

### LM1601616A/B Series – 1.50 inch 16x16 Dot Matrix LED Display



**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
DISCHARGE  
SENSITIVE  
DEVICES



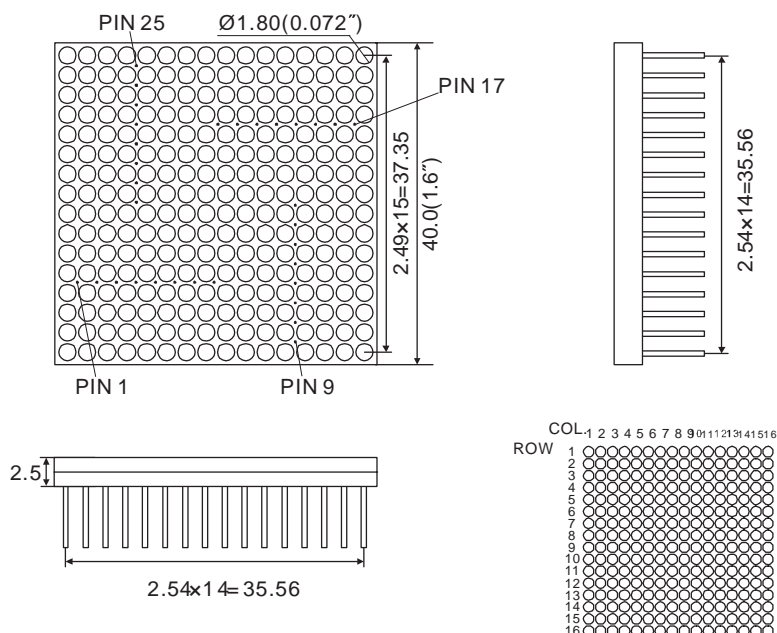
#### Features

- 39.00 mm (1.50 inch) matrix height
- Dot size: Diameter 1.80 mm
- Pitch: 2.49 mm
- Wide viewing angle
- Range of emitted colors
- I.C. compatible
- Low power consumption
- White dot, grey or black face
- RoHS compliant

#### Available options

- Alternative emitting luminosity:  
Standard or high brightness version
- Alternative emitted color
- Alternative dot color
- Alternative face color
- Both CA or CC versions are available
- Cropped terminal pins

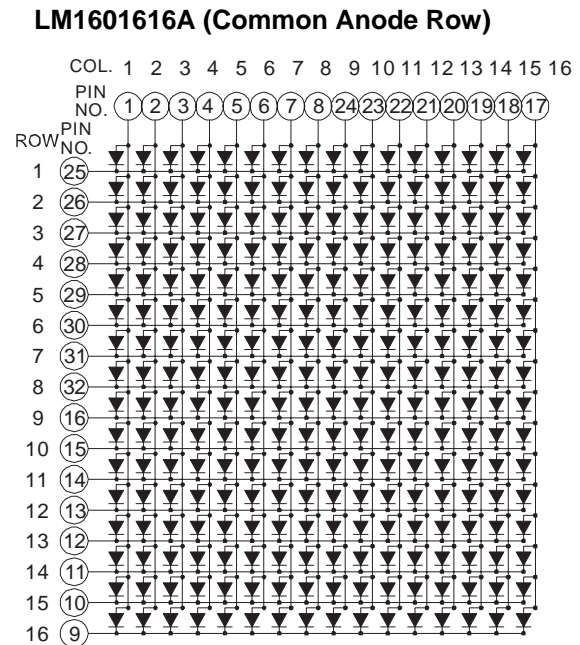
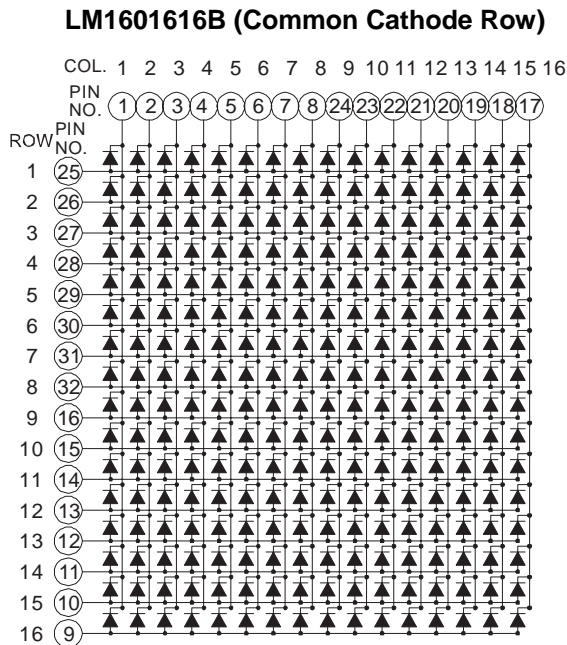
#### Package Dimensions



#### Notes:

1. All dimensions are in millimeters (inches), Tolerance is  $\pm 0.25\text{mm}$  (0.01inch) unless other wise noted.
2. Specifications are subject to change without notice.
3. The gap between the reflector and PCB shall not exceed 0.25mm.

## Internal Circuit Diagram



## Selection Guide

Part No.		Chip			Iv@IF=20mA	
Common Cathode Row	Common Anode Row	Material	Color	WLD	One Dot	
					Min.	Typ.
LM1601616AR	LM1601616BR	GaAlAs	Super Red	640	8	10
LM1601616AD	LM1601616BD	GaAlAs	Hi-Red	640	18	25
LM1601616AO	LM1601616BO	GaAsP	Orange	625	7	9
LM1601616AY	LM1601616BY	GaAsP	Yellow	588	8	10
LM1601616AG	LM1601616BG	GaP	Green	568	7	9
LM1601616AUR	LM1601616BUR	AlGaInP	Ultra Red	640	30	45
LM1601616AUO	LM1601616BUO	AlGaInP	Ultra Orange	625	45	60
LM1601616AUA	LM1601616BUA	AlGaInP	Ultra Amber	605	30	45
LM1601616AUY	LM1601616BUY	AlGaInP	Ultra Yellow	595	30	45
LM1601616AUG	LM1601616BUG	AlGaInP	Ultra Green	573	30	45
LM1601616APG	LM1601616BPG	InGaN	Pure Green	525	120	300
LM1601616AUB	LM1601616BUB	InGaN	Ultra Blue	470	30	45
LM1601616AUW	LM1601616BUW	SMD	Ultra White	\	100	120
Unit:	\	\	\	nm	mcd	mcd

## Electrical Characteristics & Absolute Maximum Ratings

Color		Electrical Characteristics <sup>[1]</sup>			Absolute Maximum Ratings <sup>[1]</sup>		
		V <sub>F</sub> @ I <sub>F</sub> =20mA <sup>[2]</sup>		Reverse Current VR=5V	Power Dissipation	DC Forward Current	Peak Forward Current <sup>[3]</sup>
		Typ.	Max.				
Super Red	Per Dot	1.8	2.2	30	60	25	100
Hi-Red	Per Dot	1.8	2.2	30	60	25	100
Orange	Per Dot	2.1	2.5	30	80	30	100
Yellow	Per Dot	2.1	2.5	30	80	30	100
Green	Per Dot	2.2	2.5	30	80	30	100
Ultra Red	Per Dot	1.9	2.6	30	60	30	100
Ultra Orange	Per Dot	2.0	2.6	30	65	30	100
Ultra Amber	Per Dot	2.0	2.6	30	65	30	100
Ultra Yellow	Per Dot	2.0	2.6	30	65	30	100
Ultra Green	Per Dot	2.1	2.6	30	75	30	100
Pure Green	Per Dot	3.5	4.0	30	110	30	100
Ultra Blue	Per Dot	3.5	4.0	30	120	30	100
Ultra White	Per Dot	3.5	4.0	30	120	30	100
Unit:	\	V	V	uA	mW	mA	mA

Notes:

1. At Ta = 25 °C.
2. Forward voltage at forward current = 20mA.
3. Peak forward current at 1/10 Duty Cycle, 0.1ms Pulse.