

### FEATURES

- 1.9inch (47.8mm) Matrix height
- Full color — Blue + Bright Green + DH. Red
- Flat package and light weight
- Easy assembly
- High quality and low cost
- High reliable and intensity
- Low power requirement

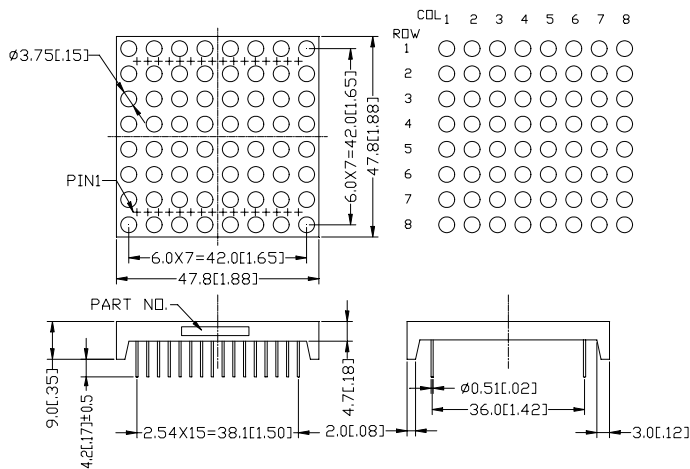
### DESCRIPTION :

- 8x8 dot matrix displays
- Ø 3.75mm dot and pitch 6.0mm
- Black face and water clear dots

### DEVICES

PART NO.	DESCRIPTION	CIRCUIT DIAGRAM
Blue +Bright Green + DH. Red		
DM4-8819F4-CA02	Common Anode	A
DM4-8819F4-CC02	Common Cathode	B

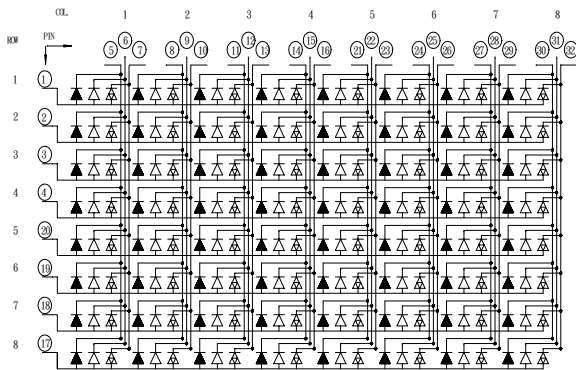
### PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters (inches) tolerance are  $\pm 0.25$ mm (0.01inch) unless otherwise noted.

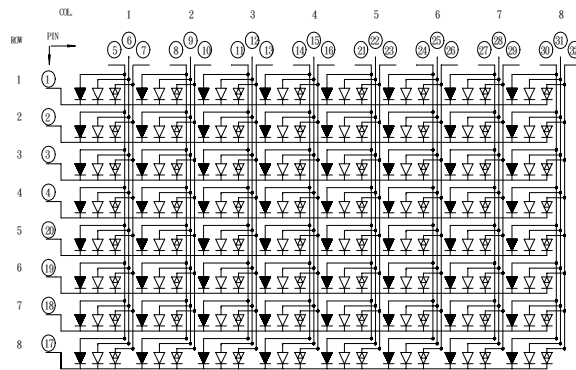
## CIRCUIT DIAGRAM

A. DM4-8819F4-CA02



The Sign" "Represent For Blue chips  
 The Sign" "Represent For Bright Green chips  
 The Sign" "Represent For DH Red chips

B. DM4-8819F4-CC02



The Sign" "Represent For Blue chips  
 The Sign" "Represent For Bright Green chips  
 The Sign" "Represent For DH Red chips

## PIN CONNECTION

PIN NO.	CONNECTION	PIN NO.	CONNECTION
1	Row 1	17	Row 8
2	Row 2	18	Row 7
3	Row 3	19	Row 6
4	Row 4	20	Row 5
5	Column 1 (DH. Red)	21	Column 5 (DH. Red)
6	Column 1 (Bright Green)	22	Column 5 (Bright Green)
7	Column 1 (Blue)	23	Column 5 (Blue)
8	Column 2 (DH. Red)	24	Column 6 (DH. Red)
9	Column 2 (Bright Green)	25	Column 6 (Bright Green)
10	Column 2 (Blue)	26	Column 6 (Blue)
11	Column 3 (DH. Red)	27	Column 7 (DH. Red)
12	Column 3 (Bright Green)	28	Column 7 (Bright Green)
13	Column 3 (Blue)	29	Column 7 (Blue)
14	Column 4 (DH. Red)	30	Column 8 (DH. Red)
15	Column 4 (Bright Green)	31	Column 8 (Bright Green)
16	Column 4 (Blue)	32	Column 8 (Blue)

**ABSOLUTE MAXIMUM RATINGS AT T<sub>a</sub>=25°C**

PARAMETER	BLUE	Bright Green	DH. Red	UNIT
Power Dissipation Per Dot	90	39	30	mW
Forward Current per Dot	20	15	15	mA
Derating Linear From 25°C Per Dot	0.33	0.17	0.2	mA/°C
Peak Forward Current Per Dot	80	120	120	mA
Reverse Voltage Per Dot	5			V
Operation Temperature Range	-35~+85			°C
Storage Temperature Range.	-35~+85			°C

NOTES: T<sub>a</sub>=25°C I<sub>F P</sub>=1/8 Duty 10KHZ

**OPTOELECTRIC CHARACTERISTICS T<sub>a</sub>=25°C**

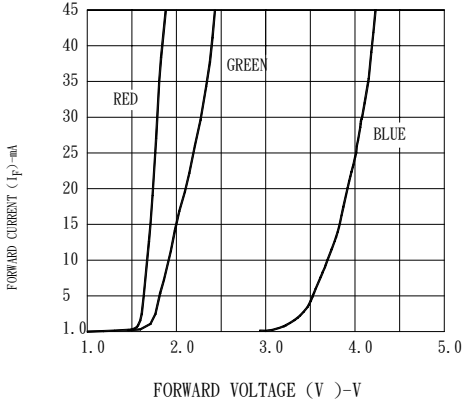
PARAMETER	SYMBOL	TEST CONDITIONS	PART NO.	RATING			UNIT
				MIN.	TYP.	MAX.	
Forward Voltage Per Dot	V <sub>F</sub>	I <sub>F</sub> =20mA	Blue	—	3.8	4.5	V
			Bright Green	1.8	2.25	2.6	
			DH. Red	—	1.8	2.0	
Reverse Current Per Dot	I <sub>R</sub>	V <sub>R</sub> =5V	Blue. DH. Red Bright Green	—	—	100	μ A
Luminance	L	I <sub>F P</sub> =40mA 1/8 Duty	Blue / DH. Red	—	600	—	cd/m <sup>2</sup>
		I <sub>F P</sub> =80mA 1/8 Duty	Bright Green				
Peak Emission Wavelength Per Dot	λ <sub>P</sub>	I <sub>F</sub> =20mA	Blue	—	428	—	nm
			Bright Green	—	568	—	
			DH. Red	—	660	—	
Dominant Wavelength Per Dot	λ <sub>D</sub>	I <sub>F</sub> =20mA	Blue	—	466	—	nm
			Bright Green	—	573	—	
			DH. Red	—	643	—	
Spectral Line Wave Length Per Dot	Δλ	I <sub>F</sub> =20mA	Blue	—	65	—	nm
			Bright Green	—	30	—	
			DH. Red	—	20	—	
Luminous Intensity Matching Ratio (Dot To Dot)	I <sub>V-m</sub>	I <sub>F P</sub> =40mA 1/8 Duty	Blue. DH. Red Bright Green			2:1	

**SOLDERING CONDITIONS** : Soldering Temp.≤+260°C; Soldering Time≤3sec  
(at 2mm Distance from the Case of Reflector Edge)

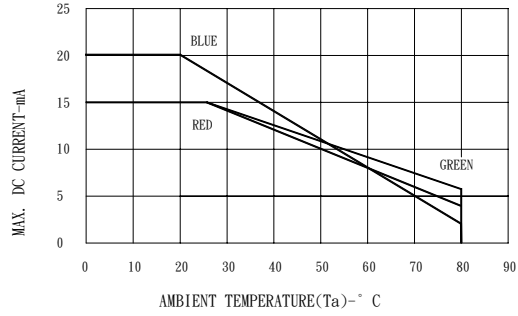
# TYPICAL ELECTRICAL/OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless otherwise Noted)

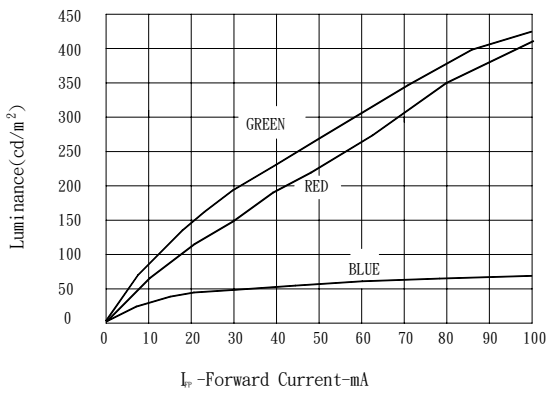
Forward Voltage vs. Forward Current



Forward Current vs. Ambient Temperature curve



Peak Forward Current vs. Luminance



Duty cycle vs. Luminance

