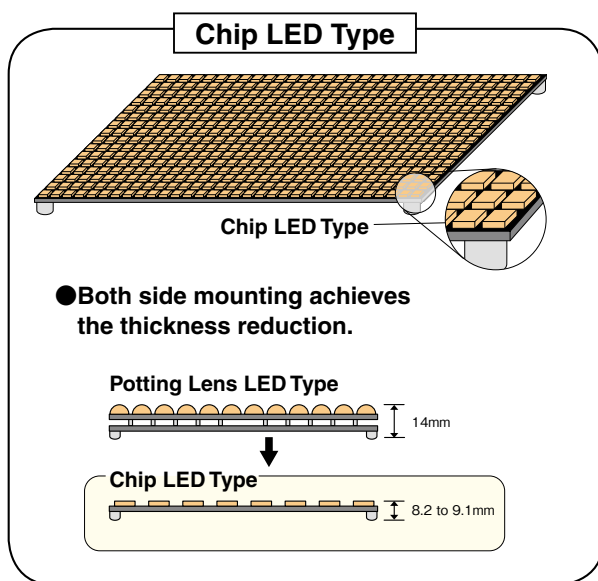
Emitting surface size (mm)	Shape	Part No.	Display	Emitting color	Wavelength (nm)	Dot size (mm)	Dot pitch (mm)	Number of dots (dot)	Control		LED		Brightness (cd/m ²)	Operating freq. (MHz)	Drive type
									V _{DD} (V)	I _{CC1} Max. (mA)	V _{LED} (V)	I _{CC2} Max. (A)			
96×96		LPM-5763BMU813	Potting lens	Red	(624)	φ2.8	4	24×24	5	400	5	3.0	330	10 (Max.)	1/24 duty (shift register type) External gray levels clock 1024 gray levels
				Green	(525)								890		
				Blue	(471)								180		
		LPM-5763MU301	Potting lens	Red	624	φ2.8	4	24×24	5	20	5	2.6	300	20 (Max.)	1/24 duty (Memory type)
				Green	571								300		

※LPM-5763BMU813 was designed to be used with the LPM-1153BMU813 and therefore does not have a signal output pin.

24×48 Dots Matrix Units

The 24×48 dot matrix LED modules combine the LED matrix and IC drivers. Multiple letters can be displayed by cascade connection. The IC drivers have enough RAM to allow programming of one screen of information while another screen is being displayed. Both graphics and characters can be displayed.

Emitting surface size (mm)	Shape	Part No.	Display	Emitting color	Wavelength (nm)	Dot size (mm)	Dot pitch (mm)	Number of dots (dot)	Control		LED		Brightness (cd/m ²)	Operating freq. (MHz)	Drive type
									V _{DD} (V)	I _{CC1} Max. (mA)	V _{LED} (V)	I _{CC2} Max. (A)			
64×128		LUM-115BMU300	Chip LEDs	Red	624	1.0×0.6	2.67	24×48	5	40	5	2.0	300	20 (Max.)	1/24 duty (Memory type)
				Green	572								300		
96×192		LPM-1153BMU813	Potting lens	Red	(624)	φ2.8	4	24×48	5	600	5	6.0	330	10 (Max.)	1/24 duty (shift register type) External gray levels clock 1024 gray levels
				Green	(525)								890		
				Blue	(471)								180		
		LPM-1153MU300	Potting lens	Red	624	φ2.8	4	24×48	5	40	5	5.2	300	20 (Max.)	1/24 duty (Memory type)
				Green	571								300		



Notes

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[Viewing the catalog]

■ **New** indicates new product.

■ ☆ indicates product under development.