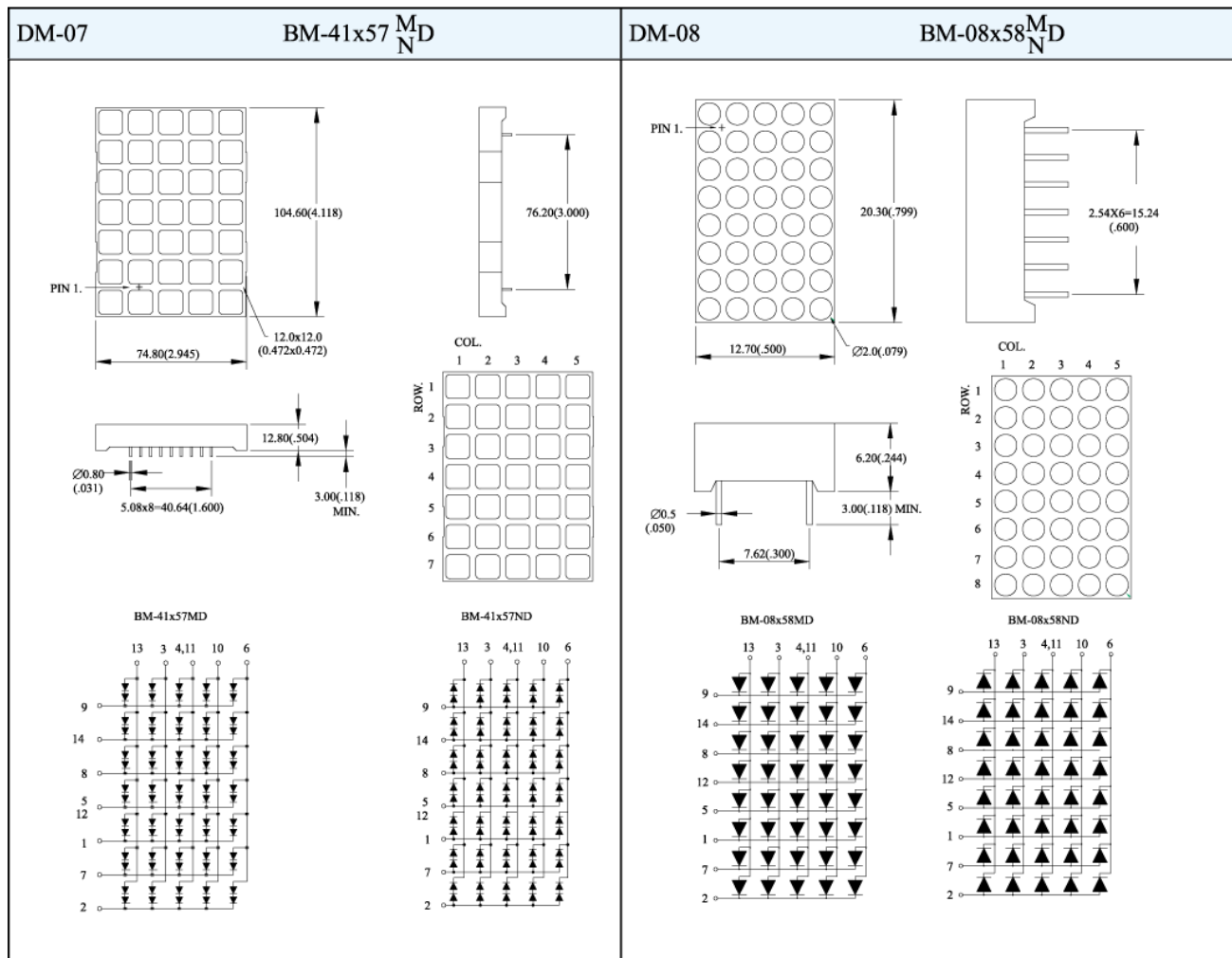




# LED Dot Matrix Display BM Series

Single Color, 5 x 7 & 5 x 8 Dot Matrix Displays

| Digit Size                 | Part No.            |                       | Chip                       |                                   | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|----------------------------|---------------------|-----------------------|----------------------------|-----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                            | Column Common Anode | Column Common Cathode | Material/Emitted Color     | Peak Wave Length $\lambda_p$ (nm) | $\Delta \lambda$ (nm)    | Pd (mw) | If (mA) | Ifp (mA) | Vf (v)                        |      | Iv. Typ. Per.Seg. (mcd) |             |
|                            |                     |                       |                            |                                   |                          |         |         |          | Typ.                          | Max. |                         |             |
| 4.00" High<br>12.0*12.0 mm | BM-41257MD          | BM-41257ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 160     | 30      | 150      | 4.2                           | 5.0  | 15.0                    | DM-07       |
|                            | BM-41457MD          | BM-41457ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 15.0                    |             |
|                            | BM-41457MA          | BM-41457NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 23.0                    |             |
|                            | BM-41657MD          | BM-41657ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 20.0                    |             |
|                            | BM-41657MA          | BM-41657NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 25.0                    |             |
|                            | BM-41F57MD          | BM-41F57ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 160     | 30      | 150      | 4.0                           | 5.0  | 20.0                    |             |
|                            | BM-41J57MD          | BM-41J57ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 160     | 30      | 150      | 4.0                           | 5.0  | 32.0                    |             |
|                            | BM-41K57MD          | BM-41K57ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 160     | 30      | 150      | 4.2                           | 5.0  | 35.0                    |             |
| 0.80" High<br>$\phi$ 2.0   | BM-08258MD          | BM-08258ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 8.0                     | DM-08       |
|                            | BM-08458MD          | BM-08458ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 8.0                     |             |
|                            | BM-08458MA          | BM-08458NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 12.0                    |             |
|                            | BM-08658MD          | BM-08658ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 12.0                    |             |
|                            | BM-08658MA          | BM-08658NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 16.0                    |             |
|                            | BM-08F58MD          | BM-08F58ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 80      | 30      | 150      | 2.0                           | 2.5  | 18.0                    |             |
|                            | BM-08J58MD          | BM-08J58ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 20.0                    |             |
|                            | BM-08K58MD          | BM-08K58ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 20.0                    |             |



NOTES: 1.All Dimensions are in millimeters(inches).

3.Specifications are subject to change without notice.

2.Tolerance is  $\pm 0.25\text{mm}(.010")$ .

4.NP:No Pin.

5.NC:No Connect.

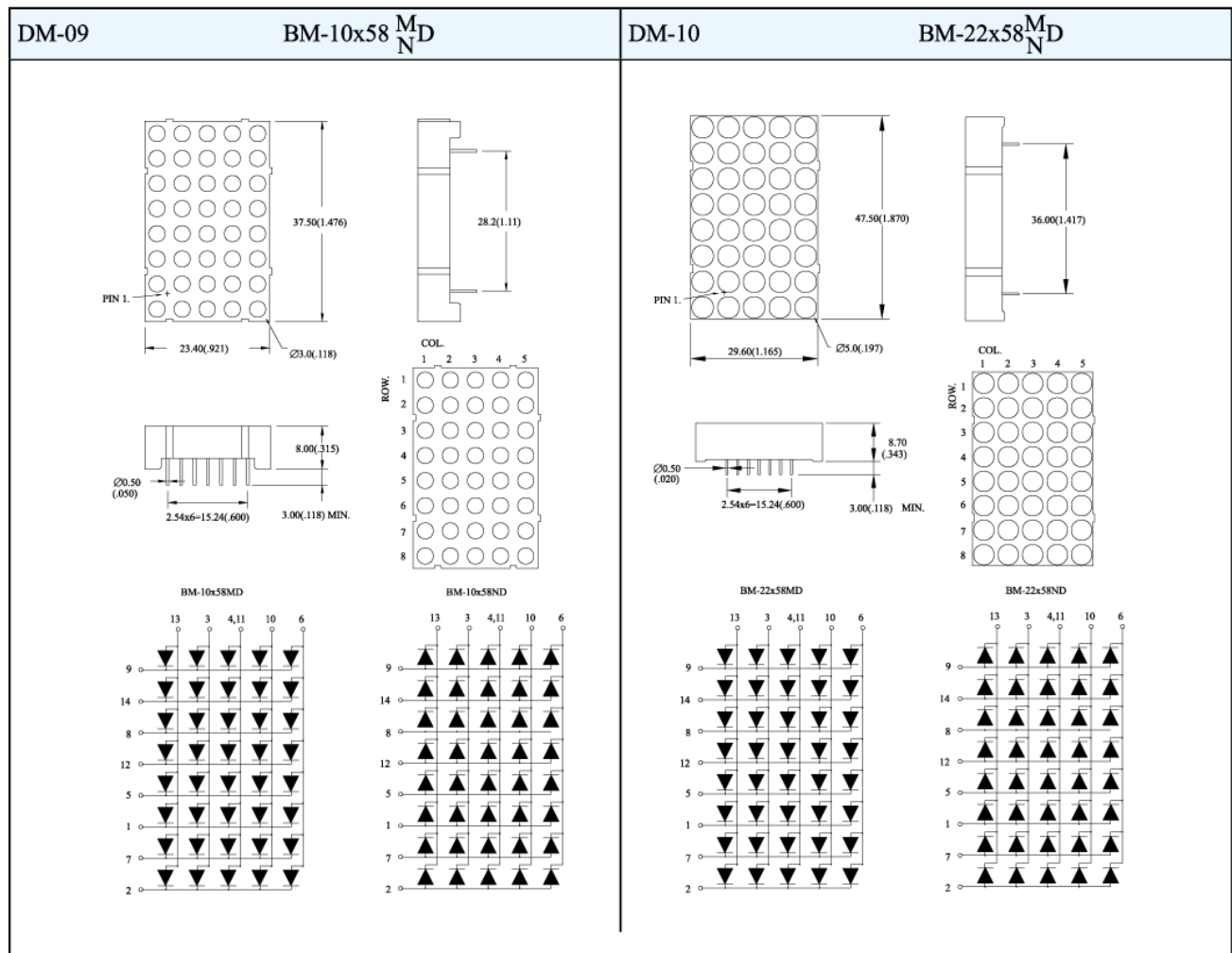
AMERICAN BRIGHT



# LED Dot Matrix Display BM Series

Single Color, 5 x 8 Dot Matrix Displays

| Digit Size            | Part No.            |                       | Chip                       |                                   | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|-----------------------|---------------------|-----------------------|----------------------------|-----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                       | Column Common Anode | Column Common Cathode | Material/Emitted Color     | Peak Wave Length $\lambda_p$ (nm) | $\Delta \lambda$ (nm)    | Pd (mw) | If (mA) | Ifp (mA) | Vf (v)                        |      | Iv. Typ. Per.Seg. (mcd) |             |
|                       |                     |                       |                            |                                   |                          |         |         |          | Typ.                          | Max. |                         |             |
| 1.50" High $\phi$ 3.0 | BM-10258MD          | BM-10258ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 9.0                     | DM-09       |
|                       | BM-10458MD          | BM-10458ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 9.0                     |             |
|                       | BM-10458MA          | BM-10458NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 9.0                     |             |
|                       | BM-10658MD          | BM-10658ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 13.0                    |             |
|                       | BM-10658MA          | BM-10658NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 17.0                    |             |
|                       | BM-10F58MD          | BM-10F58ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 80      | 30      | 150      | 2.0                           | 2.5  | 20.0                    |             |
|                       | BM-10J58MD          | BM-10J58ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 22.0                    |             |
|                       | BM-10K58MD          | BM-10K58ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 22.0                    |             |
| 1.90" High $\phi$ 5.0 | BM-22258MD          | BM-22258ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 10.0                    | DM-10       |
|                       | BM-22458MD          | BM-22458ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 10.0                    |             |
|                       | BM-22458MA          | BM-22458NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 15.0                    |             |
|                       | BM-22658MD          | BM-22658ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 18.0                    |             |
|                       | BM-22658MA          | BM-22658NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 25.0                    |             |
|                       | BM-22F58MD          | BM-22F58ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 80      | 30      | 150      | 2.0                           | 2.5  | 23.0                    |             |
|                       | BM-22J58MD          | BM-22J58ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 25.0                    |             |
|                       | BM-22K58MD          | BM-22K58ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 25.0                    |             |



NOTES: 1.All Dimensions are in millimeters(inches).  
3.Specifications are subject to change without notice.

2.Tolerance is  $\pm 0.25\text{mm}(.010")$ .  
4.NP:No Pin. 5.NC:No Connect.

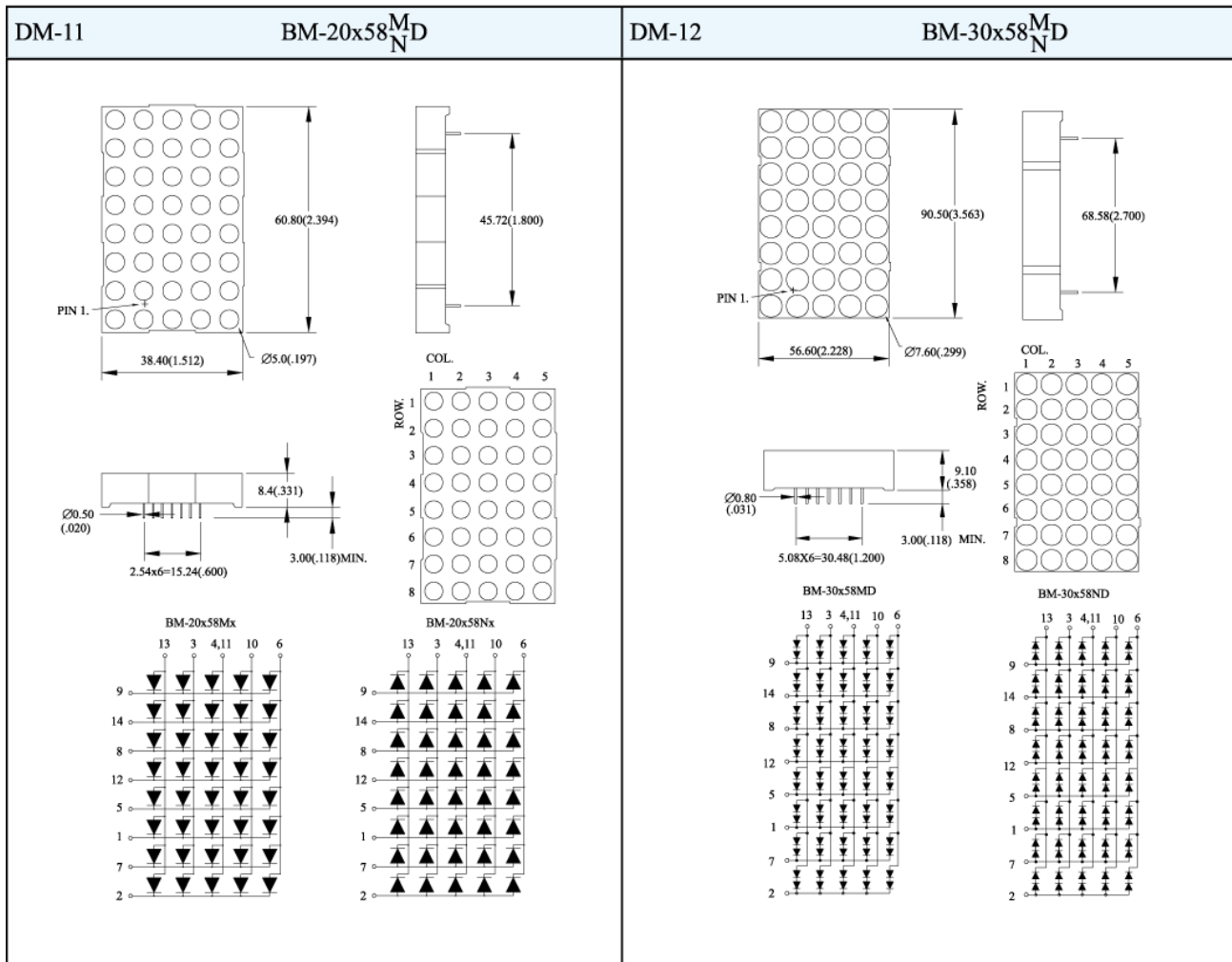
AMERICAN BRIGHT



# LED Dot Matrix Display BM Series

Single Color, 5 x 8 Dot Matrix Displays

| Digit Size            | Part No.            |                       | Chip                       |                                   | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|-----------------------|---------------------|-----------------------|----------------------------|-----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                       | Column Common Anode | Column Common Cathode | Material/Emitted Color     | Peak Wave Length $\lambda_p$ (nm) | $\Delta \lambda$ (nm)    | Pd (mw) | If (mA) | Ifp (mA) | Vf (v)                        |      | Iv. Typ. Per.Seg. (mcd) |             |
|                       |                     |                       |                            |                                   |                          |         |         |          | Typ.                          | Max. |                         |             |
| 2.30" High $\phi$ 5.0 | BM-20258MD          | BM-20258ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 80      | 30      | 150      | 2.1                           | 2.5  | 10.0                    | DM-11       |
|                       | BM-20458MD          | BM-20458ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 10.0                    |             |
|                       | BM-20458MA          | BM-20458NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 80      | 30      | 150      | 2.0                           | 2.5  | 15.0                    |             |
|                       | BM-20658MD          | BM-20658ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 18.0                    |             |
|                       | BM-20658MA          | BM-20658NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 80      | 30      | 150      | 1.7                           | 2.5  | 25.0                    |             |
|                       | BM-20F58MD          | BM-20F58ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 80      | 30      | 150      | 2.0                           | 2.5  | 23.0                    |             |
|                       | BM-20J58MD          | BM-20J58ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 80      | 30      | 150      | 2.0                           | 2.5  | 25.0                    |             |
|                       | BM-20K58MD          | BM-20K58ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 80      | 30      | 150      | 2.1                           | 2.5  | 25.0                    |             |
| 3.50" High $\phi$ 7.6 | BM-30258MD          | BM-30258ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 160     | 30      | 150      | 4.2                           | 5.0  | 12.0                    | DM-12       |
|                       | BM-30458MD          | BM-30458ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 12.0                    |             |
|                       | BM-30458MA          | BM-30458NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 16.0                    |             |
|                       | BM-30658MD          | BM-30658ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 20.0                    |             |
|                       | BM-30658MA          | BM-30658NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 25.0                    |             |
|                       | BM-30F58MD          | BM-30F58ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 160     | 30      | 150      | 4.0                           | 5.0  | 25.0                    |             |
|                       | BM-30J58MD          | BM-30J58ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 160     | 30      | 150      | 4.0                           | 5.0  | 26.0                    |             |
|                       | BM-30K58MD          | BM-30K58ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 160     | 30      | 150      | 4.2                           | 5.0  | 26.0                    |             |



NOTES: 1.All Dimensions are in millimeters(inches).  
3.Specifications are subject to change without notice.

2.Tolerance is  $\pm 0.25\text{mm}(.010")$ .  
4.NP:No Pin. 5.NC:No Connect.

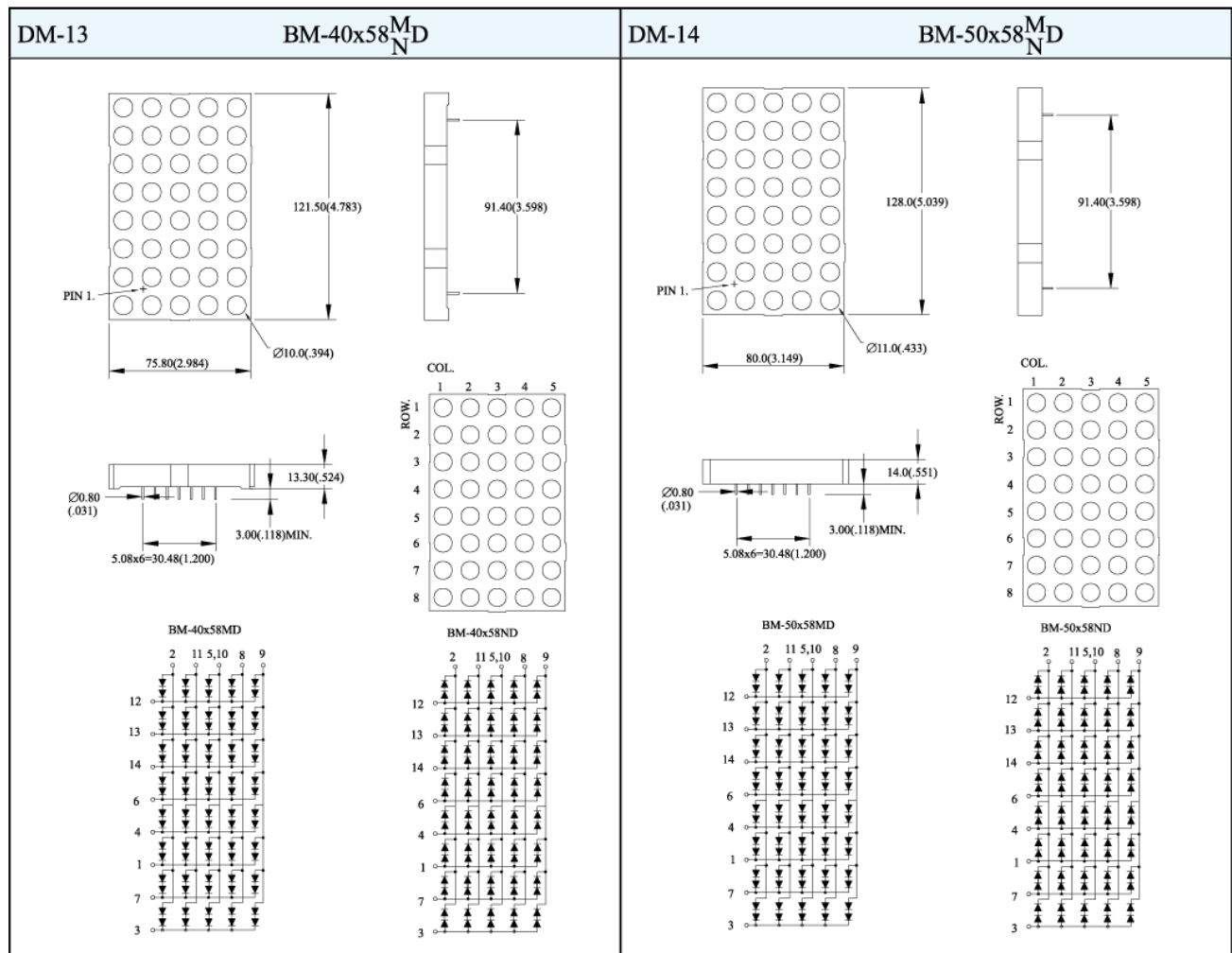
AMERICAN BRIGHT



# LED Dot Matrix Display BM Series

Single Color, 5 x 8 Dot Matrix Displays

| Digit Size             | Part No.            |                       | Chip                       |                                   | Absolute Maximum Ratings |         |         |          | Electro-optical Data(At 10mA) |      |                         | Drawing No. |
|------------------------|---------------------|-----------------------|----------------------------|-----------------------------------|--------------------------|---------|---------|----------|-------------------------------|------|-------------------------|-------------|
|                        | Column Common Anode | Column Common Cathode | Material/Emitted Color     | Peak Wave Length $\lambda_p$ (nm) | $\Delta \lambda$ (nm)    | Pd (mw) | If (mA) | Ifp (mA) | Vf (v)                        |      | Iv. Typ. Per.Seg. (mcd) |             |
|                        |                     |                       |                            |                                   |                          |         |         |          | Typ.                          | Max. |                         |             |
| 4.78" High $\phi$ 10.0 | BM-40258MD          | BM-40258ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 160     | 30      | 150      | 4.2                           | 5.0  | 12.0                    | DM-13       |
|                        | BM-40458MD          | BM-40458ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 12.0                    |             |
|                        | BM-40458MA          | BM-40458NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 16.0                    |             |
|                        | BM-40658MD          | BM-40658ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 20.0                    |             |
|                        | BM-40658MA          | BM-40658NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 25.0                    |             |
|                        | BM-40F58MD          | BM-40F58ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 160     | 30      | 150      | 4.0                           | 5.0  | 25.0                    |             |
|                        | BM-40J58MD          | BM-40J58ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 160     | 30      | 150      | 4.0                           | 5.0  | 26.0                    |             |
|                        | BM-40K58MD          | BM-40K58ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 160     | 30      | 150      | 4.2                           | 5.0  | 26.0                    |             |
| 5.00" High $\phi$ 11.0 | BM-50258MD          | BM-50258ND            | GaP/ GaP/ Yellow Green     | 568                               | 30                       | 160     | 30      | 150      | 4.2                           | 5.0  | 12.0                    | DM-14       |
|                        | BM-50458MD          | BM-50458ND            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 12.0                    |             |
|                        | BM-50458MA          | BM-50458NA            | GaAsP/GaP/ Hi-Eff.Red      | 635                               | 45                       | 160     | 30      | 150      | 4.0                           | 5.0  | 16.0                    |             |
|                        | BM-50658MD          | BM-50658ND            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 20.0                    |             |
|                        | BM-50658MA          | BM-50658NA            | GaAlAs/ SH/ Super Red      | 660                               | 20                       | 160     | 30      | 150      | 3.4                           | 5.0  | 25.0                    |             |
|                        | BM-50F58MD          | BM-50F58ND            | GaAlAs/ DDH/ Super Red     | 660                               | 20                       | 160     | 30      | 150      | 4.0                           | 5.0  | 25.0                    |             |
|                        | BM-50J58MD          | BM-50J58ND            | AlGaInP/GaAs/ Ultra Orange | 620                               | 17                       | 160     | 30      | 150      | 4.0                           | 5.0  | 26.0                    |             |
|                        | BM-50K58MD          | BM-50K58ND            | AlGaInP/GaAs/ Ultra Yellow | 592                               | 15                       | 160     | 30      | 150      | 4.2                           | 5.0  | 26.0                    |             |



NOTES: 1.All Dimensions are in millimeters(inches).

3.Specifications are subject to change without notice.

2.Tolerance is  $\pm 0.25\text{mm}(.010")$ .

4.NP:No Pin.

5.NC:No Connect.

AMERICAN BRIGHT

(714) 257-0800 FAX (714) 257-1310 • © 2000 American Bright Optoelectronics Corporation. Specifications subject to change without notice. 177